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Professional Experience

- **07/2018 – present:** ***Full Professor;*** **09/2010 – 06/2018:** ***Associate Professor;*** **09/2003 – 08/2010:** ***Assistant Professor*** **of Computer Science and Engineering,** Dept. of Computer Science (primary), Dept of Electrical and Computer Engineering (secondary), and **Senior Research Scientist,** Institute for Software Integrated Systems, Vanderbilt University, Nashville, TN, USA.
  Teaching graduate and undergraduate courses in the CS/ECE departments; conducting research in the area of distributed systems, model driven engineering, cloud and mobile computing, cyber physical systems and Internet of Things; and involvement in professional service.

- **05/2009 – 08/2009: Visiting Faculty,** Air Force Research Laboratory, Rome, NY, USA.
  Conducted research in real-time and fault-tolerance in Cyber Physical Systems, with focus on intelligent transportation.

- **01/2002 – 08/2003: Research Scientist,** Institute for Software Integrated Systems, Vanderbilt University, Nashville, TN, USA.
  Conducted research on model-driven development techniques in the context of middleware for Distributed Real-time & Embedded systems.

- **12/2005 – 08/2010: Adjoint/Adjunct Assistant Professor,** Dept. of Computer and Information Sciences, University of Alabama at Birmingham, Birmingham, AL, USA.

- **07/1998 – 01/2002: Member of Technical Staff,** Bell Research Laboratories, Lucent Technologies, Murray Hill and Holmdel, NJ, USA.
  Conducted research primarily in fault-tolerant distributed middleware-based software systems, network services management software, prototyping, publishing, and patenting innovative solutions.

- **04/1998 – 07/1998: Research Associate,** Washington University, St. Louis, St. Louis, MO, USA.
  Continued my research involving measuring the performance of CORBA implementations and improving their efficiency and predictability via systematic optimizations.

- **08/1995 – 04/1998: Graduate Research Assistant,** Washington University, St. Louis, MO, USA.
  Worked on research involving measuring the performance of CORBA implementations and improving their efficiency and predictability via systematic optimizations.

- **05/1994 – 07/1995, 05/1993 – 12/1993: Software Programmer,** Electronic Radiology Laboratory, Mallinkrodt Institute of Radiology, Washington University Medical School, St. Louis, MO, USA.
  Worked in a team responsible for implementation of the Digital Imaging and Communications in Medicine (DICOM) v3.0 protocol.

- **01/1994 – 05/1994: Graduate Research Assistant,** Washington University, St. Louis, MO, USA.
  Worked on research involving use of compiler code generation and optimization techniques for rapid prototyping of efficient protocol implementations.

- **08/1992 – 05/1993: Graduate Teaching Assistant,** Washington University, St. Louis, MO, USA.
  Assisted in grading and consulting for a senior level course on Operating Systems for the Fall 1992 and Spring 1993 semesters.

- **01/1992 – 05/1992: Graduate Teaching Assistant,** Arizona State University, Tempe, AZ, USA.
  Assisted in grading and consulting for a junior level course on Data Structures.

- **08/1990 – 12/1991: Office Assistant,** Department of Sociology, Arizona State University, Tempe, AZ, USA.
  Job responsibilities included assisting in office work that included printing, collating, and stapling handouts and examinations for Sociology classes, and proctoring examinations.

- **08/1989 – 07/1990: Lecturer,** Maharashtra Institute of Technology, Pune, India.
  Involved with teaching undergraduate courses in Computer Engineering and being on administrative committees.

Educational Background

- **D.Sc (Computer Science),** Aug 1992 – May 1998, Washington University, St. Louis, Missouri, USA.
  Dissertation: *Design Principles and Optimizations for High-performance, Real-time CORBA Implementations*
  Slides
  Adviser: Dr. Douglas C. Schmidt.
- **MS (Computer Science),** Aug 1990 – Aug 1992, Arizona State University, Tempe, Arizona, USA.
  Thesis: *Automatic Test Suite Generation for Protocol Testing.*
  Adviser: Dr. Arunabha Sen.
- **BE (Computer Engineering),** June 1985 – June 1989, Maharashtra Institute of Technology, University of Pune, Pune, Maharashtra, India.
  Senior-level Capstone Project: *Lisp Interpreter in C using Recursive Descent Parsing.*
  Advisers: Prof. Shashikant Bhandari and Prof. Shirish Joshi.

Research Interests and Projects

My research focuses primarily on solving systems-level challenges by designing and implementing innovative algorithmic solutions incorporating (a) elegant software engineering principles, such as design patterns, domain-specific modeling and generative programming, and (b) data-driven system models. Specifically, I am interested in solving systems problems involving a variety of quality of service and data consistency issues through effective resource management, particularly in Cloud computing, Cyber Physical Systems, and Internet of Things. I am also interested in 5G and beyond networking and Digital Twins. These interests manifest in my past and ongoing research projects:

Current Projects

1. DARPA CASTLE, "RAMPART: Reinforcement Against Malicious Penetration by Adversaries in Realistic Topologies," which is investigating the use of reinforcement learning techniques to secure networked infrastructure.
2. Argonne National Lab, "Development of Reinforcement Learning Based Methods for Dynamic Power Management," which is investigating use of reinforcement learning techniques in high performance computing clusters to tradeoff performance and energy consumption issues.
3. Currently unfunded, "Testbed Federation," which is investigating the use of model-driven engineering and automation approaches to federate disparate testbed infrastructures.
4. Currently unfunded, "Digital Twins," which is investigating the design and use of digital twins for dynamic resource management.
5. Currently unfunded, "Optimizations for Federated Learning Tasks," which is investigating a variety of performance optimizations to speed up federated learning tasks.

Past Projects

1. Unfunded, "Dynamic Network Slice Management in 5G," which was a continuation of the previous Siemens-funded work and investigated a variety of approaches to dynamically manage network slices end-to-end in 5G networks.
2. Unfunded, "Storage Optimizations for Deep Learning Training Tasks," which investigated a variety of storage optimization techniques to speed up deep learning training tasks.
3. Siemens Fellowship, "Evaluating Open Source DDS Implementations," which evaluated different OMG DDS implementations for suitability in various Siemens deployments.
4. Siemens Fellowship, "Intelligent Architecture for Accelerated Edge Learning," which investigated resource management solutions in 5G networks as applied to manufacturing and industrial automation scenarios.

5. Cisco Gift, "EdgeNet: An online Edge Computing Based Generative Anomaly Detection and Prognostics Solution for Networked Equipment at Customer Premises," which investigated statistical methods for anomaly detection and system reliability (Jan 2021–Dec 2022). PI: Abhishek Dubey.

6. NSF Convergence Accelerator Track D, "Scalable, TRaceable Ai for Imaging Translation: INnovation to Implementation for accelerated Impact (STRAIT I3)," 9/15/2020–5/31/2021. PI: Bennett Landman.

7. NSF Smart and Connected Communities Pilot Project, through Dec 2021. PI: Daniel Balasubramanian.

8. Cisco Gift, "Spatio-Temporal AI Inference Engines for System-Level Reliability," which investigated statistical methods for anomaly detection and system reliability (Jan 2020–Dec 2020).

9. AFOSR DDDAS, "DDDAS-as-a-Service: Dynamic Resource Management Algorithms and Systems Software for an Infosymbiotics Hosting Platform," for the AFOSR Dynamic Data Driven Applications Systems (DDDAS) program, which investigated dynamic resource management algorithms for fog/edge using dynamically instrumented data (Feb 2018 – Jan 2021).

10. "Next-Generation Simulation Architecture for Collaborative Development," SBIR Phase 1 for MDA with Real-time Innovations (RTI) as prime and Vanderbilt (sub), 6 months starting Jan 2019.

11. "Learning Ecosystem with Adaptive Repository Navigation (LEARN)," for the AFRL StreamlinedML program with Lockheed Martin (Prime) and Vanderbilt (sub), which investigated software engineering tools (possibly Feb 2018, 18 months)

12. "Internet of Things (IoT) Immersion," Sponsored by Marriott, which developed a curriculum for IoT training (Dec 2017 – May 2019).

13. "Cloud Computing and Software-Defined Networking Enhancements to Support Collaborative, Problem-based STEM Education," which investigated the use of software defined networking and microcloud/cloud architectures to support collaborative STEM education. This research is supported by the NSF US Ignite program (Sep 2015–Aug 2019).

14. "NIST Global Cities Team Challenge," where our team explored solutions to challenging problems in realizing Smart Cities. I am a participant in this NSF-funded project.

15. "VISOR Smart City," where our team explored solutions to interdisciplinary challenging problems in realizing Smart and Connected Cities. I am a participant in this Vanderbilt-funded Trans-Institutional Program (TIPS).

16. "Domain Specific Language Design for Big Data Analytics Ecosystem," which investigated effective model-driven engineering techniques for Big Data analysts to use to specify various hypotheses for solving Big Data analytics problems (Aug 2016–June 2017).

17. "Automation of system configuration definition," which investigated effective model-driven engineering techniques for configuration management in enterprise systems (Aug 2016–Feb 2017).

18. "Stochastic Hybrid Systems Modeling and Middleware-enabled DDDAS for Next-generation US Air Force Systems," This research was supported by an AFOSR grant for the DDDAS program (Sept 2013–Dec 2016).

19. "Cloud Computing for Cyber Physical Systems," which investigated new techniques and algorithms to make cloud computing infrastructure predictable, reliable and secure for CPS workflows. This research was supported by the NSF CAREER award (2009–2015).

20. "Information Architecture for a System of Fractionated Spacecrafts," which developed model-based fault-tolerant and secure middleware and operating system-level solutions to support a system of fractionated spacecrafts. This research is supported on the DARPA F6 program (2011–2014).

21. Gigabit Networks for Collaborative Education, which was a NSF EAGER supported project (2012–2014) that is investigating how Gigabit networks can be leveraged to solve the 21st century challenges in STEM education. This project was part of the NSF IGNITE program.

22. Power- and Performance-aware Resource Management of Multicore Servers in Cloud Data Centers, part of the AFRL C2ORES project (2012–2013).

23. Smartphone Clouds, which investigated the use of smartphones for both civilian and military-purposes. This research is supported through NSF RAPID (2010–2012), DARPA Transformative Apps (starting 2010), and Vanderbilt IDEAS awards (2010–2012).

24. Automated Configuration and Deployment of Distributed Real-time and Embedded (DRE) systems, which investigated the design and implementation of algorithms that deploy and configure DRE systems in a way that optimizes specified properties. This research is supported through NSF CNS/SHF Core program award (2009–2013), and AFRL SPRUCE, and previously was supported on the DARPA PCES program.

25. Real-time and Fault-tolerant Middleware for Cyber Physical Systems, which investigating the design and implementation of middleware for CPS such as Intelligent Transportation Systems (ITS) and Reconfigurable Conveyor Systems. This research is also currently supported by the NSF CAREER award, and previously by the Vanderbilt Discovery Grant (2009–2011) and earlier by AFRL/SUNY-IT follow on contract for the summer research conducted in 2009.

26. Middleware Specializations for Cyber Physical Systems (CPS), which investigated the design of tools that automatically specialize general-purpose middleware to address footprint, QoS, and power issues. This research was supported by the NSF CAREER award (2009–2014).

27. Predictive Cache Analysis, which investigated the use of optimization techniques to schedule real-time tasks in a way that will maximize cache use. This research was supported by Lockheed Martin Aeronautics through an award from AFRL.

28. Reuse in metamodeling and model transformations. This topic also includes improving user productivity through the use of strategic and adaptive programming. This research was synergistic with objectives of the model-driven engineering research supported through the DARPA PCES program and subcontracts from Raytheon and Lockheed Martin.

29. Model-driven automation and optimizations for real-time and fault-tolerance management in distributed, real-time and embedded (DRE) systems. This research was originally supported by the DARPA ARMS program through subcontracts from Lockheed Martin Advanced Technology Labs, BBN, and Telcordia on the DARPA ARMS program.

30. End-to-end toolchain for designing, deploying and configuring large-scale, component-oriented, distributed, real-time and embedded systems. This research resulted in the CoSMIC model-driven engineering toolchain, the DAnCE deployment and configuration framework, and parts of the the CIAO component middleware suite. This research was supported by the DARPA PCES program and subcontracts from Raytheon and Lockheed Martin.

Teaching Interests

I have been teaching undergraduate and graduate level courses at Vanderbilt University since Fall 2002. My teaching interests include systems- and software engineering-related subjects, such as:

- Cloud computing (undergraduate and graduate level)
- Distributed systems focusing on Real-time and Fault-tolerant Computing for Cyber Physical Systems (graduate-level)
- Introductory Computer Networks (undergraduate and graduate-level)
- Software Engineering including Model Driven Engineering and Design Patterns (graduate-level)
- Introductory Operating Systems (undergraduate-level)
- Distributed Object-Oriented Computing & Middleware (graduate-level)

Student Advising and Supervision

Graduated PhD Students (as Dissertation Committee Chair in the role as Primary Advisor) [Total: 20]

1. Robert Canady, (PhD Electrical Engineering, Vanderbilt University, June 2024); Adversarially Robust Machine Learning Approaches for Edge-based Applications,
[Current Activities:] Employed as Postdoc, Vanderbilt University, Nashville, TN, USA.

2. Zhuangwei Kang, (PhD Computer Science, Vanderbilt University, Aug 2023) *Principles and Techniques for Robust and High-Performance Cloud-Native Deep Learning Systems,*
[Current Activities:] Employed at Amazon, Austin, TX, USA.

3. Ziran Min, (PhD Computer Science, Vanderbilt University, Apr 2023) *Dynamic Network Resource Management in IoT,*
[Current Activities:] Employed at Siemens Corporate Technology, Princeton, NJ, USA.

4. Xingyu Zhou, (PhD Computer Science, Vanderbilt University, Apr 2022) *Deploying Adversarially Robust Learning Enabled Components for Cyber Physical Systems,*
[Current Activities:] Employed at Experion.

5. Yogesh Barve, (PhD Computer Science, Vanderbilt University, Jan 2020), *Principles and Techniques for Performance Management and Validation of Cloud Hosted Distributed Applications,*
[Current Activities:] Research Scientist, Institute for Software Integrated Systems, Vanderbilt University.

6. Anirban Bhattacharjee, (PhD Computer Science, Vanderbilt University, Jan 2020), *Automating Deployment and Management of Data Analytics Services Across Distributed Systems,*
[Current Activities:] Employed at Intel, Portland, OR, USA.

7. Shweta Khare, (PhD Computer Science, Vanderbilt University, Jan 2020), *Resource Management Algorithms for Edge-Based, Latency-Aware Data Distribution and Processing,*
[Current Activities:] Employed at Amazon in Bay Area, CA, USA.

8. Shashank Shekhar, (PhD Computer Science, Vanderbilt University, May 2018), *Algorithms and Techniques for Dynamic Resource Management across Cloud-Edge Resource Spectrum*
[Current Activities:] Employed at Siemens, Princeton, NJ, USA.

9. Subhav Pradhan (co-advised by Dr. Abhishek Dubey), (PhD Computer Science, Vanderbilt University, September 2016), *Algorithms and Techniques for Managing Extensibility in Cyber-Physical Systems*
[Current Activities:] Employed at Uber, San Francisco, CA, USA.

10. Prithviraj Patil, (PhD Computer Science, Vanderbilt University, June 2016), *Algorithms and Techniques for Transitioning to Software Defined Networks*
[Current Activities:] Mathworks, Natick, MA, USA.

11. Faruk Caglar (PhD Computer Science, Vanderbilt University, May 2015), *Dynamic Resource Management in Resource-overbooked Cloud Data Centers*
[Current Activities:] Employed in Turkey, since Fall 2015.

12. Kyoungho An (PhD Computer Science, Vanderbilt University, Mar 2015), *Algorithms and Techniques for Scalable, Reliable Edge-to-Cloud Industrial Internet of Things*
[Current Activities:] Real-time Innovations (RTI), Nashville, TN, USA.

13. Akshay Dabholkar (PhD Computer Science, Vanderbilt University, Apr 2012), Topic: *Principles for Safe and Automated Middleware Specializations for Distributed, Real-time and Embedded Systems.*
[Current Activities:] Senior Member of Technical Staff, Oracle, CA, USA.

14. James Edmondson (PhD Computer Science, Vanderbilt University, Mar 2012), Topic: *Control and Validation Mechanisms for Information, Resources, and Deployments in Distributed Real-time and Embedded Systems.*
[Current Activities:] Research Scientist, Software Engineering Institute, Carnegie Mellon University, Pittsburgh, PA, USA.

15. William Otte (PhD Computer Science, Vanderbilt University, Nov 2011), Topic: *Adaptive Deployment and Configuration Frameworks for Component-based Applications.*
[Current Activities:] Nevelex Corp, Minneapolis, MN, USA.

16. Joe Hoffert (PhD Computer Science, Vanderbilt University, Nov 2010), Topic: *Design and Run-time Quality of Service Management Techniques for Publish/Subscribe Distributed Real-time and Embedded Systems.*
[Current Activities:] Assistant Professor, Indiana Wesleyen University, Marion, IN, USA.

17. Nilabja Roy (PhD Computer Science, Vanderbilt University, Nov 2010), Topic: *QoS Assurance and Control of Large-scale Distributed Component-based Systems.*
[Current Activities:] Bloomberg since Spring 2015, New York City, NY.

18. Sumant Tambe (PhD Computer Science, Vanderbilt University, Sep 2010), Topic: *Model-driven Fault-Tolerance Provisioning for Component-based Distributed Real-time Embedded Systems.*
[Current Activities:] At LinkedIn, Mountainview, CA, USA.

19. James Hill (PhD Computer Science, Vanderbilt University, Mar 2009), Topic: *Agile Techniques for Developing and Evaluating Large-Scale Component-based Distributed Real-time and Embedded Systems.*
[Current Activities:] Associate Professor in Computer and Information Science, Indiana University-Purdue University Indianapolis (IUPUI), Indianapolis, IN, USA.

20. Amogh Kavimandan (PhD Computer Science, Vanderbilt University, Nov 2008), Topic: *Reusable Model Transformations for QoS Configurations in Distributed Real-time and Embedded Systems.*
[Current Activities:] At Mathworks, Natick, MA, USA.

Graduated PhD Students (as Co-Advisor and Committee Co-chair) [Total: 6]

1. Shunxing Bao (co-advised by Dr. Bennett Landman), (PhD Computer Science, Vanderbilt University, Sept 2018), *Algorithmic Enhancements to Data Colocation Grid Frameworks for Big Data Medical Image Processing*
[Current Activities:] Continuing as Postdoc at Vanderbilt University.

2. Brian Dougherty (Advised by Dr. Douglas Schmidt), (PhD Computer Science, Vanderbilt University, Mar 2011), Topic: *Configuration and Deployment Derivation Strategies for Real-Time and Embedded Systems.*
[Current Activities:] Build3 Software and Correct Care Solutions, Nashville, TN, USA.

3. Jaiganesh Balasubramanian (Advised by Dr. Douglas Schmidt), (PhD Computer Science, Vanderbilt University, Sep 2009), Topic: *Resource-aware Deployment, Configuration, and Adaptation for Fault-tolerant Distributed Real-time Embedded Systems.*
[Current Activities:] At Citigroup, New York City, NY, USA.

4. Gan Deng (Advised by Dr. Douglas Schmidt), (PhD Computer Science, Vanderbilt University, Dec 2007), Topic: *Deployment and Configuration of Component-based Distributed, Real-time and Embedded Systems.*
[Current Activities:] At Google, Seattle, WA, USA.

5. Krishnakumar Balasubramanian (Advised by Dr. Douglas Schmidt), (PhD Computer Science, Vanderbilt University, Sept 2007), Topic: *Model-Driven Engineering of Component-based Distributed, Real-time and Embedded Systems.*
[Current Activities:] At PayPal, San Jose, CA, USA.

6. Arvind Krishna (Advised by Dr. Douglas Schmidt), (PhD Computer Science, Vanderbilt University, Nov 2005), Topic: *Optimization Techniques for Enhancing Middleware Quality of Service for Software Product-Line Architectures.*
[Current Activities:] At Qualcomm, Bengaluru, India.

Graduated MS Students Thesis/Non-thesis (as Primary Advisor) [Total: 23]

1. Matthew Kenigsberg, Investigating pros and cons of variety of virtualization techniques including VMs, containers and unikernels; MS expected Spring 2021.

2. Ziqi Li, Investigating effective fault tolerance strategies for distributed co-simulation environments; MS expected Spring 2021.

3. Evan Wang, Investigating efficient resource management strategies for distributed co-simulation environments; MS expected Spring 2021.

4. Davut Disci (MS Computer Science, Vanderbilt University, Dec 2019); non-thesis.

5. Travis Brummett (MS Computer Science, Vanderbilt University, Spring 2019); non-thesis.
   [Current Activities:] Lecturer in Computer Science, Tennessee Tech University, Cookeville, TN, USA.

6. Lian Liu (MS Computer Science, Vanderbilt University, June 2016) Topic: A Novel Technique and Infrastructure for Online Analytics of Social Networks
   [Current Activities:] at Atypon, Santa Clara, CA, USA.

7. Pankaj Chand (MS Computer Science, Vanderbilt University, May 2016); non-thesis.

8. Shunxing Bao (MS Computer Science, Vanderbilt University, Mar 2014), Topic: Reasoning about CPS using surrogate simulation models
   [Current Activities:] Continuing in PhD program.

9. Sheeladitya Mukherjee (MS Computer Science, Vanderbilt University, May 2014); non-thesis.

10. Dili Wu (MS Computer Science, Vanderbilt University, Mar 2013), Topic: A Profiling and Performance Analysis-based Self-Tuning System for Optimization of Hadoop Mapreduce Cluster Configuration
    [Current Activities:] At Criteo, San Francisco, CA, USA.

11. Adam Trewyn (MS Computer Science, Vanderbilt University, Aug 2012); Investigated topics in cyber physical systems; Non-thesis option.
    [Current Activities:] Change Healthcare, Nashville, TN, USA.

12. Subhav Pradhan (MS Computer Science, Vanderbilt University, Aug 2012); Investigated topics in reusable graph transformations; Non-thesis option.
    [Current Activities:] Continued in the PhD program.

13. Laura Poff, MS Dept of Civil and Environmental Engineering, Vanderbilt University, Dec 2011; Investigated interdisciplinary topics in Intelligent Transportation Systems; Non-thesis option.
    [Current Activities:] Employed at NextGxDx Inc, Nashville, TN, USA.

14. Kyoungho An (MS Computer Science, Vanderbilt University, Mar 2011), Topic: *Model-driven Performance Analysis of Reconfigurable Conveyor Systems used in Material Handling Applications*
    [Current Activities:] Continued in the PhD program in Computer Science, Vanderbilt University, Nashville, TN, USA.

15. Anushi Shah (MS Computer Science, Vanderbilt University, Nov 2010), Topic: *Service Uptime Maximization in Smartphones.*
    [Current Activities:] University of New South Wales (UNSW), Australia.

16. Ritesh Neema (MS Computer Science, Vanderbilt University, May 2010). Topic: *Enhancing Reusability in Model-driven Engineering.*
    [Current Activities:] Employed in Pillsbury LLC, Nashville, TN, USA.

17. Deepti Thopte (M.S Computer Science, Vanderbilt University, July 2009), Topic: *A Real-time, Event-based Driver Alert System for Accident Avoidance due to Red Light Running.*
    [Current Activities:] At Lutron Electronics, PA.

18. Tina Devkota (M.S Computer Science, Vanderbilt University, May 2009), Topic: *Two-level Event Brokering in Intelligent Transportation Systems.*
[Current Activities:] At Morningstar, Chicago, IL.

19. Akshay Dabholkar (M.S Computer Science, Vanderbilt University, Aug 2007), Continued in the Ph.D program.

20. Dimple Kaul (M.S Computer Science, Vanderbilt University, May 2007), Topic: *Automating Middleware Configuration and Specializations via Model-based Aspect-Oriented Software Development.*
[Current Activities:] Fidelity Investments, Austin, TX, USA.

21. Arundhati Kogekar (M.S Computer Science, Vanderbilt University, May 2007), Topic: *Model-driven Composition and Performance Evaluation of Pattern-Based Systems.*
[Current Activities:] At Bloomberg, New York City, NY, USA.

22. Amogh Kavimandan (M.S Computer Science, Vanderbilt University, May 2006), Continued in the Ph.D program.

23. James Hill (M.S Computer Science, Vanderbilt University, May 2006), Continued in the Ph.D program.

Graduated MS Students (as Co-Adviser or Second Reader) [Total: 5]

1. Weichen Wang (MS Computer Science, Vanderbilt University, Mar 2015), Topic: *A Cyber-security defense method using Docker containers*
[Current Activities:] Employed in Atlanta, GA.

2. Kelsie Covington (MS Computer Science, Vanderbilt University, Dec 2011), Topic: *Informatics for High-throughput and Distributed Analysis of Medical Images*
[Current Activities:] Employed at Amazon, Seattle, WA.

3. Friedhelm Wolf (M.S Computer Science, Vanderbilt University, May 2009), Topic: *Component-based Fault Tolerance for Distributed Real-Time and Embedded Systems.*
[Current Activities:] Employed in Germany.

4. Emre Turkay (MS Computer Science, Vanderbilt University, August 2005), Topic: *Resolving Middleware Configuration Challenges using Model Driven Development.*
[Current Activities:] Employed in IKON Interactive, Istanbul, Turkey.

5. George Edwards (MS Computer Science, Vanderbilt University, August 2005).
[Current Activities:] At Univ of Southern California and Quandary Peaks, Los Angeles, CA, USA.

Current PhD Students (Advised as Primary Advisor) [Total: 3]

1. Sanjana Das, started Aug 2023; Investigating testbed federation ideas.

2. Akhilesh Raj, started Fall 2022; Investigating topics in composition of surrogate models for cyber physical systems and resource management topics; PhD expected Summer 2025.

3. Shuang Zhou, started Fall 2019; Investigating topics in Federated Machine Learning; PhD expected Spring 2025.

Current PhD Students (Co-advised)

NONE AT THIS TIME

Current MS Students Thesis/Non-thesis (Primary Advised)

1. Srikanth Narayanan, Investigating topics related to power-performance trade-offs using reinforcement learning in GPU devices; Thesis defense expected March 2025.

Current MS Students (Co-Advised)

NONE AT THIS TIME

Undergraduate Student Academic Advising

1. Computer Science Second Majors/Minors – Advisor since May 2024 (200+ students).
2. Computer Science Second Majors/Minors – temporary advising Fall 2022.
3. Computer Science Academic Advising (30+ students advised) Aug 2018 – May 2022).
4. Computer Science Academic Advising (30+ students advised from Dec 2015 – May 2018).
5. Computer Science Academic Advising (22 students advised from Fall 2013–Spring 2015).
6. Computer Engineering Academic Advising (9 students from Fall 2009–Spring 2013).
7. Computer Engineering Academic Advising (10 students advised from Fall 2004 – Spring 2008)

Undergraduate Student Research & Independent Study [Total: 50]

1. Matthew Buchowiec (Fall 2024), Working with team of graduate students on Ansible automation via Model-driven Engineering mechanisms.
2. Paulette DeJarnette (Fall 2024), Working on interdisciplinary research with Prof. Amy Booth on applying CS concepts to topics in Pyschology and Human Development.
3. Trieu Truong (Fall 2024), Working on interdisciplinary research with Prof. Amy Booth on applying CS concepts to topics in Pyschology and Human Development.
4. Nicholas Skoufis (Spring 2023 and 2024), Investigated ideas on defining domain-specific modeling language for ease of network experiment generation. This is continuation of work started by Brendan.
5. Abhay Khanna (Fall 2023), Investigated ideas related to Blockchain use in Gaming applications.
6. Brendan O'Reilly (Fall 2022), Investigated ideas on defining domain-specific modeling language for ease of network experiment generation.
7. Kerr You (Fall 2021, Spring 2022), Investigated topics related to realizing Cloud-based games using serverless computing.
8. Logan Powell (Fall 2021, Spring 2022), Investigated topics related to realizing Cloud-based games using serverless computing.
9. Frank Tian (Fall 2021), Investigated methods and conducted experiments to compare performance of several serialization frameworks like Protobuf, Flatbuf, Thrift, etc.
10. Sebastian Bond (Spring 2021), Investigating compiler techniques for a C-like language for game development.
11. Kerou (Carol) Cheng (Spring 2021), Evaluating Investigating performance and reliability characteristics of two to three contemporary data store technologies; collaborative work with Tinyu Wang.
12. Kevin Jin (Spring 2021), Extending the Cloud Computing class project to introduce elastic autoscaling for their multi language cloud-based execution environment.
13. Wenze (Thomas) Tan (Spring 2021), Investigating tweaks to Linux scheduling for IoT applications.
14. Tinyu Wang (Spring 2021), Investigating performance and reliability characteristics of two to three contemporary data store technologies; collaborative work with Kerou Cheng.
15. Austin Wei (Spring 2021), Investigating security vulnerabilities in SDN control and data plane.

16. Zeyad Moustafa (Fall 2020 and Spring 2021), Investigating model-parallel, online distributed machine learning.

17. Ludwik Huth (Fall 2020), Investigated the landscape of distributed online machine learning; collaborated with Ludwik Huth.

18. Max Winchall (Fall 2020), Investigated the landscape of distributed online machine learning; collaborated with Ludwik Huth.

19. Matt Leon (Spring 2020), Investigated the applicability of different virtualization techniques for fog/edge applications. Findings were published in Arxiv.

20. Raahul Natarajan (Spring 2020), Investigated techniques to develop reliable fog/edge-based applications.

21. Austin Wei (Spring 2020), Investigating the use of Software Defined Networking in fog/edge computing.

22. Max Winchall (Spring 2020), Investigated topics in fog and edge computing.

23. Max Cummings (Spring 2020), Investigated topics in fog and edge computing.

24. Ashley Niketas (Spring 2020), Investigated topics related to the use of blockchains to detect fake medicines/drugs.

25. Abhiram Vadali (Fall 2019), Continued investigations in topics related to using distributed ledger concepts using platoons of vehicles.

26. Abhiram Vadali (Spring 2019), Investigated topics related to using distributed ledger concepts using platoons of vehicles.

27. Josiah D. Gray (Spring 2019), Continuing the investigations from Fall 2018 and focusing on Blockchain applications.

28. Josiah D. Gray (Fall 2018), Investigated topics related to feasibility of distributed ledger technologies for Internet of Things; focus on security issues.

29. Charles MacVicar (Fall 2018), Investigated topics related to feasibility of distributed ledger technologies for Internet of Things; focus on financial analysis.

30. Colin Moody (Fall 2018), Investigating topics related to feasibility of distributed ledger technologies for Internet of Things; focus on the technical feasibility.

31. Kyuhoon Kim (Spring 2018), Investigated topics related to Bitcoin Currency Exchanges.

32. Hongtao Hua (Spring 2018), Investigated topics related to Blockchain architectures.

33. Bumsu Jung (Spring 2018), Investigated topics related to Pub/Sub and Streaming Analytics.

34. Dhruv Yadav (Fall 2017), Investigated topics related to real-time stream processing and analytics using RIOT-Bench.

35. Tianchi Wu (Fall 2017), Investigated topics related to microservices design of the C3STEM Cloud-hosted STEM Learning Framework.

36. Jesse Seales (Summer 2017), investigated topics on smart cities.

37. Parker Sarsfield (Fall 2016 and Spring 2017), investigated topics related to Edge-Cloud computing, focusing on Crossbar and microservices as applied to smart city applications.

38. Collin Jackson (Fall 2015), Investigated topics related to reconciling heterogeneous data models in the context of the redesign efforts for C3STEM web framework.

39. Virinchi Juttukonda (Fall 2015), Investigated topics related to reconciling heterogeneous user interfaces in the context of the redesign efforts for C3STEM web framework.

40. Brian Shi (Fall 2015), Investigated topics related to Cloud Security.

41. Amanda Hatfield (Fall 2014), Investigated effective collaborative development techniques.
42. Shane Selig (Fall 2014), Investigated bio-informatics database issues.
43. Octavio Roscioli (Spring 2014), Investigated topics related to web frameworks.
44. Violetta Vyleghzhanina (Fall 2012), Investigated topics in smartphone applications for hazardous weather notification using publish/subscribe semantics.
45. Luke Steensen (Fall 2012), Investigated topics in web server load balancing.
46. Zach Azar (Fall 2011), Investigated topics in smarthouse design.
47. David Hamrick (Fall 2010), Investigated topics in smartphone applications as part of independent study.
48. Ariya Guy Kopsombut (Spring 2010), Investigated topics in Intelligent Transportation Systems.
49. Aaron Stannard (Spring and Summer 2007), Funded through NSF CSR funds, Topic: *Design and optimizations for BEEP protocol implementation.*
50. Matthew Hieneke (Fall 2005, Spring 2006), Investigated topics in network management.

Research Outreach [Total: 22]

1. Aaditya Panjabi (Fall 2024, High School student); Informal mentoring on topics related to IoT.
2. Tanuj Koli (Summer 2019, High School student); Worked on IoT technologies.
3. Xiaoyang (Sven) Qiu (International visiting student from China, Summer 2019 VUSE SUGRE program); Worked in a team to develop a cognitive assistance application based on Jetson Nano, Android, Sony Smart Eye glass and object detection/depth perception algorithms.
4. Arjun Keerthi (Summer 2019 VUSE SUGRE program); Worked in a team to develop a cognitive assistance application based on Jetson Nano, Android, Sony Smart Eye glass and object detection/depth perception algorithms.
5. Teppei (Cody) Kotake (Summer 2019 VUSE SUGRE program); Worked in a team to develop a cognitive assistance application based on Jetson Nano, Android, Sony Smart Eye glass and object detection/depth perception algorithms.
6. Seong Min Cheon (Summer 2018 VUSE SUGRE program), investigated the use of the C3STEM environment in the context of Ice Shelf melting problem; co-advised by Prof. Ravindra Duddu (Civil Eng).
7. Abdelwahed Abdelrahman (Summer 2018), investigated topics related to use of microservices for smart systems for hotel management systems.
8. Jesse Seales (Summer 2017), investigated topics related to smart city applications using IoT devices as part of the VUSE SUGRE program.
9. Tianchi Wu (Summer 2016 VUSE SUGRE program), investigated use of microservices for smart and connected cities applications.
10. Peter Jean-Baptiste (VUSE SUGRE program, Summer 2014) – Summer internship on understanding OpenStack issues for our cloud platform.
11. Involved in joint mentoring of summer research for seven junior-level students from Nashville MLK high school, summer 2013.
12. David Brett (Summer 2012), Investigated topics in smartphone applications for hazardous weather notification.
13. Supported two Nashville Metro Public School high school teachers as part of the NSF RET program during Summer 2012 to develop course modules.

14. Devron Milazzo (Summer 2011), Investigated topics in smartphone applications as part of VUSE SUGRE program.

15. Zach Azar (Summer 2010), Investigated topics in publish-subscribe and event processing for summer research.

16. Mohammad Aminuddin (VUSE SUGRE program, Summer 2009) – Summer internship on Intelligent Transportation System.

17. Mohammad Aminuddin (Summer 2009), Research funded through the Vanderbilt VUSRP program, Topic: *Integrating Traffic Models with Mobile, Wireless Network Simulations for Intelligent Transportation.*

18. Ali Yilmaz (Summer 2008), Research funded through the Vanderbilt VUSRP program, Topic: *Markup languages for rich and active content.*

19. Eric Barnes (Summer 2008), Research funded through faculty funds, Topic: *Investigating Sources of Performance Overhead in Middleware via Simics.*

20. Shep Patterson (Summer 2008), Vanderbilt Center for Science Outreach – High School Research Internship Program (RIP), Topic: *Visual programming using Scratch.*

21. Neeraj Utreja (VUSE SUGRE program, Summer 2004) – Summer internship on Intelligent Transportation System.

22. Mentor and project advisor for a group of Computer Science freshman students (3) enrolled in ES140

Courses Offered

- **Vanderbilt University Online MS in CS Program**
  - **CS 5287, Principles of Cloud Computing,** Offered in Fall 2020, 2021, 2024; Summer 2022.
  - **CS 6381, Distributed Systems Principles,** Offered in Spring 2021, 2022, 2023, 2025; and Summer 2021.
  - **CS 5383, Computer Networks,** Offered in Fall 2023.
- **CS/ECE Dept, Vanderbilt University**, Nashville, TN.
  - **CS 4287/5287 (Fall: 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2024 and Spring 2021):** Principles of Cloud Computing
  - **CS 6381 (Spring: 2016, 2017, 2018, 2019, 2020, 2022, 2023, 2025):** Principles of Distributed Systems
  - **CS4383/5383 (previously numbered CS 4283/5283) (Fall 2022, 2023):** Undergraduate/graduate entry level course in Computer Networks. Material revamped from previous offerings. Newly numbered course is crosslisted with ECE offering of the same course.
  - **CS3281/5281 (Spring: 2024):** Junior/senior undergraduate level course on Principles of Operating Systems.
  - **EECS 381 (Spring 2015, 2014), Fall: 2012):** Graduate level course about principles of distributed computing. Course renumbered to CS6381.
  - **EECS 292/396 (Fall: 2014, Spring: 2013), EECS 395 (Fall: 2011):** Special topics course in Cloud Computing.
  - **EECS 292/396 (Spring 2015):** Special topics course on Web Programming for Distributed Systems.
  - **EECS 387 (Spring: 2011, 2012):** Graduate level course dealing with contemporary topics in software engineering.
  - **EECS281 (Fall: 2013, 2010, 2009, 2008, 2007, 2006, 2004, 2003, and Spring: 2010, 2003):** Junior/-senior undergraduate level course on Principles of Operating Systems.
  - **EECS 283 (Spring: 2009, 2008, 2007, and Fall: 2005):** Undergraduate/graduate entry level course in Computer Networks.

  - **EECS 396 – Graduate Level Special Topics Courses:** Offered a series of special topics courses emphasizing different facets of QoS in middleware for DRE systems.
    * **Spring 2010:** Special topics course in Real-time Systems discussing concepts from real-time systems, focussing on middleware like RT-CORBA and DDS, and survey of key papers.
    * **Spring 2008:** Special topics course in Automated QoS Provisioning in Middleware.
    * **Spring 2007:** Special topics course in Model-driven QoS Engineering in Middleware emphasizing literature survey.
    * **Spring 2006:** Special topics course in QoS-enabled Middleware emphasizing study of contemporary middleware and opportunities for adding QoS enablers.
    * **Spring 2005:** Special topics course at graduate and senior undergraduate level on Model Driven Middleware and Networked Systems Analysis and Simulation. This course covered model-driven analysis and simulation of distributed systems. Crosslisted as EECS292 available to undergraduates.
    * **Spring 2004:** Special topics course at graduate and senior undergraduate level on Model Driven Middleware. This course covered application of model-driven middleware principles to applications in different domains, such as enterprise warehouse management, avionics and networking. Crosslisted as EECS292 available to undergraduates.
  - **ECE 279/353 (Fall 2002):** A combined senior undergraduate level and graduate level course on real-time systems design and application programming. This course covered state of the art in real-time middleware such as RT CORBA and RT Java.

- **CSE Dept, Washington University,**
  - Delivered guest lectures on CORBA architecture and performance of CORBA implementations for various graduate level courses taught by Dr. Douglas C. Schmidt
  - **Fall 1992: CS 422:** Delivered a guest lecture on Computer Networks for Dr. Goldman's Operating Systems class.

- **Computer Engineering, Maharashtra Institute of Technology,** Pune, India.
  - **Spring 1990:** Taught a senior level course in Introduction to Computer Networks.
  - **Fall 1989:** Taught a junior level course in Digital Logic Design
  - **Fall 1989, Spring 1990:** Conducted Software laboratory sessions.

Awards and Honors

- Nominated for Best Paper among five papers at IEEE SmartComp 2023, Nashville, TN, USA.
- Travel grant to attend and present at the 4th NSF Chameleon Users Meeting, Chicago, IL, USA, May 2–3, 2023.
- Best Paper award for our FECBench paper, IEEE IC2E 2019 conference.
- Travel grant to attend and present at the NSF Chameleon Cloud Users Meeting, Austin, TX, USA, Feb 6-7, 2019.
- US Ignite Travel grant to present the research at US Ignite Summit, Austin, TX, USA, June 2016.
- Senior Member of IEEE and ACM.
- Selected among the top ranked papers from the International Symposium on Middleware and Network Applications (MNA 2010) Conference, Apr 2010, Las vegas, NV for submission of extended version to the Journal of Software (JSW).
- Selected among the top ranked papers from ISORC 2008 for submitting an extended version to a journal.
- Selected for the Visiting Faculty Research Program (VFRP) at Air Force Research Labs, Rome, NY, Summer 2009.

- Received the NSF CAREER award, March 2009.
- Selected as one of the best papers at SERA 2008 for publication in Journal.
- Selected as one of the best papers and presentations at IEEE UBICOMM 2007.
- Second prize award in IEEE Globecom 2005 Student Poster Competition (first author Amogh Kavimandan), St. Louis, MO, Nov-Dec 2005.
- Educator's Symposium Scholarship at ACM OOPSLA Conference, Vancouver, Canada, Oct 2004.
- Cited for most downloaded paper in the Software category of ITPapers.com for the month of November 2002.
- First author of paper receiving the Best Paper Award in the Software Technology Track at the HICSS '98 conference, January 1998, Hawaii, USA (188 submitted, 77 accepted).
- Selected amongst the top six papers submitted to the ICDCS '97 Conference, May 97, Baltimore, MD for submission to the IEEE Computer Society's Journal of Transactions on Computers.
- Selection for ACM OOPSLA '96 Doctoral Symposium, October 1996, San Jose, CA.
- IEEE travel grant award for attending and presenting a paper at IEEE Globecom 96, London, UK.
- Tilak Maharashtra Vidyapeeth, Pune, India award for securing second highest scores in state-wide Mathematics examination, Spring 1983.

Publications [Total = 428]

Refereed Journal Publications [Total = 66]

Refereed Journal Publications as Tenured Faculty (Full Professor) at Vanderbilt starting July 2018: [Total = 8]

1. Akram Hakiri, Sadok Ben Yahia, **Aniruddha S Gokhale,** and Nedra Mellouli, Special Issue on Digital Twin for Future Networks and Emerging IoT Applications (DT4IoT), Elsevier Future Generation Computer Systems, Volume 161, Dec 2024, Pages 81-84, ISSN0167-739X, https://doi.org/10.1016/j.future.2024.06.056.
2. Ziran Min, Swapna Gokhale, Shashank Shekhar, Charif Mahmoudi, Zhuangwei Kang, Yogesh Barve and **Aniruddha Gokhale,** Enhancing 5G network slicing for IoT traffic with a novel clustering framework, Elseview Journal of Pervasive and Mobile Computing, Volume 104, Nov, 2024, https://doi.org/10.1016/j.pmcj.2024.101974.
3. Akram Hakiri, **Aniruddha Gokhale,** Sadok Ben Yahia and Nedra Mellouli, A Comprehensive Survey on Digital Twin for Future Networks and Emerging Internet of Things Industry, Elsevier Journal of Computer Networks, Volume 244, May 2024, https://doi.org/10.1016/j.comnet.2024.110350.
4. A.H.M Jakaria, Mohammad Ashiqur Rahman and **Aniruddha Gokhale,** Resiliency Aware Deployment of SDN in Smart Grid SCADA: A Formal Synthesis Model, IEEE Transactions on Network and Services Management (TNSM), Vol.18, No. 2, June 2021, pp.1430-1444.
5. Yogesh D. Barve, Himanshu Neema, Zhuangwei Kang, Harsh Vardhan, Hongyang Sun and **Aniruddha Gokhale,** EXPPO: EXecution Performance Profiling and Optimization for CPS Co-simulation-as-a-Service, Journal of Systems Architecture, Volume 118, June 2021,pp. 11
6. Shashank Shekhar, Ajay D. Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, Xenofon Koutsoukos and Gabor Karsai, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *Elsevier Journal of Systems Architecture (JSA),* vol. 107, Aug 2020, pp. 20, DOI:10.1016/j.sysarc.2020.101710.

7. Abhishek Dubey, William Emfinger, **Aniruddha Gokhale,** Pranav Kumar, Dan McDermot, Ted Bapty, and Gabor Karsai, Enabling Strong Isolation for Distributed Real-time Applications in Edge Computing Scenarios, *IEEE Aerospace and Electronics Systems Magazine (SYSAES),* vol. 34, no. 7, July 2019, pp. 32–45.

8. Fangzhou Sun, Abhishek Dubey, Jules White, and **Aniruddha Gokhale,** Transit-hub: A Smart Public Transportation Decision Support System with Multi-Timescale Analytical Services, *Cluster Computing,* vol. 22, no. Suppl 1, 2019, pp. 2239–2254, DOI: 10.1007/s10586-018-1708-z.

Refereed Journal Publications as Tenured Faculty (Associate Professor) at Vanderbilt from Sep 2010–June 2018: [Total = 25]

1. Subhav Pradhan, Abhishek Dubey, Shweta Khare, Saideep Nannapaneni, **Aniruddha Gokhale,** Sankaran Mahadevan, Douglas C. Schmidt, and Martin Lehofer, CHARIOT: A Holistic, Goal Driven Orchestration Solution for Resilient IoT Applications, *ACM Transactions on Cyber Physical Systems (TCPS),* vol. 2, no. 3, 2018, pp. 1–37.

2. Yogesh Barve, Prithviraj Patil, Anirban Bhattacharjee, and **Aniruddha Gokhale,** A Cloud-based Immersive Learning Environment for Distributed Systems Algorithms, *CELT Special Issue of IEEE Transactions on Emerging Topics in Computing (TETC),* vol. PP, no. 99, Aug 2017, pp. 12 pages, DOI: 10.1109/TETC.2017.2731984.

3. Marisol Garcia-Valls, Paolo Bellavista and **Aniruddha Gokhale,** "Editorial for the Special issue on Reliable Software Technologies and Communication Middleware: a Perspective and Evolution Directions for Cyber-Physical Systems, Mobility, and Cloud Computing," *Elsevier ,* Vol. 71, No. g, June 2017, pp. 171–176, DOI: 10.1016/j.future.2017.02.037.

4. **Aniruddha Gokhale,** Kenichi Asai, and Ulrigh Pagh Schultz, Editorial on Special Issue on the 2015 International Conference on Generative Programming: Concepts and Experiences (GPCE), *Elsevier Computer Languages, Systems and Structures (COMLAN),* vol. 48, no. 2, June 2017, pp. 1–2, DOI: 10.1016/j.cl.2016.12.001.

5. Akshay Dabholkar, and **Aniruddha Gokhale,** AutoMaS: An Automated Middleware Specialization Process for Distributed Real-time and Embedded Systems, *International Journal of Next-Generation Computing (IJNGC),* vol. 7, no. 2, 2016, pp. 78–114.

6. Faruk Caglar, Shashank Shekhar, and **Aniruddha Gokhale,** iTune: Engineering the Performance of Xen Hypervisor via Autonomous and Dynamic Scheduler Reconfiguration, *IEEE Transactions on Services Computing (TSC),* vol. PP, no. 99, March 2016, pp. Online at `DOI:10.1109/TSC.2016.2538234`.

7. Faruk Caglar, Shashank Shekhar, **Aniruddha Gokhale,** Satabdi Basu, Tazrian Rafi, John Kinnebrew, and Gautam Biswas, Cloud-hosted Simulation-as-a-Service for High School STEM Education, *Elsevier Simulation Modelling Practice and Theory: Special Issue on Cloud Simulation,* vol. 58, no. 2, 2015, pp. 255–273.

8. Shashank Shekhar, Michael Walker, Hamzah Abdelaziz, Faruk Caglar, **Aniruddha Gokhale,** and Xenofon Koutsoukos, A Simulation-as-a-Service Cloud Middleware, *Journal of the Annals of Telecommunications,* vol. 71, no. , 2016, pp. 93–108, Online at `DOI:10.1007/s12243-015-0475-6`.

9. Akram Hakiri, Pascal Berthou, and **Aniruddha Gokhale,** Publish/Subscribe-enabled Software Defined Networking for Efficient and Scalable IoT Communications, *IEEE Communications Magazine, Communications Standards Supplement,* vol. 53, no. 9, 2015, pp. 48–54.

10. Daniel Balasubramanian, Abhishek Dubey, William Otte, Tihamer Levendovszky, **Aniruddha Gokhale,** and Gabor Karsai, F6ML: A Wide Spectrum Architecture Description Language for Distributed Computing Platforms, *Elsevier Science of Computer Programming, Special Issue of the Dagstuhl Workshop on Architecture-driven Semantic Analysis of Embedded Systems,* vol. 106, no. C, 2015, pp. 3–29.

11. Akram Hakiri, **Aniruddha Gokhale,** Pascal Berthou, Douglas Schmidt, and Thierry Gayraud, Software Defined Networking: Challenges and Research Opportunities for Future Internet, *Elsevier Journal of Computer Networks (COMNET),* vol. 75, no. A, 2014, pp. 453–471.

12. Hamilton Turner, Brian Daugherty, Jules White, Russell Kegley, Jonathan Preston, Douglas C. Schmidt, and **Aniruddha Gokhale,** DRE System Performance Optimization with the SMACK Cache Efficiency Metric, *Elsevier Journal of Systems Software (JSS),* vol. 98, no. 12, 2014, pp. 25–43.

13. Akram Hakiri, Pascal Berthou, **Aniruddha Gokhale,** Douglas Schmidt, and Thierry Gayraud, Supporting SIP-based End-to-End Data Distribution Service QoS in WANs, *Elsevier Journal of Systems Software (JSS),* vol. 95, no. 9, 2014, pp. 100–121.

14. Shivakumar Sastry, and **Aniruddha Gokhale,** Resolving Priority Inversions in Composable Conveyor Systems, *Elsevier Journal of Systems Architecture (JSA),* vol. 60, no. 6, June 2014, pp. 509–518.

15. Tihamer Levendovszky, Abhishek Dubey, William Otte, Daniel Balasubramanian, Alessandro Coglio, Sandor Nyako, **Aniruddha Gokhale,** and Gabor Karsai, DREMS: A Model-Driven Distributed Secure Information Architecture Platform for Managed Embedded Systems, *IEEE Software Special Issue on Next-generation Mobile Computing,* vol. 31, no. 2, April 2014, pp. 62–69.

16. Kyoungho An, Shashank Shekhar, Faruk Caglar, **Aniruddha Gokhale,** and Shivakumar Sastry, A Cloud Middleware for Assuring Performance and High Availability of Soft Real-time Applications, *Elsevier Journal of Systems Architecture (JSA),* vol. 60, no. 9, 2014, pp. 757–769.

17. Akram Hakiri, Pascal Berthou, **Aniruddha Gokhale,** Douglas Schmidt, and Thierry Gayraud, Supporting End-to-end Scalability and Real-time Event Dissemination in the OMG Data Distribution Service over Wide Area Networks, *Elsevier Journal of Systems Software (JSS),* vol. 86, no. 10, 2013, pp. 2574–2593.

18. Subhav Pradhan, **Aniruddha Gokhale,** William Otte and Gabor Karsai, Real-time Fault-tolerant Deployment and Configuration Framework for Cyber Physical Systems, ACM SIGBED Review Special Issue on Work-in-Progress (WiP) session of the 33rd IEEE Real-Time Systems Symposium (RTSS' 12), Vol. 10, No. 2, pp. 32, 2013.

19. William Otte, **Aniruddha Gokhale,** and Douglas C. Schmidt, Efficient and Deterministic Application Deployment in Component-based, Enterprise Distributed, Real-time, and Embedded Systems, Elsevier Journal of Information and Software Technology (IST), Vol. 55, No. 2, pp. 475–488, Feb 2013.

20. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale,** Evaluating Timeliness and Accuracy Trade-offs of Supervised Machine Learning for Adapting Enterprise DRE Systems in Dynamic Environments, International Journal of Computational Intelligence Systems, vol. 4-5, Sep-Oct 2011, pp. 806–816

21. Joe Hoffert, **Aniruddha Gokhale,** and Douglas C. Schmidt, Timely Autonomic Adaptation of Publish/Subscribe Middleware in Dynamic Environments, International Journal of Adaptive, Resilient and Autonomic Systems (IJARAS), Vol. 2, No. 4, 2011, pp. 1–24.

22. Friedhelm Wolf, Jaiganesh Balasubramanian, Sumant Tambe, **Aniruddha Gokhale** and Douglas C. Schmidt, Supporting Component-based Failover Units in Middleware for Distributed Real-time and Embedded Systems, Elsevier Journal of Software Architectures (JSA): Embedded Software Design, Special Issue on Real-time and Embedded Systems, Vol 57, No. 6, June 2011, pp. 597–613.

23. Akshay Dabolkar and **Aniruddha Gokhale**, FORMS: Feature-Oriented Reverse Engineering-based Middleware Specialization for Product-Lines, *Journal of Software (JSW),* vol 6., no. 4, April 2011, Academy Publisher, pp. 519–527.

24. **Aniruddha Gokhale**, Mark McDonald, Steven Drager, and William McKeever, A Cyber Physical Systems Perspective on the Real-time and Reliable Dissemination of Information in Intelligent Transportation Systems, *Journal of Network Protocols and Algorithms (JNPA),* vol. 2, no. 3, Oct 2010, pp. 116–136.

25. Christian Esposito, Domenico Controneo, **Aniruddha Gokhale** and Douglas C. Schmidt, Architectural Evolution of Monitor and Control Systems - Issues and Challenges, *Guest Editorial, Journal of Network Protocols and Algorithms (JNPA),* vol. 2, no. 3, Oct 2010, pp. 1–17.

Refereed Journal Publications as Tenure-track Faculty (Assistant Professor) at Vanderbilt; Sept 2003–Aug 2010: [Total = 25]

1. James Hill, James Edmondson, **Aniruddha Gokhale** and Douglas C. Schmidt, Tools for Continuously Evaluating Distributed System Qualities, *IEEE Software,* vol. 27, no. 4, Jul-Aug 2010, pp. 65–71.

2. Jules White, James Hill, Sumant Tambe, Jeff Gray, **Aniruddha Gokhale**, and Douglas C. Schmidt Improving Domain-specific Language Reuse through Software Product-line Configuration Techniques, *IEEE Software Special Issue: Domain-Specific Languages and Modeling,* Jonathan Sprinkle, Marjan Mernik, Juha-Pekka Tolvanen, and Diomidis Spinellis, eds., Vo. 26, No.3, Jul/Aug 2009, pp. 47–53.

3. Yuehua Lin, Jeff Gray, Jing Zhang, Steve Nordstrom, **Aniruddha Gokhale**, Sandeep Neema, and Swapna Gokhale, Model Replication: Transformations to Address Model Scalability, *Software: Practice and Experience,* vol. 38, no. 14, Nov 2008, pp. 1475–1497.

4. **Aniruddha Gokhale**, Krishnakumar Balasubramanian, Jaiganesh Balasubramanian, Arvind S. Krishna, George Edwards, Gan Deng, Jeff Parsons and Douglas C. Schmidt, Model Driven Middleware: A New Paradigm for Developing and Provisioning Distributed Real-time and Embedded Applications, *Elsevier Journal of Science of Computer Programming, Special Issue on Foundations and Applications of Model Driven Architectures,* Editors Mehmut Aksit and Ivan Kurtev, vol. 73, No. 1, Sept 2008, pp. 39–58.

5. James Hill and **Aniruddha Gokhale**, Towards Improving End-to-End Performance of Distributed Real-time and Embedded Systems Using Baseline Profiles, Best Papers from *6th International Conference on Software Engineering Research, Management and Applications (SERA 08),* Prague, Czech Republic, Aug 20–22, 2008, Published in Springer Journal of Studies in Computational Intelligence, Edited by Roger Lee, vol. 150, no. 14, 2008, pp. 43–57.

6. Jules White, Douglas C. Schmidt and **Aniruddha Gokhale**, Simplifying Autonomic Enterprise Java Bean Applications via Model-driven Engineering and Simulation, *Journal of Software and Systems Modeling,* Vol. 7, No. 1, Feb 2008, pp. 3–23.

7. James Hill and **Aniruddha Gokhale**, Model-driven Engineering for Early QoS Validation of Component-based Software Systems, *Journal of Software (JSW)*, Vol. 2, No. 3, Sep 2007, pp. 9–18.

8. **Aniruddha Gokhale**, Dimple Kaul, Arundhati Kogekar, Jeff Gray, and Swapna Gokhale, POSAML: A Visual Modeling Framework for Middleware Provisioning, *Elsevier Journal of Visual Languages and Computing (JVLC 2007)*, Vol. 18, No. 4, Aug 2007, pp. 359–377.

9. Upsorn Praphamontripong, Swapna Gokhale, **Aniruddha Gokhale**, and Jeff Gray, An Analytical Approach to Performance Analysis of an Asynchronous Web Server, *Simulation: Transactions of the Society for Modeling and Simulation,* Vol. 83, No. 8, Aug 2007, pp. 571–586.

10. Patrick Lardieri, Jaiganesh Balasubramanian, Douglas C. Schmidt, Gautam Thaker, **Aniruddha Gokhale**, and Tom Damiano, A Multi-layered Resource Management Framework for Dynamic Resource Management in Enterprise DRE Systems, *The Journal of Systems and Software (JSS): Special issue on Dynamic Resource Management in Distributed Real-Time Systems,* editors C. Cavanaugh and F. Drews and L. Welch, Vol. 80, No. 7, July 2007, pp. 984–996.

11. Venkita Subramonian, Gan Deng, Christopher Gill, Jaiganesh Balasubramanian, Liang-Jui Shen, William Otte, Douglas C. Schmidt, **Aniruddha Gokhale**, and Nanbor Wang, The Design and Performance of Component Middleware for QoS-enabled Deployment and Conguration of DRE Systems, *Elsevier Journal of Systems and Software, Special Issue Component-Based Software Engineering of Trustworthy Embedded Systems,* Vol. 80, No. 5, Mar 2007, pp. 668–677.

12. Krishnakumar Balasubramanian, Jaiganesh Balasubramanian, Jeff Parsons, **Aniruddha Gokhale**, and Douglas C. Schmidt, A Platform-Independent Component Modeling Language for Distributed Real-time and Embedded Systems, *Elsevier Journal of Computer and System Sciences,* Vol. 73, No 2, Mar 2007, pp. 171–185.

13. Cemal Yilmaz, Adam Porter, Arvind S. Krishna, Atif Memon, Douglas C. Schmidt, and **Aniruddha Gokhale**, Reliable Effects Screening: A Distributed Continuous Quality Assurance Process for Monitoring Performance Degradation in Evolving Software Systems, *IEEE Transactions on Software Engineering,* Vol. 33, No. 2, Feb 2007, pp. 124–141.

14. Krishnakumar Balasubramanian, **Aniruddha Gokhale**, Yuehua Lin, Jing Zhang and Jeff Gray, Weaving Deployment Aspects into Domain-specific Models, International Journal of Software Engineering and Knowledge Engineering (IJSEKE), vol. 16., no. 3, Jun 2006, pp. 403–424.

15. Cemal Yilmaz, Atif Memon, Adam Porter, Arvind S. Krishna, Douglas C. Schmidt and **Aniruddha Gokhale**, Techniques and Processes for Improving the Quality and Performance of Open-Source Software, Software Process - Improvement and Practice: A Special Issue on Free/Open Source Software Processes, A publication of Wiley InterScience (a group of John Wiley & Sons, Inc.), vol 11, no 2, May 2006, pages 163-176.

16. Krishnakumar Balasubramanian, Arvind S. Krishna, Emre Turkay, Jaiganesh Balasubramanian, **Aniruddha Gokhale** and Douglas C. Schmidt, Applying Model-Driven Development to Distributed Real-time and Embedded Avionics Systems, Invited Paper to *International Journal of Embedded Systems, Special Issue on Design and Verification of Real-time Embedded Software,* Vol. 2, No.3/4, 2006, pp. 142–155.

17. Krishnakumar Balasubramanian, **Aniruddha Gokhale**, Gabor Karsai, Janos Sztipanovits and Sandeep Neema, Developing Applications Using Model-Driven Design Environments, *IEEE Computer,* Vol. 39, No. 2, Feb 2006, pp. 33-40.

18. Arvind S. Krishna, **Aniruddha Gokhale**, Douglas C. Schmidt, John Hatcliff, and Venkatesh Prasad Ranganath, Towards Highly Optimized Real-time Middleware for Software Product-line Architectures, ACM SIGBED Review, Vol. 3, No. 1, Jan 2006, pp. 13–16.

19. Arvind S. Krishna, Cemal Yilmaz, Adam Porter, Atif Memon, Douglas C. Schmidt and **Aniruddha Gokhale**, Distributed Continuous Quality Assurance Process for Evaluating QoS of Performance Intensive Software, *Journal of Studia Infomatica Universalis,* Vol. 4, No. 1, March 2005, pp. 53–72.

20. Arvind S. Krishna, Nanbor Wang, Balachandran Natarajan, **Aniruddha Gokhale**, Douglas C. Schmidt and Gautam Thaker, CCMPerf: A Benchmarking Tool for CORBA Component Model Implementations, *International Journal of Time-critical Computing Systems,* Springer, Vol. 29, Nos 2-3, March-April 2005, pp. 281–308.

21. Janos Sztipanovits, Gautam Biswas, Ken Frampton, **Aniruddha Gokhale**, Larry Howard, Gabor Karsai, T. John Koo, Xenofon Koutsoukos, and Douglas C. Schmidt, Introducing Embedded Software and Systems Education and Advanced Learning Technology in an Engineering Curriculum, *Special issue of Education, ACM Transaction on Embedded Systems,* Editors Alan Burns and Alberto Sangiovanni-Vincentelli, Vol 4, No. 3, Aug 2005, pp 549–568.

22. Arvind S. Krishna, Cemal Yilmaz, Atif Memon, Adam Porter, Douglas C. Schmidt, **Aniruddha Gokhale**, and Balachandran Natarajan, Preserving Distributed Systems Critical Properties: A Model-Driven Approach, *IEEE Software Special Issue on the Persistent Software Attributes,* Vol. 21, No. 6, Nov/Dec 2004, pp. 32–40.

23. **Aniruddha Gokhale**, Douglas C. Schmidt, Balachandran Natarajan and Joseph Cross, Towards Dependable Real-time CORBA Middleware, *The Cluster Computing Journal Special Issue on Dependable Distributed Systems,* Editor Alan George, Vol 7, No. 4, Oct 2004, pp. 331–346.

24. Douglas C. Schmidt, **Aniruddha Gokhale**, and Balachandran Natarajan Frameworks: What are They and Why are they Important?, *ACM Queue Magazine,* Vol. 2, No.5, Jul/Aug 2004, pp. 66–75.

25. Douglas C. Schmidt, **Aniruddha Gokhale**, Richard Schantz, and Joesph Loyall, Middleware R&D Challenges for Distributed Real-time and Embedded Systems, *ACM SIGBED Review,* Vol. 1, No. 1, April 2004, pp. 6–12.

Refereed Journal Publications (as Research Scientist at Vanderbilt; Jan 2002–Aug 2003): [Total = 3]

1. Nanbor Wang, Douglas C. Schmidt, **Aniruddha Gokhale**, Christopher D. Gill, Balachandran Natarajan, Craig Rodrigues, Joseph P. Loyall and Richard E. Schantz, Total Quality of Service Provisioning in Middleware and Applications, *The Journal of Microprocessors and Microsystems,* Elsevier Publishers, Vol 27, No. 2, Mar 2003, Editor: Paolo Bellavista, pp. 45–54.

2. **Aniruddha Gokhale**, Douglas C. Schmidt, Balachandran Natarajan, and Nanbor Wang, Applying Model-Integrated Computing to Component Middleware and Enterprise Applications, *Special issue of Communications of ACM on Enterprise Components, Services, and Business Rules,* Vol 45, No 10, pp 65–70, Oct 2002, Editor: Ali Arsanjani.

3. Douglas C. Schmidt, Balachandran Natarajan, **Aniruddha Gokhale**, Chris Gill, and Nanbor Wang, TAO: A Pattern-Oriented Object Request Broker for Distributed Real-time and Embedded Systems, *Distributed Online Systems Journal,* Special Issue on Significant Middleware Research, April 2002.

Refereed Journal Publications (Prior to Vanderbilt Positions): [Total = 5]

1. Douglas C. Schmidt, Sumedh Mungee, Sergio Flores, and **Aniruddha Gokhale**, Software Architectures for Reducing Priority Inversion and Non-determinism in Real-time Object Request Brokers, *Journal of Real-time Systems, Special Issue on Real-Time Computing in the Age of the Web and the Internet,* Kluwer Academic Publishers, September 2001.

2. Irfan Pyarali, Carlos O'Ryan, Douglas C. Schmidt, Nanbor Wang, Vishal Kachroo, and **Aniruddha Gokhale**, Applying Optimization Principle Patterns to Real-Time ORBs, *IEEE Concurrency Magazine,* Vol. 8, No. 1, pp. 16–25, January-March 2000.

3. **Aniruddha Gokhale** and Douglas C. Schmidt, Optimizing a CORBA IIOP Protocol Engine for Minimal Footprint Multimedia Systems, *IEEE Journal on Selected Areas in Communication, Special Issue on Service Enabling Platforms for Networked Multimedia Systems,* Vol. 17, No. 9, 1673–1706, September 1999.

4. **Aniruddha Gokhale** and Douglas C. Schmidt, Measuring and Optimizing CORBA Latency and Scalability Over High-speed Networks, *IEEE Computer Society's Journal of Transactions on Computers*, Vol. 47, No. 4, pp. 391–413, April 1998.

5. Douglas C. Schmidt, **Aniruddha Gokhale**, Tim Harrison, and Guru Parulkar, A High-performance Endsystem Architecture for Real-time CORBA, *IEEE Communications Magazine*, Vol. 14, No. 2, February, 1997, pp. 72–77.

Edited and Authored Books [Total = 9]

1. Abhishek Dubey, **Aniruddha Gokhale**, Sokwoo Rhee and Monika Sturm, Editors, "Proceedings of Second International Workshop on Science of Smart City Operations and Platforms Engineering (SCOPE)," CPSWeek 2017, Pittsburgh, PA, USA, April 2017.

2. Abhishek Dubey, **Aniruddha Gokhale**, Sokwoo Rhee and Monika Sturm, Editors, "Proceedings of First International Workshop on Science of Smart City Operations and Platforms Engineering (SCOPE) in partnership with Global City Teams Challenge (GCTC) ," CPSWeek 2016, Vienna, Austria, April 11, 2016.

3. Nikolaos Georgantas and **Aniruddha Gokhale**, Editors, "Proceedings of the 2015 Adaptive and Reflective Middleware (ARM'15) Workshop," ACM/IFIP/Usenix Middleware Conference, Vancouver, Canada, Dec 8, 2015.

4. Christian Kaestner and **Aniruddha Gokhale**, Editors, "Proceedings of the 2015 ACM SIGPLAN International Conference on Generative Programming: Concepts and Experiences (GPCE)," Pittsburgh, PA, USA, Oct 26-27, 2015.

5. **Aniruddha Gokhale** and Rodolfo Pellizoni, Editors, "Proceedings of the RTSS@Work: Open Demo Session of Real-Time Systems," IEEE Real-time Systems Symposium (RTSS), Vancouver, Canada, December 3, 2013.

6. Ileana Ober, **Aniruddha Gokhale,** James Hill, Jean-Michel Bruel, Michael Felderer, David Lugato, and Akshay Dabholkar, Editors, *Proceedings of the Second International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL),* Satellite event of ACM/IEEE MODELS 2013, Miami Beach, FL, Sept 29, 2013.

7. Ileana Ober, Geri Georg, Jean-Michel Bruel, **Aniruddha Gokhale,** Michael Felderer, and David Lugato, "Proceedings of the *First International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL),*" Satellite event of ACM/IEEE MODELS 2012, ACM publisher, Innsbruck, Austria, 2012.

8. **Aniruddha Gokhale** and Douglas Schmidt, Editors, "Proceedings of the Third ACM International Conference on Distributed Event-Based Systems, DEBS 2009," Nashville, Tennessee, USA, July 6-9, 2009.

9. Dimple Kaul and **Aniruddha Gokhale**, "Automating Middleware Configuration and Specializations via Model-based Aspect-Oriented Software Development," MS thesis published as a monograph by *VDM Verlag Dr. Mueller,* Saarbruecken, Germany, ISBN: 9783836435109, Jan 2008, pages 104.

Book Chapters [Total = 27]

1. Shashank Shekhar, Ajay Dev Chhokra, Anirban Bhattacharjee, Yogesh Barve, Shweta Khare, Guillaume Pallez, Hongyang Sun and **Aniruddha S. Gokhale,** INDICES: Applying DDDAS Principles for Performance Interference-aware Cloud-to-Fog Application Migration, in the *Handbook of Dynamic Data Driven Applications Systems,* Frederica Darema and Erik Blasch, Volume 2, Springer Nature publisher, 2022, To Appear.

2. Yi Li, Shashank Shekhar, Yevgeniy Vorobeychik, Xenofon D. Koutsoukos and **Aniruddha S. Gokhale,** Simulation-Based Optimization as a Service for Dynamic Data-Driven Applications Systems, in the *Handbook of Dynamic Data Driven Applications Systems,* Frederica Darema, Erik Blasch, Alex Aved and Sai Ravela, 2nd Edition, Springer Vol 1, 2022, pp. 603–627.

3. Anirban Bhattacharjee, Yogesh Barve, Shweta Khare, Shunxing Bao, Zhuangwei Kang, **Aniruddha Gokhale,** and Thomas Damiano, "Toward Rapid Development and Deployment of Machine Learning Pipelines across Cloud-Edge," Chapter 5 in *Deep Learning for Internet of Things Infrastructure,* Al-Sakib Khan Pathan and Uttam Ghosh eds, CRC Press, Sept 2021.

4. Akram Hakiri and **Aniruddha Gokhale,** A Software Defined Blockchain-based Architecture for Scalable and Tamper-Resistant Smart Cities Network, Chapter 12 in *Communication Technologies for Networked Smart Cities,* Shree Krishna Sharma, Nalin Jayakody, Symeon Chatzinotas and Alagan Anpalagan eds, IET Publishers, June 2021, pp. 275–300.

5. Akram Hakiri, **Aniruddha Gokhale,** and Nicolae Tapus, "BlockCare: SDN-enabled Blockchain Framework for Securing Decentralized Healthcare and Precision Medicine Applications," *Smart Systems for E-health* of the *Advanced Information and Knowledge Processing* series, Springer International, April 2021.

6. Yi Li, Shashank Shekhar, Yevgeniy Vorobeychik, Xenofon D. Koutsoukos and **Aniruddha S. Gokhale,** Simulation-Based Optimization as a Service for Dynamic Data-Driven Applications Systems, in the *Handbook of Dynamic Data Driven Applications Systems,* Frederica Darema, Erik Blasch, Alex Aved and Sai Ravela, 2nd Edition, Springer Nature publisher, 2018 and 2021, pp. 589–614.

7. Shashank Shekhar, Fangzhou Sun, Abhishek Dubey, **Aniruddha Gokhale,** Himanshu Neema, Martin Lehofer, and Dan Freudberg, "TransitHub: A Smart Decision Support System for Public Transport Operations," *Internet of Things and Data Analytics Handbook,* Hwaiyu Geng Eds., Wiley publisher, 2017, pp. 597–612.

8. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale,** "Quantitative Productivity Analysis of a Domain-Specific Modeling Language," *Handbook of Research on Innovations in Systems and Software Engineering,* a book edited by Vicente Garcia Diaz, Juan Manuel Cueva Lovelle and B. Christina Pelayo Garcia-Bustelo, IGI Global, 2014, pp. 313–344.

9. Hamilton Turner, Jules White, Jeff Reed, Jose Galindo, Adam Porter, Madhav Marathe, Anil Vullikanti, and **Aniruddha Gokhale,** "Building a Cloud-based Mobile Application Testbed," *Software Testing in the Cloud: Perspective on an Emerging Discipline,* Book editors: Scott Tilley and Tauhida Parveen, IGI Global publishers, Nov 2012, pp. 382–403.

10. Kyoungho An, Adam Trewyn, **Aniruddha Gokhale,** and Shivakumar Sastry, "Design and Transformation of Domain-specific Language for Reconfigurable Conveyor Systems," *Formal and Practical Aspects of Domain-Specific Languages: Recent Developments,* IGI Global publishers, Book Editor: Marjan Mernik, Sept 2012, pp. 551–569.

11. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale,** "Productivity Analysis for the Distributed QoS Modeling Language," *Model-Driven Domain Analysis and Software Development: Architectures and Functions,* a book edited by Janis Osis and Erika Asnina, IGI Global, 2011, pp. 156–176.

12. Yu Sun, Jules White, Jeff Gray, and **Aniruddha Gokhale,** "Model-Driven Automated Error Recovery in Cloud Computing," *Model-Driven Domain Analysis and Software Development: Architectures and Functions,* a book edited by Janis Osis and Erika Asnina, IGI Global, 2011, pp. 136–155.

13. Jeff Gray, Sandeep Neema, Jing Zhang, Yuehua Lin, Ted Bapty, **Aniruddha Gokhale**, and Douglas C. Schmidt, "Concern Separation for Adaptive QoS Modeling in Distributed Real-Time Embedded Systems," Book chapter in *Behavioral Modeling for Embedded Systems and Technologies: Applications for Design and Implementation,* (Luis Gomes and Joao Fernandes, eds.), Idea Group, 2009.

14. **Aniruddha Gokhale**, "Request Broker," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, pp. 2415–2418.

15. **Aniruddha Gokhale**, ".NET Remoting," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, page 1899.

16. **Aniruddha Gokhale**, "RMI," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, pp. 2441–2442.

17. **Aniruddha Gokhale**, "CORBA," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, pp. 500–501.

18. **Aniruddha Gokhale**, "DCE," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, pp. 756–757.

19. **Aniruddha Gokhale**, "DCOM," Book chapter for Encyclopedia of Database Systems, Springer, Edited by Ozsu, M. Tamer and Liu, Ling, ISBN: 978-0-387-39940-9, Published Nov 2009, page 757.

20. Gan Deng, Douglas C. Schmidt, **Aniruddha Gokhale**, Jeff Gray, Yuehua Lin, and Gunther Lenz, Supporting Evolution in Model-Driven Software Product-line Architectures, Book chapter in *Software Applications: Concepts, Methodologies, Tools, and Applications,* Edited by Dr. Pierre F. Tiako, Information Science Reference Publisher, Idea Group, ISBN: 978-1-60566-060-8, 2009.

21. Gan Deng, Douglas C. Schmidt, **Aniruddha Gokhale**, Jeff Gray, Yuehua Lin, and Gunther Lenz, Supporting Evolution in Model-Driven Software Product-line Architectures, Book chapter also appeared in *Designing Software-Intensive Systems: Methods and Principles,* Edited by Dr. Pierre F. Tiako, Information Science Reference Publisher, Idea Group, ISBN: 9781599046990, 2008, Chap 5, pp. 102–132.

22. Jeff Gray, Juha-Pekka Tolvanen, Steven Kelly, **Aniruddha Gokhale**, Sandeep Neema, and Jonathan Sprinkle, "Domain-Specific Modeling," *Handbook on Dynamic System Modeling,* (Paul Fishwick, ed.), CRC Press, ISBN: 1584885653, 2007, Chap 7, pp. 7.1–7.20.

23. Douglas C. Schmidt, Krishnakumar Balasubramanian, Arvind S. Krishna, Emre Turkay, and **Aniruddha Gokhale**, Model-driven Development of Component-based Distributed Real-time and Embedded Systems, *Model Driven Development for Distributed Real-time and Embedded Systems,* edited by Sebastien Gerard, Joel Champea, and Jean-Philippe Babau, Hermes, 2005.

24. Gabriele Trombetti, **Aniruddha Gokhale**, Douglas C. Schmidt, A Model-driven Development Environment for Composing and Validating Distributed Real-time and Embedded Systems: A Case Study , *Model-driven Software evelopment - Volume II of Research and Practice in Software Engineering,* edited by Sami Beydeda and Volker Gruhn, Spring 2005.

25. **Aniruddha Gokhale**, Douglas C. Schmidt, Balachandran Natarajan, Jeff Gray, and Nanbor Wang, Model Driven Middleware, *Middleware for Communication,* Editor Qusay H. Mahmoud, Wiley Publications, ISBN: 0470862068, 2004, Chapter 30, pp 163–187.

26. Nanbor Wang, Douglas C. Schmidt, **Aniruddha Gokhale**, Chris Gill, Balachandran Natarajan, Joseph Loyall, Richard Schantz, and Craig Rodrigues, QoS-enabled Middleware, *Middleware for Communication,* Editor Qusay H. Mahmoud, Wiley Publications, 2004, pp 131–162.

27. Jeff Gray, Janos Sztipanovits, Ted Bapty, Sandeep Neema, **Aniruddha Gokhale** and Douglas C. Schmidt, Two-level Aspect Weaving to Support Evolution of Model-Based Software, *Aspect-Oriented Software Development,* Editors Robert Filman, Tzilla Elrad, Mehmet Aksit and Siobhan Clarke, Addison-Wesley Publisher, Reading, Massachusettes, ISBN: 0321219767, 2004, Chapter 30, pp 681–710.

Refereed Conference & Symposium Publications [Total = 158]

Selective Refereed Conferences (<= 35% Acceptance Rate)

As Tenured Faculty (Full Profesor) at Vanderbilt starting July 2018 [Total = 19]

1. Shuang Zhou, **Aniruddha Gokhale,** Abhishek Dubey, Shashank Shekhar and Ajay Chhokra, Drift Detection and Adaptation for Federated Learning in IoT with Adaptive Device Management, Special session Special Session on Federated Learning on Big Data at *IEEE International Conference on Big Data (BigData),* Washington, DC, USA, Dec 15–18, 2024, To Appear

   [Acceptance rate: *TBD*.**]**

   Ziran Min, Ziteng Liu, Zhuangwei Kang, Shuang Zhou, Swapna Gokhale, Shashank Shekhar, Charif Mahmoudi and **Aniruddha Gokhale,** A Novel 5G Digital Twin Approach for Traffic Prediction and Elastic Network Slice Management, Invited talk at *16th International Conference on COMmunication Systems & NETworkS (COMSNETS),* Bengaluru, India, 2024, pp. 497-505, doi:10.1109/COMSNETS59351.2024.10427071.

2. Zhuangwei Kang, Ziran Min, Shuang Zhou, Yogesh Barve and **Aniruddha Gokhale,** Towards High-Performance Data Loading in Cloud-Native Deep Learning Systems, *16th International Conference on COMmunication Systems & NETworkS (COMSNETS)*, Bengaluru, India, Jan 3–7, 2024, pp. 361–369.

   [Acceptance rate: *TBD*.**]**

3. Akhilesh Raj, Swann Perarnau and **Aniruddha Gokhale,** A Reinforcement Learning Approach for Performance-aware Reduction in Power Consumption of Data Center Compute Nodes, *11th IEEE International Conference on Cloud Engineering (IC2E),* Boston, MA, USA, Sept 25–28, 2023, pp 121–130.

   [Acceptance rate: 33%.**]**

4. Ziran Min, Swapna Gokhale, Shashank Shekhar, Charif Mahmoudi, Zhuangwei Kang, Yogesh Barve and **Aniruddha Gokhale,** 'Research: A Classification Framework for IoT Network Traffic Data for Provisioning 5G Network Slices in Smart Computing Applications, 9th IEEE International Conference on Smart Computing (SMARTCOMP) 2023, Nashville, TN, USA, June 26–29, 2023, pp. 133–140.

   [Acceptance rate: 25%.**]**

5. Shuang Zhou, Yuankai Huo, Shunxing Bao, Bennett Landman and **Aniruddha Gokhale,** FedACA: An Adaptive Communication-Efficient Asynchronous Framework for Federated Learning, *IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS),* CA, USA, 2022, pp. 71-80.

   [Acceptance rate: 32%.**]**

6. Xingyu Zhou, Robert Canady, Yi Li, Shunxing Bao, Yogesh Barve, Daniel Balasubramanian, and **Aniruddha Gokhale,** Guarding Against Universal Adversarial Perturbations in Data-driven Cloud/Edge Services, *11th IEEE International Conference on Cloud Engineering (IC2E),* Pacific Grove, CA, USA, 2022, pp. 233-244.

   [Acceptance rate: 30%.**]**

7. Ziran Min, Hongyang Sun, Shunxing Bao, **Aniruddha Gokhale** and Swapna Gokhale, A Self-Adaptive Load Balancing Approach for Software-Defined Networks in IoT, *IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS),* Washington, DC, USA, 2021, pp. 11-20.

   [Acceptance rate: 25%.**]**

8. Zhuangwei Kang, Kyoungho An, **Aniruddha Gokhale,** and Paul Pazandak, A Comprehensive Performance Evaluation of Different Kubernetes CNI Plugins for Edge-based and Containerized Publish/Subscribe Applications, *9th IEEE International Conference on Cloud Engineering (IC2E),* San Francisco, CA, Oct 4-8, 2021, pp. 31–42.

   [Acceptance rate: 30%.**]**

9. David Bermbach, Abhishek Chandra, Chandra Krintz, **Aniruddha Gokhale,** Aleksander Slominski, Lauritz Thamsen, Everton Cavalcante, Tian Guo, Ivona Brandic, and Rich Wolski, On the Future of Cloud Engineering, Invited Paper at *IEEE International Conference on Cloud Engineering (IC2E),* San Francisco, CA, USA, 2021, pp. 264-275.

   [Acceptance rate: 30%.**]**

10. Xingyu Zhou, Robert Canady, Shunxing Bao, and **Aniruddha Gokhale,** Cost-effective Hardware Accelerator Recommendation for Edge Computing, *3rd USENIX Workshop on Hot Topics in Edge Computing (HotEdge '20),* Virtual, June 25–26, 2020, pp. 7

    [Acceptance rate: 35%.**]**

11. Anirban Bhattacharjee, Yogesh Barve, Shweta Khare, Shunxing Bao, Zhuangwei Kang, **Aniruddha Gokhale,** and Thomas Damiano, STRATUM: A BigData-as-a-Service for Lifecycle Management of IoT Analytics Applications, *IEEE International Conference on Big Data (BigData' 19),* Los Angeles, CA, USA, December 9–12, 2019, pp. 1607–1612.

    [Acceptance rate: 17%.**]**

12. Shweta Khare, Hongyang Sun, Julien Gascon-Samson, Kaiwen Zhang, Yogesh Barve, **Aniruddha Gokhale,** and Xenofon Koutsoukos, Linearize, Predict and Place: Minimizing the Makespan for Edge-based Stream Processing of Directed Acyclic Graphs, *4th ACM/IEEE Symposium on Edge Computing,* Washington, DC, USA, Nov 7–9, 2019, pp. 1–14.

    [Acceptance rate: 33%.**]**

13. Anirban Bhattacharjee, Ajay Dev Chhokra, Zhuangwei Kang, Hongyang Sun, and **Aniruddha Gokhale,** BARISTA: Efficient and Scalable Deep Learning Prediction Serving using Serverless Computing, *IEEE International Conference on Cloud Engineering (IC2E),* Prague, Czech Republic, June 24–27, 2019, pp. 23–33.

    [Acceptance rate: 26%.**]**

14. Yogesh Barve, Shashank Shekhar, Shweta Khare, Anirban Bhattacharjee, Zhuangwei Kang, Hongyang Sun, and **Aniruddha Gokhale,** FECBench: A Lightweight Interference-aware Approach for Application Performance Modeling, *IEEE International Conference on Cloud Engineering (IC2E),* Prague, Czech Republic, June 24–27, 2019, pp. 211–221. **BEST PAPER AWARD.**

    [Acceptance rate: 26%.**]**

15. Shashank Shekhar, Ajay Dev Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, and Xenofon Koutsoukos, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *IEEE Symposium on Real-time Computing (ISORC 2019),* Valencia, Spain, May 7–9, 2019, pp. 118–125.

    [Acceptance rate: 35%.**]**

16. Shunxing Bao, Prasanna Parvarthaneni, Yuankai Huo, Yogesh Barve, Andrew J. Plassard, Yuang Yao, Ilwoo Lyu, David H. Zald, Bennett A. Landman, and **Aniruddha Gokhale,** Technology Enablers for Big Data, Multi-Stage Analysis in Medical Image Processing, *IEEE International Conference on Big Data (BigData),* Seattle, WA, USA, Dec 11–14, 2018, pp. 1337–1346.

    [Acceptance rate: 18.9%.**]**

17. Yogesh Barve, Shashank Shekhar, UPSARA: A Model-driven Approach for Performance Analysis of Cloud-hosted Applications, 11th IEEE/ACM International Conference on Utility and Cloud Computing (UCC), Zurich, Switzerland, Dec 17–20, 2018, pp. 1–10.

    [Acceptance rate: 20.5%.**]**

18. Shweta Khare, Hongyang Sun, Kaiwen Zhang, Julien Gascon-Samson, **Aniruddha Gokhale,** Xenofon Koutsoukos, and Hamzah Abdel Aziz, Scalable Edge Computing Architectures for Low Latency Data Dissemination in Topic-based Publish/Subscribe, *The Third ACM/IEEE Symposium on Edge Computing (SEC),* Bellevue, WA, USA, Oct 25–27, 2018, pp. 214–227.

    [Acceptance rate: 35%.**]**

19. Shashank Shekhar, Hamzah Abdel-Aziz, **Aniruddha Gokhale,** and Xenofon Koutsoukos, Performance-Aware Vertical Elasticity for Latency-Sensitive Applications, *IEEE International Conference on Cloud Computing (CLOUD),* San Francisco, CA, USA, July 2–7, 2018, pp. 82–89.

    [Acceptance rate: 15%.**]**

As Tenured Faculty (Associate Professor) at Vanderbilt from Sep 2010–June 2018. [Total = 31]

1. Prithviraj Patil, Akram Hakiri, Shashank Shekhar, and **Aniruddha Gokhale,** Software-defined Adaptive Resource Management for Cloud-hosted Group Communication Applications, *ACM/IEEE International Conference on Utility Cloud Computing (UCC),* Austin, TX, Dec 2017, pp. 111–120.

    [Acceptance rate: 27%.**]**

2. Kyoungho An, Shweta Khare, and **Aniruddha Gokhale,** An Autonomous and Dynamic Coordination and Discovery Service for Wide-Area Peer-to-peer Publish/Subscribe, Experience Paper in *The 11th ACM International Conference on Distributed and Event-Based Systems (DEBS),* Barcelona, Spain, June 19–23, 2017, pp. 239–248.

    [Acceptance rate: 24%.**]**

3. Shashank Shekhar, Ajay Chhokra, Anirban Bhattacharjee, Guillaume Aupy, and **Aniruddha Gokhale,** INDICES: Exploiting Edge Resources for Performance-aware Cloud-hosted Services, *1st IEEE/ACM International Conference on Fog and Edge Computing (ICFEC),* Madrid, Spain, 2017, pp. 75–80.

    [Acceptance rate: 24%.**]**

4. Shunxing Bao, Andrew Plassard, Bennett A. Landman and **Aniruddha Gokhale,** Cloud Engineering Principles and Technology Enablers for Medical Image Processing-as-a-Service, *IEEE International Conference on Cloud Engineering (IC2E),* Vancouver, BC, Canada, Apr 2017, pp. 127–137.

    [Acceptance rate: 24%.**]**

5. Prithviraj Patil, and Akram Hakiri and Yogesh Barve, and **Aniruddha Gokhale,** Enabling Software-Defined Networking for Wireless Mesh Networks in Smart Environments, *15th IEEE International Symposium on Network Computing and Applications (NCA 2016),* Cambridge, MA, USA, Oct 31–Nov 2, 2016, pp. 153–157.

    [Acceptance rate: 30%.**]**

6. Akram Hakiri and **Aniruddha Gokhale,** Data-Centric Publish/Subscribe Routing Middleware for Realizing Proactive Overlay Software-Defined Networking, *10th ACM International Conference on Distributed and Event-based Systems (DEBS)* ACM publisher, Irvine, CA, USA, June 20–24, 2016, pp. 246–257.

    [Acceptance rate: 25%.**]**

7. Yogesh Barve, Prithviraj Patil and **Aniruddha Gokhale,** A Cloud-based Immersive Learning Environment for Distributed Systems Algorithms, *40th IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC) Symposium on Computing Education & Learning Technologies (CELT),* IEEE publisher, Atlanta, GA, USA, June 10–14, 2016, pp. 754–763.

   [Acceptance rate: 18%.**]**

8. Shunxing Bao and **Aniruddha Gokhale,** Reasoning for CPS Education using Surrogate Simulation Models, *40th IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC) Symposium on Computing Education & Learning Technologies (CELT),* IEEE publisher, Atlanta, GA, USA, June 10–14, 2016, pp. 764–773.

   [Acceptance rate: 18%.**]**

9. Prithviraj Patil, Akram Hakiri, and **Aniruddha Gokhale,** Cyber Foraging and Offloading Framework for Internet of Things, *40th IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC) Symposium on IT in Practice (ITiP),* IEEE publisher, Atlanta, GA, USA, June 10–14, 2016, pp. 360–368.

   [Acceptance rate: 18%.**]**

10. Faruk Caglar, Shashank Shekhar, **Aniruddha Gokhale,** and Xenofon Koutsoukos, An Intelligent, Performance Interference-aware Resource Management Scheme for IoT Cloud Backends, *1st IEEE International Conference on Internet-of-Things: Design and Implementation,* IEEE publisher, Berlin, Germany, April 2016, pp. 95–105.

    [Acceptance rate: 20%.**]**

11. Shweta Khare, Kyoungho An, Sumant Tambe, **Aniruddha Gokhale,** and Ashish Meena, Industry Paper: Reactive Stream Processing for Data-centric Publish/Subscribe, *The 9th ACM International Conference on Distributed Event-Based Systems (DEBS' 15),* ACM publisher, Oslo, Norway, 2015, pp. 234–245, DOI:10.1145/2675743.2771880.

    [Acceptance rate: 19%.**]**

12. Satabdi Basu, Shashank Shekhar, Faruk Caglar, John Kinnebrew, Gautam Biswas, and **Aniruddha Gokhale,** Collaborative Problem Solving Using a Cloud-based Infrastructure to Support High School STEM Education, *ASEE Annual Conference K-12 and Pre-engineering Track,* ASEE publisher, Seattle, WA, USA, June 2015, pp. 26.359.1–26.359.21.

    [Acceptance rate: *NotSpecified*.**]**

13. Prithviraj Patil, Akram Hakiri, and **Aniruddha Gokhale,** Bootstrapping Software Defined Network for Flexible and Dynamic Control Plane Management, *1st IEEE Conference on Network Softwarization,* IEEE publisher, London, UK, April 2015, pp. 1–5, DOI:10.1109/NETSOFT.2015.7116132.

    [Acceptance rate: 16%.**]**

14. Takayuki Kuroda, and **Aniruddha Gokhale,** Model-based IT Change Management for Large System Definitions with State-related Dependencies, *18th IEEE International Enterprise Computing Conference (EDOC '14),* IEEE publisher, Ulm, Germany, 2014, pp. 170–179.

    [Acceptance rate: 22%.**]**

15. Faruk Caglar, and **Aniruddha Gokhale,** iOverbook: Managing Cloud-based Soft Real-time Applications in a Resource-Overbooked Data Center, *The 7th IEEE International Conference on Cloud Computing (CLOUD' 14),* IEEE publisher, Anchorage, AL, USA, June 2014, pp. 538–545.

    [Acceptance rate: 18%.**]**

16. Faruk Caglar, Shashank Shekhar, and **Aniruddha Gokhale,** iPlace: An Intelligent and Tunable Power- and Performance-Aware Virtual Machine Placement Technique for Cloud-based Real-time Applications, *17th IEEE Computer Society Symposium on Object/component/service-oriented real-time distributed Computing Technology (ISORC '14).,* IEEE publisher, Reno, NV, USA, June 2014, pp. 48–55.

    [Acceptance rate: 35%.**]**

17. Kyoungho An, Sumant Tambe, Paul Pazandak, Gerardo Pardo-Castello, **Aniruddha Gokhale,** and Douglas C. Schmidt, Content-based Filtering Discovery Protocol (CFDP): Scalable and Efficient OMG DDS Discovery Protocol, *8th ACM International Conference on Distributed Event-based Systems (DEBS),* IEEE publisher, Mumbai, India, 2014, pp. 130–141.

    [Acceptance rate: 9%.**]**

18. Takayuki Kuroda, and **Aniruddha Gokhale,** Model-based Automation for Hardware Provisioning in IT Infrastructure, *8th IEEE International Systems Conference (SysCon '14),* IEEE publisher, Ottawa, ON, Canada, March 2014, pp. 293–300.

    [Acceptance rate: *Unknown.***]**

19. Dili Wu, and **Aniruddha Gokhale,** A Self-Tuning System based on Application Profiling and Performance Analysis for Optimizing Hadoop MapReduce Cluster Configuration, *20th Annual IEEE International Conference on High Performance Computing (HiPC '13),* IEEE publisher, Bengaluru, India, 2013, pp. 89–98.

    [Acceptance rate: 25%.**]**

20. Kyoungho An, Takayaki Kuroda, **Aniruddha Gokhale,** Sumant Tambe, and Andrea Sorbini, Model-driven Generative Framework for Automated OMG DDS Performance Testing in the Cloud, *12th International Conference on Generative Programming: Concepts & Experiences (GPCE'13),* ACM publisher, Indianapolis, IN, USA, 2013, pp. 179–182.

    [Acceptance rate: 33%.**]**

21. Anton Dukeman, Faruk Caglar, Shashank Shekhar, John Kinnebrew, Gautam Biswas, Doug Fisher, and **Aniruddha Gokhale,** Teaching Computational Thinking Skills in C3STEM with Traffic Simulation, *Human-Computer Interaction and Knowledge Discovery in Complex, Unstructured, Big Data,* Springer Berlin Heidelberg publisher, 2013, pp. 350-357.

    [Acceptance rate: 29%.**]**

22. William Otte, Abhishek Dubey, Subhav Pradhan, Prithviraj Patil, **Aniruddha Gokhale,** Gabor Karsai, Jeffrey Parsons, and Johnny Willemsen, F6COM: A Component Model for Resource-Constrained and Dynamic Space-based Computing Environment, *16th International Symposium on Object/component/service-oriented Real-time Computing (ISORC '13),* IEEE publisher, Paderborn, Germany, June 2013, pp. 1–8.

    [Acceptance rate: 35%.**]**

23. Abhishek Dubey, **Aniruddha Gokhale,** Gabor Karsai, William Otte, and Johnny Willemsen, A Model-Driven Software Component Framework for Fractionated Spacecraft, *Proceedings of the 5th International Conference on Spacecraft Formation Flying Missions and Technologies (SFFMT),* Munich, Germany, 2013, pp. 15.

    [Acceptance rate: 18%.**]**

24. Akshay Dabholkar, Abhishek Dubey, **Aniruddha Gokhale,** Gabor Karsai and Nagabhushan Mahadevan, Reliable Distributed Real-time and Embedded Systems Through Safe Middleware Adaptation, *31st IEEE International Symposium on Reliable Distributed Systems (SRDS '12),* Irvine, CA, USA, Oct 8–11, 2012, pp. 362–371.

    [Acceptance rate: 18%.**]**

25. William Otte, **Aniruddha Gokhale,** Douglas C. Schmidt and Johnny Willemsen, Infrastructure for Component-based DDS Application Development, *Tenth ACM International Conference on Generative Programming and Component Engineering (GPCE'11),* Portland, OR, USA, Oct 22–23, 2011, pp. 53–62.

    [Acceptance rate: 31%, 18/58.**]**

26. Nilabja Roy, Abhishek Dubey and **Aniruddha Gokhale,** Efficient Autoscaling in the Cloud using Predictive Models for Workload Forecasting, *4th IEEE International Conference on Cloud Computing (Cloud' 11),* Washington DC, USA, July 4–9, 2011, pp. 500–507.

    [Acceptance rate: 19%.**]**

27. Will Otte, **Aniruddha Gokhale,** and Douglas C. Schmidt, Techniques for Predictable Deployment Latencies in Large-scale Component-based Distributed Real-time and Embedded Systems, Proceedings of the *14th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE-2011),* Boulder, CO, USA, June 21–23, 2011, pp. 21–30.

    [Acceptance rate: 29%.**]**

28. Sumant Tambe, and **Aniruddha Gokhale,** Rectifying Orphan Components using Group-Failover in Distributed Real-time and Embedded Systems, Proceedings of the *14th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE-2011),* Boulder, CO, USA, June 21–23, 2011, pp. 139–148.

    [Acceptance rate: 29%.**]**

29. Kyoungho An, Adam Trewyn, **Aniruddha Gokhale,** and Shiva Sastry, Model-Driven Performance Analysis of Reconfigurable Conveyor Systems for Material Handling Applications, Proceedings of the *Second ACM/IEEE International Conference on Cyber Physical Systems (ICCPS 2011),* Chicago, IL, Apr 11–14, 2011, pp. 141–150.

    [Acceptance rate: 27%.**]**

30. Nilabja Roy, Abhishek Dubey, **Aniruddha Gokhale** and Larry Dowdy, A Capacity Planning Process for Performance Assurance of Component-based Distributed Systems, Proceedings of the *2nd ACM/SPEC International Conference on Performance Engineering (ICPE 2011),* Karlsruhe, Germany, Mar 14–16, 2011, pp. 259–270.

    [Acceptance rate: 30%.**]**

31. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale,** Adapting Distributed Real-time and Embedded Publish/Subscribe Middleware for Cloud-Computing Environments, Proceedings of the ACM/IFIP/USENIX 11th International Middleware Conference, Bangalore, India, November 30–Dec 3, 2010, pp. 21–41.

    [Acceptance rate: 16%.**]**

As Tenure-track Faculty (Assistant Professor) at Vanderbilt from Sep 2003–Aug 2010. [Total = 25]

1. Jaiganesh Balasubramanian, **Aniruddha Gokhale**, Friedhelm Wolf, Abhishek Dubey, Chenyang Lu, Chris Gill, and Douglas C. Schmidt, Middleware for Resource-Aware Deployment and Configuration of Fault-tolerant Real-time Systems, *16th IEEE Real-time and Embedded Technology and Applications Symposium (RTAS '10),* Stockhom, Sweden, April 12–15, 2010.

    [Acceptance rate: 22%.**]**

2. Akshay Dabholkar and **Aniruddha Gokhale,** Middleware Specialization for Product-Lines using Feature-Oriented Reverse Engineering, *7th International Conference on Information Technology: New Generations (ITNG) 2010, Track on Middleware and Network Applications Symposium (MNA 2010),* Las Vegas, NV, USA, April 12–14, 2010, pp. 696–701.

    [Acceptance rate: 28%.**]**

3. Nilabja Roy, Yuan Xue, **Aniruddha Gokhale**, Larry Dowdy and Douglas C. Schmidt, A Component Assignment Framework for Improved Capacity and Assured Performance in Web Portals, Proceedings of the 11th International Symposium on Distributed Objects, Middleware, and Applications (DOA'09) Vilamoura, Algarve-Portugal, Nov 01–03, 2009, pp. 671–689.

    [Acceptance rate: 30% $(Approx.\ 70/234\ among\ 4\ colocated\ conferences)$.**]**

4. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale**, Evaluating Transport Protocols for Real-time Event Stream Processing Middleware and Applications, Proceedings of the 11th International Symposium on Distributed Objects, Middleware, and Applications (DOA'09) Vilamoura, Algarve-Portugal, Nov 01 - 03, 2009, pp. 614–633.

    [Acceptance rate: 30% $(Approx.\ 70/234\ among\ 4\ colocated\ conferences)$.**]**

5. Friedhelm Wolf, Jaiganesh Balasubramanian, **Aniruddha Gokhale** and Douglas C. Schmidt, Component Replication based on Failover Units, Proceedings of the 15th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA '09), Beijing, China, Aug 2009.

   [Acceptance rate: 31% (39/124).**]**

6. Christian Esposito, **Aniruddha Gokhale** and Domenico Cotroneo, Reliable Publish/Subscribe Middleware for Time-sensitive Internet-scale Applications, Proceedings of the 3rd ACM International Conference on Distributed Event-based Systems (DEBS 2009), Nashville, TN, Jul 2009, pp. 16.

   [Acceptance rate: 27% (16/60).**]**

7. Jaiganesh Balasubramanian, Sumant Tambe, Chenyang Lu, **Aniruddha Gokhale**, Chris Gill and Douglas Schmidt, Adaptive Failover for Real-time Middleware with Passive Replication, Proceedings of *15th IEEE Real-Time and Embedded Technology and Applications Symposium, (RTAS 09)* San Francisco, CA, Apr 13–16, 2009, pp. 118–127.

   [Acceptance rate: 25.6% (32/125).**]**

8. Joe Hoffert, Douglas C. Schmidt and **Aniruddha Gokhale**, DQML: A Modeling Language for Configuring Distributed Publish/Subscribe Quality of Service Policies, Proceedings of *The 10th International Symposium on Distributed Objects, Middleware, and Applications (DOA'08),* Monterrey, Mexico, Nov 10–12, 2008, pp 515–534.

   [Acceptance rate: 30% (87/292 *among* 5 *colocated conferences*).**]**

9. Amogh Kavimandan, Reinhard Klemm and **Aniruddha Gokhale**, Automated Context-sensitive Dialog Synthesis for Enterprise Workflows using Templatized Model Transformations, Proceedings of *The 12th IEEE International Enterprise Computing Conference (EDOC 2008),* Munchen, Germany, Sept 15–19, 2008, pp. 159–168.

   [Acceptance rate: 25% (27/108).**]**

10. Jaiganesh Balasubramanian, **Aniruddha Gokhale**, Douglas C. Schmidt, and Nanbor Wang, Towards Middleware for Fault-tolerance in Distributed Real-time and Embedded Systems, Proceedings of the *8th Annual IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS 2008),* Oslo, Norway, June 4–6, 2008, pp. 72–85.

    [Acceptance rate: 28.78% (19/66).**]**

11. Amogh Kavimandan and **Aniruddha Gokhale**, Automated Middleware QoS Configuration Techniques using Model Transformations, *14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 08),* St. Louis, MO, USA, April 22–24, 2008, pp 93–102.

    [Acceptance rate: 25% (35/140).**]**

12. Jaiganesh Balasubramanian, Sumant Tambe, **Aniruddha Gokhale**, Balakrishnan Dasarathy, Shrirang Gadgil, and Douglas C. Schmidt, NetQoPE: A Model-driven Network QoS Provisioning Engine for Distributed Real-time and Embedded Systems, *14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 08),* St. Louis, MO, USA, April 22–24, 2008, pp 113–122.

    [Acceptance rate: 25% (35/140).**]**

13. Upsorn Praphamontripong, Swapna Gokhale, **Aniruddha Gokhale**, and Jeff Gray, Performance Analysis of an Asynchronous Web Server, *Proceedings of the 30th Annual International Computer Software and Applications Conference (COMPSAC),* Chicago, IL, September 2006, pp. 22–28.

    [Acceptance rate: 31% (57/183).**]**

14. Amogh Kavimandan, Reinhard Klemm, Ajita John, Doree Seligmann, **Aniruddha Gokhale**, A Client-Side Architecture for Supporting Pervasive Enterprise Communications, *Proceedings of the IEEE International Conference on Pervasive Services (ICPS 2006),* Lyon, France, June 26-29, 2006, pp. 222–232.

    [Acceptance rate: 20.9% (23/110).**]**

15. Arvind S. Krishna, **Aniruddha Gokhale**, Douglas C. Schmidt, John Hatcliff, and Venkatesh Prasad Ranganath, Context-Specific Middleware Specialization Techniques for Optimizing Software Product-line Architectures, *Proceedings of the ACM EuroSys 2006,* Leuven, Belgium, April 18–21, 2006, pp. 205–218.

    [Acceptance rate: 20% (29/144).**]**

16. Jaiganesh Balasubramanian, Balachandran Natarajan, Douglas C. Schmidt, **Aniruddha Gokhale**, Gan Deng, and Jeff Parsons, Evaluating Techniques for Dynamic Component Updating, *Proceedings of the International Symposium on Distributed Objects and Applications (DOA),* Agia Napa, Cyprus, Oct 31 - Nov 4, 2005, pp 978-996.

    [Acceptance rate: 25%(90/360 *among* 3 *colocated conferences*).**]**

17. Amogh Kavimandan, Wonsuck Lee, Marina Thottan, **Aniruddha Gokhale** and Ramesh Vishwanathan, Simulation via Hybrid System Modeling: A Time-Stepped Approach, *Proceedings of the IEEE International Conference on Computer Communications and Networks (ICCCN),* San Diego, CA, Oct 17-19, 2005, pp. 531–536.

    [Acceptance rate: 32.1%(83/258).**]**

18. Jeff Gray, Yuehua Lin, Jing Zhang, Steve Nordstrom, **Aniruddha Gokhale**, Sandeep Neema, and Swapna Gokhale, Replicators: Transformations to Address Model Scalability, *Model Driven Engineering Languages and Systems (MoDELS) (formerly the UML series of conferences),* Springer-Verlag LNCS 3713, Montego Bay, Jamaica, October 2005, pp. 295-308. Voted as one of the **best papers** of the MODELS 2005 conference and invited to submit an extended version to the Journal of Software and Systems Modeling.

    [Acceptance rate: 27%(46/166).**]**

19. Jules White, Douglas Schmidt, and **Aniruddha Gokhale**, Simplifying Autonomic Enterprise Java Bean Applications via Model-driven Development: a Case Study, *Proceedings of MODELS 2005,* ACM/IEEE 8th International Conference on Model Driven Engineering Languages and Systems, Half Moon Resort, Montego Bay, Jamaica, October 5-7, 2005, pp. 601-615. Voted as one of the **best papers** of the MoDELS 2005 conference and invited to submit an extended version to the Journal of Software and Systems Modeling.

    [Acceptance rate: 27%(46/166).**]**

20. Cemal Yilmaz, Arvind S. Krishna, Atif Memon, Adam Porter, Douglas C. Schmidt, **Aniruddha Gokhale**, and Balachandran Natarajan, Main Effects Screening: A DCQA Process for Monitoring Performance Degradation in Evolving Software Systems, *Proceedings of the ACM/IEEE 27th International Conference on Software Engineering (ICSE) 2005,* St. Louis, MO, May 2005, pp 293-302.

    [Acceptance rate: 14% (44/313).**]**

21. Arvind Krishna, Emre Turkay, **Aniruddha Gokhale,** Douglas C. Schmidt, Model-Driven Techniques for Evaluating the QoS of Middleware Configurations for DRE Systems, *Proceedings of the Eleventh IEEE Real-time and Embedded Technology and Applications Symposium (RTAS 05),* San Francisco, CA, Mar 2005, pp. 180–189.

    [Acceptance rate: 33.5%(53/158).**]**

22. Krishnakumar Balasubramanian, Jaiganesh Balasubramanian, Jeff Parsons, **Aniruddha Gokhale**, Douglas C. Schmidt, A Platform-Independent Component Modeling Language for Distributed Real-time and Embedded Systems, *Eleventh IEEE Real-time and Embedded Technology and Applications Symposium (RTAS 05),* San Francisco, CA, Mar 2005, pp. 190–199.

    [Acceptance rate: 33.5%(53/158).**]**

23. George Edwards, Gan Deng, Douglas C. Schmidt, **Aniruddha Gokhale**, and Balachandran Natarajan, Model-driven Configuration and Deployment of Component Middleware Publisher/Subscriber Services, *Proceedings of the 3rd ACM International Conference on Generative Programming and Component Engineering (GPCE' 04),* Springer LNCS 3286, Gabor Karsai and Eelco Visser editors, Vancouver, Canada, October 2004, pp 337–360.

    [Acceptance rate: 33% (25/75).**]**

24. Jeff Gray, Jing Zhang, Yuehua Lin, Suman Roychoudhury, Hui Wu, Rajesh Sudarsan, **Aniruddha Gokhale**, Sandeep Neema, Feng Shi, and Ted Bapty, Model-driven Program Transformation of a Large Avionics Framework, *Proceedings of the 3rd ACM International Conference on Generative Programming and Component Engineering (GPCE' 04),* Springer LNCS 3286, Gabor Karsai and Eelco Visser editors, Vancouver, Canada, October 2004, pp 361–378.

    [Acceptance rate: 33% (25/75).**]**

25. Arvind Krishna, Balachandran Natarajan, **Aniruddha Gokhale**, Douglas C. Schmidt, Nanbor Wang and Gautam Thaker, CCMPerf: A Benchmarking Tool for CORBA Component Model Implementations, *Proceedings of the Tenth IEEE Real-time and Embedded Technology and Applications Symposium (RTAS 04),* Toronto, Canada, May 2004, pp 140–147.

    [Acceptance rate: 30.2% (62/205).**]**

As Research Scientist at Vanderbilt [Total = 2]

1. Jeff Gray, Ted Bapty, Sandeep Neema, Douglas C. Schmidt, **Aniruddha Gokhale**, and Balachandran Natarajan, An Approach for Supporting Aspect-Oriented Domain Modeling, *Proceedings of the Generative Programming and Component Engineering (GPCE 2003) Conference,* Erfurt, Germany, September 22-25, 2003, pp. 151–168.

    [Acceptance rate: 34%(21/62).**]**

2. **Aniruddha Gokhale** and Balachandran Natarajan, Composing and Deploying Grid Middleware Web Services using Model Integrated Computing, *Proceedings of the Distributed Objects and Applications Symposium,* Irvine, CA, Oct 2002, pp. 633–649.

    [Acceptance rate: 25%(73/293 *among* 3 *colocated conferences*).**]**

Other Refereed Conferences (e.g., small symposia, unpublished acceptance rates)

As Tenured Faculty (Full Profesor) at Vanderbilt starting July 2018 [Total = 17]

1. Robert Canady, Akhilesh Raj, Bach Tran, Shivakumar Sastry and **Aniruddha Gokhale,** Edge-to-Cloud AI-Assisted Augmented Reality DDDAS Framework for Robust and Real-time Assistance to Operators, DDDAS Annual Conference, New Brunswick, NJ, Nov 6–8, 2024, pp. 8.

2. Zhuangwei Kang, Ziran Min, Shuang Zhou, Yogesh Barve and **Aniruddha Gokhale,** Dataset Placement and Data Loading Optimizations for Cloud-Native Deep Learning Workloads, 26th IEEE International Symposium on Real-time Distributed Computing (ISORC), Nashville, TN, USA, May 23–25, 2023, pp. 107–116.

3. Evan Wang, Yogesh Barve, Hongyang Sun and **Aniruddha Gokhale,** Dynamic Resource Management for Cloud-native Bulk Synchronous Parallel Applications, 26th IEEE International Symposium on Real-time Distributed Computing (ISORC), Nashville, TN, USA, May 23–25, 2023, pp 152–157.

4. Robert Canady, Xingyu Zhou, Yogesh Barve and **Aniruddha Gokhale,** Applying DDDAS Principles for Realizing Optimized and Robust Deep Learning Models at the Edge, DDDAS Annual Conference, Cambridge, MA, Oct 6–10, 2022, pp. 15.

5. Ziran Min, Shashank Shekhar, Charif Mahmoudi, Valerio Formicola, Swapna Gokhale and **Aniruddha Gokhale,** Software-defined Dynamic 5G Network Slice Management for Industrial Internet of Things, IEEE 21st International Symposium on Network Computing and Applications (NCA), Boston, MA, USA, 2022, pp. 251-259.

6. Robert Canady, Xingyu Zhou, Yogesh Barve, Daniel Balasubramanian and **Aniruddha Gokhale,** Adversarially Robust Edge-Based Object Detection for Assuredly Autonomous Systems, 2022 IEEE International Conference on Assured Autonomy (ICAA'22), Fajardo, PR, USA, March 22–24, 2022, pp. 97-106.

7. Hakiri Akram, **Aniruddha Gokhale,** Yogesh Barve, Valerio Formicola, Shashank Shekhar, Charif Mahmoudi, Mohammad Ashiqur Rahman, Uttam Ghosh, Syed Rafay Hasan and Terry Guo, Techniques for Realizing Secure, Resilient and Differentiated 5G Operations, 14th IFIP Wireless and Mobile Networking Conference (WMNC), Sousse, Tunisia, 2022, pp. 113-117.

8. Shuang Zhou, Bennett A. Landman, Yuankai Huo, and **Aniruddha Gokhale,** Communication-efficient federated learning for multi-institutional medical image classification, *Proc. SPIE 12037, Medical Imaging 2022: Imaging Informatics for Healthcare, Research, and Applications,* 1203703 (4 April 2022).

9. Xingyu Zhou, Zhuangwei Kang, Robert Canady, Shunxing Bao, Daniel Balasubramanian and **Aniruddha Gokhale,** Exploring Cloud Assisted Tiny Machine Learning Application Patterns for PHM Scenarios, Annual Conference of the Prognostics and Health Management Society (PHM), Virtual, Vol 13, No. 1, Nov 2021, pp. 10.

10. Xingyu Zhou, Robert Canady, and **Aniruddha Gokhale,** Overcoming Adversarial Perturbations in Data-driven Prognostics Through Semantic Structural Context-driven Deep Learning, Annual Conference of the Prognostics and Health Management Society (PHM), Virtual, Sept 2020, pp. 11.

11. Xingyu Zhou, Robert Canady, Yi Li, Xenofon Koutsoukos, and **Aniruddha Gokhale,** Overcoming Stealthy Adversarial Attacks onPower Grid Load Predictions Through DynamicData Repair, Third International Conference on Dynamic Data-driven Applications Systems (DDDAS), Boston, MA, USA, Oct 2–4, 2020, pp. 102–109.

12. Anirban Bhattacharjee, Ajay Dev Chhokra, Hongyang Sun, Shashank Shekhar, Shreyas Ramakrishna, **Aniruddha Gokhale,** Abhishek Dubey and Gabor Karsai, Deep-Edge: An Efficient Framework for Deep Learning Model Update on Heterogeneous Edge, *4th IEEE International Conference on Fog and Edge Computing (ICFEC),* Melbourne, Australia, May 11–14, 2020, pp. 75–84.

    [Acceptance rate: 40%.**]**

13. Yogesh Barve, Himanshu Neema, Zhuangwei Kang, Hongyang Sun, **Aniruddha Gokhale,** and Thomas Roth, A Model-driven Middleware Integration Approach for Performance-Sensitive Distributed Simulations, The 23rd IEEE International Symposium on Real-time Distributed Computing (ISORC), 2021, Nashville, TN, USA, May 19–21, 2020, pp. 184–191.

    [Acceptance rate: 44%.**]**

14. Travis Brummett, Kyoungho An, **Aniruddha Gokhale,** and Sander Mertens, A Model-driven Middleware Integration Approach for Performance-Sensitive Distributed Simulations, The 23rd IEEE International Symposium on Real-time Distributed Computing (ISORC), 2021, Nashville, TN, USA, May 19–21, 2020, pp. 65–73.

    [Acceptance rate: 44%.**]**

15. Akram Hakiri, **Aniruddha Gokhale,** and Pascal Berthou, Software-defined Wireless Mesh Networking for Reliable and Real-time Smart City Cyber Physical Applications, *27th International Conference on Real-Time Networks and Systems (RTNS),* Toulous, France, 2019, pp. 165–175.

    [Acceptance rate: 54%.**]**

16. Anirban Bhattacharjee, Yogesh Barve, Shweta Khare, Shunxing Bao, **Aniruddha Gokhale,** and Thomas Damiano, Stratum: A Serverless Framework for the Lifecycle Management of Machine Learning-based Data Analytics Tasks, *2019 Usenix Conference on Operational Machine Learning (OpML),* Santa Clara, CA, USA, May 20, 2019, pp. 3.

    [Acceptance rate: *Unknown*.**]**

17. Anirban Bhattacharjee, Yogesh Barve, **Aniruddha Gokhale,** and Takayuki Kuroda, CloudCAMP: A Platform for Automating Deployment and Management of Cloud Services, *IEEE International Conference on Services Computing (SCC), Work-in-Progress Track,* San Francisco, CA, USA, July 2–7, 2018, pp. 237–240.

    [Acceptance rate: *Unknown*.**]**

As Tenured Faculty (Associate Professor) at Vanderbilt from Sep 2010 to June 2018. [Total = 23]

1. Yi Li, Shashank Shekhar, Yevgeniy Vorobeychik, Xenofon Koutsoukos, and **Aniruddha Gokhale,** "Simulation-based Optimization as a Service for Dynamic Data-driven Applications Systems," *1st Conference on Dynamic Data-driven Applications Systems (DDDAS),* Hartford, CT, USA, Aug 15-16, 2016. To Appear in Proceedings in 2018.

    [Acceptance rate: *Unknown%*.**]**

2. Shunxing Bao, Prasanna Parvarthaneni, Andrew J. Plassard, Camilo Bermudez, Yuang Yao, Ilwoo Lyu, Yuankai Huo, **Aniruddha Gokhale** and Bennett A. Landman, A Data Colocation Grid Framework for Big Data Medical Image Processing – Backend Design, *SPIE Medical Imaging, International Society for Optics and Photonics* Houston, TX, USA, Feb 10–15, 2018.

3. Akram Hakiri, Bassem Sallemi, Prithviraj Patil, Pascal Berthou and **Aniruddha Gokhale,** Managing Wireless Fog Networks using Software-Defined Networking, To Appear in *14th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA),* Hammamet, Tunisia, Oct 30–Nov 3, 2017, pp. 1149–1156.

   [Acceptance rate: *Unknown%*.**]**

4. Abhishek Dubey, Gabor Karsai, **Aniruddha Gokhale,** William Emfinger and Pranav Kumar, DREMS-OS: An Operating System for Managed Distributed Real-time Embedded Systems, *6th International Conference on Space Mission Challenges for Information Technology (SMC-IT),* Alcala de Henares, Spain, Sept 27–29, 2017, pp. 6.

   [Acceptance rate: *Unknown%*.**]**

5. Shweta Khare, Janos Sallai, Abhishek Dubey and **Aniruddha Gokhale,** Short Paper: Towards Low-Cost Indoor Localization using Edge Computing Resources, *20th IEEE International Symposium on Real-time Computing (ISORC),* Toronto, Canada, May 16–18, 2017, pp. 28–31.

   [Acceptance rate: *Unknown%*.**]**

6. Shunxing Bao, Andrew Plassard, Frederick D. Weitendorf, Andrew J. Plassard, Yuankai Huo , **Aniruddha Gokhale,** and Bennett A. Landman, "Theoretical and Empirical Comparison of Big Data Image Processing with Apache Hadoop and Sun Grid Engine," *Imaging Informatics for Healthcare, Research, and Applications, SPIE Medical Imaging,* Orlando, FL, USA, 2017, pp. 10138–10138-8, DOI: 10.1117/12.2254712.

   [Acceptance rate: *Unknown%*.**]**

7. Akram Hakiri and **Aniruddha Gokhale,** Rethinking the Design of LR-WPAN IoT Systems with SDN *12th International Conference on Distributed Computing in Sensor Systems (DCOSS) IoTIP Track,* Washington D.C, May 28, 2016, pp. 238–246.

   [Acceptance rate: *Unknown%*.**]**

8. Shunxing Bao, Stephen M. Damon, Bennett Landman and **Aniruddha Gokhale,** "Performance management of high performance computing for medical image processing in Amazon Web Services," *Proc. SPIE 9789, Medical Imaging 2016: PACS and Imaging Informatics: Next Generation and Innovations,* 97890Q (March 25, 2016); doi:10.1117/12.2217396.

9. Subhav Pradhan, William Otte, Abhishek Dubey, **Aniruddha Gokhale,** and Gabor Karsai, Establishing Secure Interactions Across Distributed Applications in Satellite Clusters, *5th IEEE International Conference on Space Mission Challenges for Information Technology (SMC-IT' 14),* IEEE publisher, Laurel, MD, USA, 2014, pp. 67–74.

   [Acceptance rate: *Not Specified*.**]**

10. Prithviraj Patil, and **Aniruddha Gokhale,** Voronoi-based Placement of Road-side Units to Improve Dynamic Resource Management in Vehicular Ad Hoc Networks, *Special Session on Collaboration for Dynamic Resource Management in Mobile P2P Networks (CDRM '13), International Conference on Collaboration Techniques and Systems (CTS '13),* ACM, IEEE, IFIP publisher, San Diego, CA, USA, 2013, pp. 389–396.

    [Acceptance rate: *Not Known*.**]**

11. Laura Poff, **Aniruddha Gokhale,** and Mark McDonald, A Framework for Broker Placement in Vehicular Ad hoc Networks, *The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012), Session on Collaboration for Dynamic Resource Management in Mobile P2P Networks,* Denver, CO, USA, May 21–25, 2012, pp. 182–189.

    [Acceptance rate: *Not Known*.**]**

12. James Hill and **Aniruddha Gokhale,** Using Template Metaprogramming to Enhance Reuse in Visitor-based Model Interpreters, *19th Annual IEEE International Conference and Workshops on the Engineering of Computer Based Systems,* Novi Sad, Serbia, Apr 11–13, 2012, pp. 5–14.

    [Acceptance rate: *Not Known*.**]**

13. Abhishek Dubey, William Emfinger, **Aniruddha Gokhale,** Gabor Karsai, William Otte, Jeffrey Parsons, Csanad Czabo, Alessandro Coglio, Eric Smith and Prasanta Bose, A Software Platform for Fractionated Spacecrafts, *IEEE Aerospace Conference 2012,* Big Sky, MT, USA, Mar 3–10, 2012, pp. 1–20.

    [Acceptance rate: *Not Known*.**]**

14. James Edmondson and **Aniruddha Gokhale,** Design of a Scalable Reasoning Engine for Distributed, Real-time and Embedded Systems, *5th International Conference on Knowledge Science, Engineering and Management (KSEM '11)* Irvine, CA, USA, Dec 12–14, 2011, pp.

    [Acceptance rate: *Not Known*.**]**

15. James Edmondson and **Aniruddha Gokhale,** Automating Testing of Service-oriented Mobile Applications with Distributed Knowledge and Reasoning, *IEEE International Conference on Service-Oriented Computing and Applications (SOCA '11)* Irvine, CA, USA, Dec 12–14, 2011, pp. 274–277.

    [Acceptance rate: *Not Known*.**]**

16. James Edmondson, Douglas C. Schmidt, and **Aniruddha Gokhale,** QoS-enabled Distributed Mutual Exclusion in Public Clouds, *1st International Symposium on Secure Virtual Infrastructures (DOA-SVI'11),* Oct 17-19, 2011, Crete, Greece, pp. 542–559.

    [Acceptance rate: *Not Known*.**]**

17. Akram Hakiri, **Aniruddha Gokhale,** Douglas C. Schmidt, Berthou Pascal, Joe Hoffert, and Gayraud Thierry, A SIP-based Network QoS Provisioning Framework for Cloud-hosted DDS Applications, *1st International Symposium on Secure Virtual Infrastructures (DOA-SVI'11),* Oct 17-19, 2011, Crete, Greece, pp. 507–524.

    [Acceptance rate: *Not Known*.**]**

18. Brian Dougherty, Jules White, Russell Kegley, Jonathan Preston, Douglas C. Schmidt, and **Aniruddha Gokhale,** Optimizing Integrated Application Performance with Cache-aware Metascheduling, *1st International Symposium on Secure Virtual Infrastructures (DOA-SVI'11),* Oct 17-19, 2011, Crete, Greece, pp. 432–450.

    [Acceptance rate: *Not Known*.**]**

19. Amogh Kavimandan, **Aniruddha Gokhale**, Gabor Karsai and Jeff Gray, Managing the Quality of Software Product Line Architectures through Reusable Model Transformations, Proceedings of the *Seventh International Conference on the Quality of Software Architectures (QoSA 2011),* Boulder, CO, June 21–23, 2011, pp. 13–22.

    [Acceptance rate: 34% *in* 2010.**]**

20. Sumant Tambe and **Aniruddha Gokhale**, LEESA: Toward Native XML Processing Using Multi-paradigm Design in C++, Proceedings of *BoostCon 2011,* Aspen, CO, USA, May 15–20, 2011.

    [Acceptance rate: *Not known*.**]**

21. Sumant Tambe, Akshay Dabholkar and **Aniruddha Gokhale,** MoPED: A Model-based Provisioning Engine for Dependability in Component-based Distributed Real-time Embedded Systems, Proceedings of the *18th IEEE International Conference and Workshops on Engineering of Computer-Based Systems (ECBS 2011),* Las Vegas, NV, USA, Apr 27–29, 2011. One of the finalists for best student paper award.

    [Acceptance rate: *Not released*.**]**

22. Anushi Shah, Kyoungho An, **Aniruddha Gokhale,** and Jules White, Maximizing Service Uptime of Smartphone-based Distributed Real-time and Embedded Systems, Appeared in the *14th IEEE International Symposium on Object/Component/Service-oriented Real-time Distributed Computing (ISORC 2011),* Newport Beach, CA, Mar 28–31, 2011, pp. 3–10.

    [Acceptance rate: 46%.**]**

23. Akshay Dabholkar and **Aniruddha Gokhale,** A Generative Middleware Specialization Process for Distributed Real-time and Embedded Systems, Appeared in the *14th IEEE International Symposium on Object/Component/Service-oriented Real-time Distributed Computing (ISORC 2011),* Newport Beach, CA, Mar 28–31, 2011, pp. 197–204.

    [Acceptance rate: 46%.**]**

As Tenure-track Faculty (Assistant Professor) at Vanderbilt, Sept 2003–Aug 2010. [Total = 27]

1. Sumant Tambe and **Aniruddha Gokhale**, LEESA: Embedding Strategic and XPath-like Object Structure Traversals in C++, Proceedings of the *IFIP Working Conference on Domain Specific Languages (DSL WC 09),* Oxford, UK, July 15–17, 2009, pp. 100–124.

    [Acceptance rate: 38% (18/48).**]**

2. Amogh Kavimandan and **Aniruddha Gokhale**, A Model-transformation Approach to Improving the Quality of Software Architectures for Distributed Real-time and Embedded Systems, Proceedings of the *Fifth International Conference on the Quality of Software Architectures (QoSA 2009),* Springer LNCS Vol 5581, East Stroudsberg, PA, June 22–26, 2009, pp. 18–35.

    [Acceptance rate: 39% (13/33).**]**

3. Sumant Tambe, Akshay Dabholkar, and **Aniruddha Gokhale**, CQML: Aspect-oriented Modeling for Modularizing and Weaving QoS Concerns in Component-based Systems, Proceedings of the *16th Annual IEEE International Conference and Workshop on the Engineering of Computer Based Systems (ECBS),* San Francisco, CA, Apr 13–16, 2009, pp 11–20.

    [Acceptance rate: *Not Published*.**]**

4. Sumant Tambe, Akshay Dabholkar, Jaiganesh Balasubramanian, and **Aniruddha Gokhale**, Fault-tolerance for Component-based Systems - An Automated Middleware Specialization Approach, Proceedings of the *12th IEEE International Symposium on Objects/component/service-oriented Real-time distributed Computing (ISORC 09),* Tokyo, Japan, Mar 17–20, 2009.

    [Acceptance rate: *Not Published*.**]**

5. Amogh Kavimandan and **Aniruddha Gokhale**, Evaluating the Effectiveness of Model-based Techniques for Middleware QoS Configurations in Distributed Real-time and Embedded Systems, *11th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC 2008),* Orlando, FL, USA, 5-7 May, 2008, pp. 100–107.

    [Acceptance rate: *Not Published*.**]**

6. Gan Deng, Douglas C. Schmidt, and **Aniruddha Gokhale**, CaDANCE: Ensuring Deployment Predictability of Distributed Real-time and Embedded Systems,

    11th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC 2008), Orlando, FL, USA, 5-7 May, 2008, pp. 317–321.

    [Acceptance rate: *Not Published*.**]**

7. Amogh Kavimandan, Reinhard Klemm, **Aniruddha Gokhale**, and Doree Seligmann, Enhancing Enterprise User Productivity with Embedded Context-Aware Voice Applications, *Proceedings of The IEEE International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM 2007),* Papeete, French Polynesia, November 4-9, 2007, pp. 169–176.

    [Acceptance rate: *Not Published*.**]**

8. Paul Rubel, Matthew Gillen, Joseph Loyall, **Aniruddha Gokhale**, Jaiganesh Balasubramanian, Aaron Paulos, Priya Narasimhan, and Richard Schantz, Fault Tolerant Approaches to Distributed Real-time and Embedded Systems *Proceedings of MILCOM Conference,* Orlando, FL, USA, Oct 29-31, 2007, pp. 1386–1393.

    [Acceptance rate: *Not Known*.**]**

9. Paul J. Vandal, Swapna S. Gokhale, and **Aniruddha S. Gokhale**, Performance Analysis of the Active Object Pattern in Middleware, *Proceedings of The Nineteenth International Conference on Software Engineering and Knowledge Engineering (SEKE'2007),* Boston, MA, USA, July 9-11, 2007, pp. 730–735.

   [Acceptance rate: 42.5%.**]**

10. Joe Hoffert, Douglas C. Schmidt, and **Aniruddha Gokhale**, A QoS Policy Configuration Modeling Language for Publish/Subscribe Middleware Platforms, *Proceedings of the First Annual Usenix Conference on Distributed Event-based Systems (DEBS 2007),* Toronto, Canada, June 20-22, 2007, pp. 140–145.

    [Acceptance rate: *Short Paper Category*.**]**

11. Sumant Tambe, Jaiganesh Balasubramanian, **Aniruddha Gokhale** and Thomas Damiano, MDDPro: Model Driven Dependability Provisioning in Enterprise Distributed Real-time and Embedded Systems, *Proceedings of the Fourth Annual International Service Availability Symposium (ISAS '07)*, Durham, NH, USA, May 21-22, 2007, pp. 127–144.

    [Acceptance rate: 48% $(12/25)$.**]**

12. Amogh Kavimandan, Krishnakumar Balasubramanian, Nishanth Shankaran, **Aniruddha Gokhale**, and Douglas C. Schmidt, QUICKER: A Model-driven QoS Mapping Tool, *Proceedings of 10th IEEE International Symposium on Object/Component/Service-oriented Real-time Distributed Computing (ISORC),* May 7-9, 2007, Santorini Island, Greece, pp. 62–70.

    [Acceptance rate: *Not Published*.**]**

13. Gan Deng, Ming Xiong, **Aniruddha Gokhale**, and George Edwards, Evaluating Real-time Publish/Subscribe Service Integration Approaches in QoS-enabled Component Middleware, *Proceedings of 10th IEEE International Symposium on Object/Component/Service-oriented Real-time Distributed Computing (ISORC),* May 7-9, 2007, Santorini Island, Greece, pp. 222–227.

    [Acceptance rate: *Not Published*.**]**

14. James H. Hill, Sumant Tambe and **Aniruddha Gokhale**, Model-driven Engineering for Development-time QoS Validation of Component-based Software Systems, *Proceedings of 14th Annual IEEE International Conference and Workshop on the Engineering of Computer Based Systems (ECBS 2007),* Tucson, AZ, USA, pp. 307–316.

    [Acceptance rate: *Not Published*.**]**

15. Swapna Gokhale, Upsorn Praphamontripong, **Aniruddha Gokhale**, and Jeff Gray, Performance Analysis of a Middleware Demultiplexing Pattern, *Proceedings of the 40th Hawaiian International Conference on System Sciences (HICSS),* Big Island, HI, January 2007, pp. 287a.

    [Acceptance rate: *Not Published*.**]**

16. Dimple Kaul, Arundhati Kogekar, **Aniruddha Gokhale**, Jeff Gray, and Swapna Gokhale, POSAML: A Visual Modeling Framework for Middleware Provisioning, *Proceedings of the 40th Hawaiian International Conference on System Sciences (HICSS),* Big Island, HI, January 2007, pp. 289c.

    [Acceptance rate: *Not Published*.**]**

17. Gan Deng, Douglas C. Schmidt, **Aniruddha Gokhale**, and Andrey Nechypurenko, Modularizing Variability and Scalability Concerns in Distributed Real-time and Embedded Systems with Modeling Tools and Component Middleware, *Proceedings of the 9th IEEE International Symposium on Object-oriented Real-time Distributed Computing (ISORC '06),* April 24-26, 2006, Gyeongju, Korea, pp. 327–334.

    [Acceptance rate: *Not Published*.**]**

18. Dimple Kaul and **Aniruddha Gokhale**, Middleware Specialization using Aspect Oriented Programming, *Proceedings of the 44th ACM SE conference,* Melbourne, FL, Mar 10-12, 2006, pp. 319–324

    [Acceptance rate: 40.98%$(100/244)$.**]**

19. Arundhati Kogekar and **Aniruddha Gokhale**, Performance Evaluation of the Reactor Pattern Using the OMNeT++ Simulator, *Proceedings of the 44th ACM SE conference,* Melbourne, FL, Mar 10-12, 2006, pp. 708–713.

    [Acceptance rate: 40.98%$(100/244)$.**]**

20. Swapna Gokhale, **Aniruddha Gokhale** and Jeff Gray, Performance Evaluation of Middleware Event Demultiplexing Patterns in Distributed Performance-Sensitive Software Systems, *Proceedings of IEEE Globecom 2005,* St. Louis, Nov 2005, pp. 1700–1705.

    [Acceptance rate: 47.7% $(770/1,638)$.**]**

21. Gan Deng, Jaiganesh Balasubramanian, William Otte, Douglas C. Schmidt, and **Aniruddha Gokhale**, DAnCE: A QoS-enabled Component Deployment and Conguration Engine, *Proceedings of the 3rd Working Conference on Component Deployment,* Grenoble, France, November 28-29, 2005, pp. 67-82.

    [Acceptance rate: 41.3% $(12/29)$.**]**

22. **Aniruddha Gokhale** and Jeff Gray, Advancing Model Driven Development Education via Collaborative Research, *MoDELS Educators Symposium,* Montego Bay, Jamaica, October 2005.

    [Acceptance rate: *Not Published*.**]**

23. James Hill and **Aniruddha Gokhale**, Visual OS: Design and Implementation of a Visual Framework for Learning Operating System Concepts, *Proceedings of the 43rd ACM Southeast Conference,* Kennesaw, GA, Mar 18-20, 2005, pp. 355-358.

    [Acceptance rate: 60%.**]**

24. Andrey Nechypurenko, Gan Deng, Tao Lu, Emre Turkay, Douglas C. Schmidt, and **Aniruddha Gokhale**, Concern-based Composition and Reuse of Distributed Systems: A Case Study, *Proceedings of the ACM/IEEE 8th International Conference on Software Reuse,* Madrid, July 2004, pp. 167–184.

    [Acceptance rate: *NotPublished*.**]**

25. George T. Edwards, Douglas C. Schmidt, Balachandran Natarajan and **Aniruddha Gokhale**, EQAL and Event Channel Integration in CIAO, *Proceedings of the 42nd ACM Southeast Conference,* Huntsville, AL, April 2004, pp. 171–176.

    [Acceptance rate: *Not Published*.**]**

26. Gan Deng, **Aniruddha Gokhale** and Balachandran Natarajan, FESML: Federated Event Channel Integration in CIAO, *Proceedings of the 42nd ACM Southeast Conference,* Huntsville, AL, April 2004, pp. 353–356.

    [Acceptance rate: *Not Published*.**]**

27. Emre Turkay, **Aniruddha Gokhale** and Balachandran Natarajan, OCML - Model Driven Middleware Configuration, *Proceedings of the 42nd ACM Southeast Conference,* Huntsville, AL, April 2004, pp. 166–170.

    [Acceptance rate: *Not Published*.**]**

As Research Scientist at Vanderbilt [Total = 2]

1. **Aniruddha Gokhale** and Balachandran Natarajan, GriT: A CORBA Based Grid Middleware Architecture, *Proceedings of the Hawaii International Conference on System Sciences, Software Technology Track,* Big Island of Hawaii, HI, Jan 2003, pp. 319.

    [Acceptance rate: *Not Published*.**]**

2. Sandeep Neema, Ted Bapty, Jeff Gray, and **Aniruddha Gokhale**, Generators for Synthesis of QoS Adaptation in Distributed Real-time Embedded Systems, *Proceedings of the First ACM SIGPLAN/SIGSOFT Conference on Generative Programming and Component Engineering (GPCE '02),* Pittsburg, PA, October 6-8, 2002, pp 236–251.

    [Acceptance rate: 46%$(18/39)$.**]**

Conference Publications Prior to Vanderbilt Positions

Bell Labs and Washington University [Total = 12]

1. **Aniruddha Gokhale**, Bharat Kumar and Arnaud Sahuguet, Reinventing the Wheel? CORBA vs Web services, *Proceedings of the Eleventh International Conference on World Wide Web (WWW2002), Practice and Experience Track,* Honolulu, Hawaii, May 7-11, 2002.

2. Balachandran Natarajan, **Aniruddha Gokhale**, Shalini Yajnik, and Douglas C. Schmidt, Applying Patterns to Improve the Performance of Fault Tolerant CORBA, *Proceedings of the ACM/IEEE 7th International Conference on High-Performance Computing (HiPC),* Bangalore, India, Springer LNCS 1970, Victor Prasanna et. al editors, December 17-20, 2000, pp. 107–120.

3. Balachandran Natarajan, **Aniruddha Gokhale**, Shalini Yajnik, and Douglas C. Schmidt, DOORS: Towards High-performance Fault Tolerant CORBA, *Proceedings of the 2nd Distributed Objects and Applications (DOA) 2000 Conference,* Antwerp, Belgium, Sept. 21-23, 2000.

4. Irfan Pyarali, Carlos O' Ryan, Douglas C. Schmidt, Vishal Kachroo, Alexander Arulanthu, Nanbor Wang, and **Aniruddha Gokhale**, Design Considerations and Performance Optimizations for Real-time ORBs, *Proceedings of the 5th USENIX Conference on OO Technologies and Systems (COOTS '99),* San Diego, CA, May 1999.

5. **Aniruddha Gokhale** and Douglas C. Schmidt, Techniques for Optimizing CORBA Middleware for Distributed Embedded Systems, *Proceedings of IEEE INFOCOM '99,* New York, New York, March 21–25th, 1999, pp. 513–521.

6. Douglas C. Schmidt, Sumedh Mungee, Sergio Flores, and **Aniruddha Gokhale**, Alleviating Priority Inversion and Non-determinism in Real-time CORBA ORB Architectures, *Proceedings of the IEEE Real-Time Applications Symposium (RTAS) 1998,* Denver, CO, June 1998.

7. **Aniruddha Gokhale** and Douglas C. Schmidt, Optimizing the Performance of the CORBA Internet Inter-ORB Protocol Over ATM, *Proceedings of the 31st Hawaii International Conference on System Systems (HICSS), Hawaii, January, 1998.* Received **Best Paper Award** in the Software Technology Track (188 submitted, 77 accepted).

8. **Aniruddha Gokhale** and Douglas C. Schmidt, Evaluating the Performance of Demultiplexing Strategies for Real-time CORBA, *Proceedings of GLOBECOM '97 conference,* IEEE, Phoenix, AZ, November, 1997.

9. **Aniruddha Gokhale** and Douglas C. Schmidt and Stan Moyer, Tools for Automating the Migration from DCE to CORBA, *Proceedings of ISS 97: World Telecommunications Congress,* IEEE Toronto, Canada, September, 1997.

10. **Aniruddha Gokhale** and Douglas C. Schmidt, Evaluating Latency and Scalability of CORBA Over High-Speed ATM Networks, *Proceedings of the International Conference on Distributed Computing Systems (ICDCS'97),* Baltimore, Maryland, May 27–30, 1997, pp 401–410.

11. **Aniruddha Gokhale** and Douglas C. Schmidt, Performance of the CORBA Dynamic Invocation Interface and Internet Inter-ORB Protocol over High-Speed ATM Networks, *Proceedings of IEEE GLOBECOM '96,* London England, November, 1996.

12. **Aniruddha Gokhale** and Douglas C. Schmidt, Measuring the Performance of Communication Middleware on High-Speed Networks, *Proceedings of SIGCOMM '96, ACM Computer Communication Review,* Vol. 26, No. 4, Stanford University, CA, August 26-30th, 1996, pp 306–317.

Short Papers, Posters, Tutorials, and Demos [Total = 65]

1. Akhilesh Raj, Sanjana Das, Swann Perarnau and **Aniruddha Gokhale,** "Reinforcement Learning-based Performance-aware Energy Management in 5G Base Stations," Poster at COMSNETS 2024, Bengaluru, India, Jan 4–7, 2024.

2. Robert Canady, Xingyu Zhou, Daniel Balasubramanian and **Aniruddha Gokhale,** Deploying Adversarially Robust Computer Vision Deep Learning Models Across the Computing Spectrum, IBM IEEECAS/EDS20 4th AI Compute Symposium, Virtual, Oct 13–14, 2021.

3. Xingyu Zhou, Robert Canady, and **Aniruddha Gokhale,** Simple Black-box Adversarial Attack Against Machine Learning Systems on Edge/IoT Devices, IBM IEEECAS/EDS20 3rd AI Compute Symposium, Virtual, Oct 21–22, 2020.

4. Xiaoyang Qiu, Arjun Keerthi, Teppei Kotake, and **Aniruddha Gokhale,** Demo Abstract: A Monocular Vision-based Obstacle Avoidance Android/Linux Middleware for the Visually Impaired, *ACM/IFIP International Middleware Conference (Middleware) Demo Session,* Davis, CA, USA, December 9–13, 2019, pp. 25–26.

5. A H M Zakaria, Mohammad Ashiqur Rahman, and **Aniruddha Gokhale,** A Formal Model for Resiliency-Aware Deployment of SDN: A SCADA-Based Case Study, *Short paper at the 15th International Conference on Network and Service Management (CNSM),* Halifax, NS, Canada, 2019, pp. 4.

6. Shashank Shekhar, Ajay Dev Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, and Xenofon Koutsoukos, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *Poster in the Internet of Things Design and Implementation (IoTDI), Part of the IEEE/ACM CPSWeek 2019,* Montreal, Canada, April 2019, pp. 2.

7. Akram Hakiri, **Aniruddha Gokhale,** and Prithviraj Patil, Work-in-Progress: Towards Real-time Smart City Communications using Software Defined Wireless Mesh Networking, *RTSS@Brief Session of the 39th IEEE Real-time Systems Symposium (RTSS),* Nashville, TN, USA, Dec 11–14, 2018, pp. 4.

8. Yogesh Barve, Shashank Shekhar, Ajay D. Chhokra, Shweta Khare, Anirban Bhattacharjee, and **Aniruddha Gokhale,** Demo Paper: FECBench – A Framework for Measuring and Analyzing Performance Interference Effects for Latency-Sensitive Applications, *RTSS@Works Demo Session of the 39th IEEE Real-time Systems Symposium (RTSS),* Nashville, TN, USA, Dec 11–14, 2018, pp. 2.

9. Yogesh Barve, Shashank Shekhar, Shweta Khare, Anirban Bhattacharjee, and **Aniruddha Gokhale,** FECBench: An Extensible Framework for Pinpointing Sources of Performance Interference in the Cloud-Edge Resource Spectrum, *Poster session of the Third ACM/IEEE Symposium on Edge Computing (SEC),* Bellevue, WA, USA, Oct 25–27, 2018, pp. 331–333.

10. Shweta Khare, Hongyang Sun, Kaiwen Zhang, Julien Gascon-Samson and **Aniruddha Gokhale,** Ensuring Low-Latency and Scalable Data Dissemination for Smart-City Applications, Poster Session of *The 3rd ACM/IEEE International Conference on Internet-of-Things Design and Implementation,* Orlando, FL, USA, April 17–20, 2018, pp. 283–284.

11. Shashank Shekhar, Yogesh Barve, Shweta Khare, Anirban Bhattacharjee, and **Aniruddha Gokhale,** "FECBench: An Extensible Framework for Pinpointing Sources of Performance Interference in Cloud-to-Edge hosted Applications," Tutorial at *IEEE International Conference on Cloud Engineering (IC2E),* Orlando, FL, Apr 2018, pp. 1.

12. Shashank Shekhar, Yogesh Barve, and **Aniruddha Gokhale,** Understanding Performance Interference Benchmarking and Application Profiling Techniques for Cloud-hosted Latency-Sensitive Applications, Tutorial at *ACM/IEEE International Conference on Utility Cloud Computing (UCC),* Austin, TX, Dec 2017, pp. 111–120.

13. Yogesh Barve, Anirban Bhattacharjee, and **Aniruddha Gokhale,** PADS – A Model Driven Engineering Framework for Learning Distributed Systems Algorithms, *Tutorial at the ACM/IEEE 20th International Conference on Model-driven Engineering Languages and Systems (MODELS),* Austin, TX, USA, Sept 17–22, 2017, pp. 2.

14. Yogesh Barve, Himanshu Neema, **Aniruddha Gokhale** and Janos Sztipanovits, Towards an Automated Deployment Framework for Large-scale CPS Co-simuations in the Cloud, *Poster track of the ACM/IEEE 20th International Conference on Model-driven Engineering Languages and Systems (MODELS),* Austin, TX, USA, Sept 17–22, 2017, pp. 463–464.

15. Prithviraj Patil, Akram Hakiri and **Aniruddha Gokhale,** "Poster: Software-defined Adaptive Resource Management for Cloud-hosted Group Communication Applications," Poster in *The 11th ACM International Conference on Distributed and Event-Based Systems (DEBS),* Barcelona, Spain, June 19–23, 2017, pp. 339–340.

16. Shivakumar Sastry and **Aniruddha Gokhale,** ICCPS WiP: Cybermanufacturing in the Shared Economy, *IEEE/ACM International Conference on Cyber Physical Systems (ICCPS' 17) Work-in-Progress,* Pittsburgh, PA, USA, April 18–21, 2017, pp. .

17. Shashank Shekhar and **Aniruddha Gokhale,** Poster Abstract: Enabling IoT Applications via Dynamic Cloud-Edge Resource Management, *2nd ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI),* Pittsburgh, PA, USA, April 17–21, 2017.

    [Acceptance rate: *Unknown%*.**]**

18. Shunxing Bao, Bennett A. Landman and **Aniruddha Gokhale,** Algorithmic Enhancements to Big Data Computing Frameworks for Medical Image Processing, *Doctoral Symposium of IC2E 2017,* Vancouver, BC, Canada, 2017, pp. 13–16.

19. Subhav Pradhan, Abhishek Dubey, Shweta Khare, Fangzhou Sun, Janos Sallai, **Aniruddha Gokhale,** Douglas Schmidt, Martin Lehofer, and Monika Sturm, "A Distributed and Resilient Platform for City-scale Smart Systems," *Poster Session of the 1st IEEE/ACM Symposium on Edge Computing (SEC),* Washington, DC, USA, 2016, pp. 99–100.

20. Subhav Pradhan, Yogesh Barve, Abhishek Dubey, **Aniruddha Gokhale,** and Martin Lehofer, "WiP Abstract: Platform for Designing and Managing Resilient and Extensible CPS," *IEEE Conference on Cyber Physical Systems (ICCPS) Work-in-progress Session,* IEEE publisher, Vienna, Austria, Apr 2016.

21. Takayuki Kuroda, and **Aniruddha Gokhale,** "The Configuration-Oriented Planning for Fully Declarative IT System Provisioning Automation," *IEEE/IFIP Network Operations and Management Symposium (NOMS), Poster Paper,* Istanbul, Turkey, April 2016, pp. 808–811.

22. Kyoungho An, **Aniruddha Gokhale,** Sumant Tambe, and Takayuki Kuroda, Wide Area Network-scale Discovery and Data Dissemination in Data-centric Publish/Subscribe Systems, *Proceedings of the ACM/IFIP/Usenix Middleware Conference,* ACM/IFIP/Usenix publisher, Vancouver, Canada, 2015, pp. 234–245.

23. Shunxing Bao, **Aniruddha Gokhale,** Sherif Abdelwahed, and Shivakumar Sastry, Model-predictive Controllers for Performance Management of Composable Conveyor Systems, *Proceedings of the Work-in-Progress Session of the 21st IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS),* Nanyang Technological University publisher, Seattle, WA, USA, April 2015, pp. 25–26.

24. Anton Dukeman, Liyan Hou, Shashank Shekhar, Faruk Caglar, John Kinnebrew, Gautam Biswas, **Aniruddha Gokhale,** and Doug Fisher, "Modeling Student Program Evolution in STEM Disciplines," *Poster paper at the 121st ASEE Annual Conference, K-12 and Pre-Engineering Track,* ASEE publisher, Indianapolis, IN, USA, June 2014, pp. .

25. Shashank Shekhar, Faruk Caglar, Anton Dukeman, Liyan Hou, **Aniruddha Gokhale,** John Kinnebrew, Gautam Biswas, and Doug Fisher, "An Evaluation of a Collaborative STEM Education Framework for High and Middle School Students," *Poster Paper at 121st ASEE Annual Conference, K-12 and Pre-Engineering Track,* ASEE publisher, Indianapolis, IN, USA, June 2014, pp. .

26. Kyoungho An, and **Aniruddha Gokhale,** PubSubCoord: A Cloud-enabled Coordination Service for Internet Scale OMG DDS Applications, *Poster Session of 8th ACM International Conference on Distributed Event-based Systems (DEBS),* IEEE publisher, Mumbai, India, 2014, pp. .

27. William Emfinger, Pranav Kumar, Abhishek Dubey, William Otte, **Aniruddha Gokhale,** and Gabor Karsai, "DREMS: A Toolchain and Platform for the Rapid Application Development, Integration and Deployment of Managed Distributed Real-time and Embedded Systems," *RTSS@Work Demo Session of the 34th IEEE Real-Time Systems Symposium (RTSS '13),* IEEE publisher, Vancouver, BC, Canada, 2013, pp. 26–30.

28. Faruk Caglar, Kyoungho An, Shashank Shekhar , and **Aniruddha Gokhale,** "Model-driven Performance Estimation, Deployment, and Resource Management for Cloud-hosted Services," *Poster at SPLASH '13,* ACM publisher, Indianapolis, IN, USA, 2013, pp. .

29. Violetta Vylegzhanina, David Brett, and **Aniruddha Gokhale,** "Design Considerations in Developing a Mobile Application for Scalable and Decentralized Publish/Subscribe-based Weather Alert System," *Poster at SPLASH '13,* ACM publisher, Indianapolis, IN, USA, 2013, pp. .

30. Kyoungho An, Takayaki Kuroda, **Aniruddha Gokhale,** Sumant Tambe, and Andrea Sorbini, "Model-driven Generative Framework for Automated OMG DDS Performance Testingin the Cloud," *Poster Session of SPLASH '13,* ACM/IEEE publisher, Indianapolis, IN, USA, 2013, pp. .

31. Violetta Vylegzhanina, and **Aniruddha Gokhale,** "A Scalable and Decentralized Publish/Subscribe-based Weather Alert System," *Poster at the ASEE Southeastern Section Conference,* ASEE publisher, Cookeville, TN, USA, April 2013, pp. .

32. Faruk Caglar, Shashank Shekhar, Kyoungho An, and **Aniruddha Gokhale,** Intelligent Power- and Performance-aware Tradeoffs for Multicore Servers in Cloud Data Centers, *Proceedings of the Work-in-Progress Session of the 4th ACM/IEEE International Conference on Cyber Physical Systems (ICCPS' 13),* IEEE/ACM publisher, Philadelphia, PA, USA, April 2013, pp. .

33. Kyoungho An, and **Aniruddha Gokhale,** Model-driven Performance Analysis and Deployment Planning for Real-time Stream Processing, *Proceedings of the Work-in-Progress Session of the 19th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS '13),* IEEE publisher, Philadelphia, PA, USA, April 2013, pp. 21–24.

34. Subhav Pradhan, **Aniruddha Gokhale,** William Otte, and Gabor Karsai, Real-time Fault-tolerant Deployment and Configuration Framework for Cyber Physical Systems, *Work-in-Progress Session at the 33rd IEEE Real-time Systems Symposium (RTSS '12),* IEEE publisher, San Juan, Puerto Rico, USA, 2012, pp. .

35. James Edmondson, **Aniruddha Gokhale,** and Douglas Schmidt, Approximation Techniques for Maintaining Real-time Deployments Informed by User-provided Dataflows Within a Cloud, *31st IEEE International Symposium on Reliable Distributed Systems (SRDS '12) Short Paper,* Irvine, CA, USA, Oct 8–11, 2012.

    [Acceptance rate: *Not Known*.**]**

36. Prithviraj Patil and **Aniruddha Gokhale,** Improving the Reliability and Availability of Vehicular Communications using Voronoi Diagram-based Placement of Road Side Units, To Appear in the *31st IEEE International Symposium on Reliable Distributed Systems (SRDS '12) Poster Session,* Irvine, CA, USA, Oct 8–11, 2012.

    [Acceptance rate: *Not Known*.**]**

37. Prithviraj Patil and **Aniruddha Gokhale,** Maximizing Vehicular Network Connectivity Through an Effective Placement of Road Side Units Using Voronoi Diagrams, To Appear in the *13th IEEE International Conference on Mobile Data Management (MDM '12) Poster Session,* Bengaluru, India, July 23–26, 2012.

    [Acceptance rate: *Not Known*.**]**

38. Jesse Ehrenfeld, **Aniruddha Gokhale,** Xenonfon Koutsoukos, and Douglas Schmidt, WiP Abstract: A Closed-loop Control Architecture to Maintain Patient Normothermia during Perioperative Periods, *ACM/IEEE Third International Conference on Cyber Physical Systems (ICCPS '12) Work-in-Progress Session,* Beijing, China, April 16–19, 2012, pp. 217–217.

39. Adam Trewyn, **Aniruddha Gokhale,** Shivakumar Sastry, and Michael Branicky, WiP Abstract: TCP Congestion Control Principles for Highly Available Reconfigurable Conveyor Systems, *ACM/IEEE Third International Conference on Cyber Physical Systems (ICCPS '12) Work-in-Progress Session,* Beijing, China, April 16–19, 2012, pp. 212–212.

40. James Edmondson, **Aniruddha Gokhale,** and Sandeep Neema, Automated Redeployment of Real-Time Systems Informed by User-Provided Workflows, *The 18th IEEE Real-Time and Embedded Technology and Applications Symposium Work-in-Progress (RTAS WiP 2012),* Beijing, China, April 16–19, 2012.

    [Acceptance rate: *Not Known*.**]**

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47. Amogh Kavimandan and **Aniruddha Gokhale**, "Templatized Model Transformations," Poster presentation at OMG Annual Real-time Workshop, Arlington, VA, Jul 2008.

48. James Hill and **Aniruddha Gokhale**, "Continuous Integration of QoS in DRE Systems," Poster presentation at OMG Annual Real-time Workshop, Arlington, VA, Jul 2008.

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50. Amogh Kavimandan and **Aniruddha Gokhale**, Supporting Systems QoS Design and Evolution through Model Transformations, Proceedings of the *Companion to the Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, (OOPSLA Companion 2007)*, Montreal, Canada, October 21-25, 2007.

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59. Amogh Kavimandan and **Aniruddha Gokhale**, "An Energy-efficient and Scalable Data Dissemination Protocol for Wireless Sensor Networks," *Usenix Mobisys 2005 Poster Session,* Seattle, WA, June 6-8, 2005.

60. Jules White, Douglas C. Schmidt and **Aniruddha Gokhale**, Simplifying the Development of Autonomic Enterprise Java Bean Applications via Model Driven Development, *Proceedings of the International Conference on Autonomic Computing (ICAC 05), Short Paper* Seattle, WA, June 2005.

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2. Akram Hakiri, Sadok Ben Yahia and **Aniruddha Gokhale,** Hyper-5G: A Cross-Atlantic Digital Twin Testbed for Next Generation 5G IoT Networks and Beyond, Workshop on Digital Twin for Next Generation Networks, IEEE ISORC 2023 Conference, Nashville, TN, USA, May 23–25, 2023, pp. 230-235, doi: 10.1109/ISORC58943.2023.00041.

3. Ziran Min, Shuang Zhou, Zhuangwei Kang, Shashank Shekhar, Charif Mahmoudi, Swapna Gokhale, and **Aniruddha Gokhale,** Managing and Optimizing 5G & Beyond Network Resources for Multi-Task Digital Twin Applications in Industry 4.0, Workshop on Digital Twin for Next Generation Networks, IEEE ISORC 2023 Conference, Nashville, TN, USA, May 23–25, 2023, pp. 220-223.

4. **Aniruddha Gokhale,** Research and Educational Experiences using Chameleon for Distributed Systems, Cloud Computing and Computer Networks, 4th Chameleon User Meeting, Chicago, IL, USA, May 2–3, 2023.

5. Yogesh Barve, Pranav Karve, **Aniruddha Gokhale,** and Sankaran Mahadevan, Position Paper: Research Challenges in the Design and Composition of Surrogate Models for Robust CPS, Appeared in *The Design Automation for CPS and IoT (DESTION 2021)* workshop, CPS-IoTWeek 2021, May 2021, pp. 4.

6. Ziran Min, Robert Canady, Akram Hakiri, Uttam Ghosh and **Aniruddha Gokhale,** Tools and Techniques for Privacy-aware, Edge-centric Distributed Deep Learning, Workshop on Distributed Infrastructures for Deep Learning (DIDL 20), ACM/IFIP Middleware 2020 conference, Delft, The Netherlands, Dec 2020, pp. 7–12.

7. Zhuangwei Kang, Robert Canady, Abhishek Dubey, **Aniruddha Gokhale,** Shashank Shekhar and Matous Sedlacek, Evaluating DDS, MQTT, and ZeroMQ Under Different IoT Traffic Conditions, 7th International Workshop on Middleware and Applications for the Internet of Things (M4IoT 2020), ACM/IFIP Middleware 2020 conference, Delft, The Netherlands, Dec 2020, pp. 7–12.

8. **Aniruddha Gokhale,** Yogesh Barve, Anirban Bhattacharjee, and Shweta Khare, Software-defined and Programmable CPS/IoT-OS: Architecting the Next-generation of CPS/IoT Operating Systems, *1st International Workshop on Next-Generation Operating Systems for Cyber-Physical Systems (NGOSCPS), On Beyond POSIX,* CPSWeek 2019, Montreal, Quebec, Canada, April 5, 2019, pp. 3.

9. **Aniruddha Gokhale,** Yogesh Barve, Anirban Bhattacharjee, and Travis Brummett, "Experiences using Chameleon in a Cloud Computing Course," 2nd Chameleon User's Meeting, Austin, TX, USA, Feb 6–7, 2019, pp. 2.

10. Yogesh Barve, Anirban Bhattacharjee, Shweta Khare, and **Aniruddha Gokhale,** "Investigating Dynamic Resource Management Solutions for Cloud Infrastructures using Chameleon Cloud," 2nd Chameleon User's Meeting, Austin, TX, USA, Feb 6–7, 2019, pp. 2.

11. Anirban Bhattacharjee, Yogesh Barve, **Aniruddha Gokhale,** and Takayuki Kuroda, International Workshop on Clouds and (eScience) Applications Management (CloudAM), Collocated with the 11th IEEE/ACM International Conference on Utility and Cloud Computing (UCC), Zurich, Switzerland, Dec 17–20, 2018, pp. 109–114.

12. **Aniruddha Gokhale,** Leveraging Fog/Edge Computing Resources in Collaborative Community-driven Solutions for Smart and Connected Cities, Position paper for the Ignite Connecting Technologies and Communities (ICTC), College Park, MD, USA, Aug 1–3, 2018.

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14. Subhav Pradhan, Abhishek Dubey, and **Aniruddha Gokhale,** "Designing a Resilient Deployment and Reconguration Infrastructure for Remotely Managed Cyber-Physical Systems," *8th International Workshop on Software Engineering for Resilient Systems (SERENE),* Gothenberg, Sweden, Sept 5-6, 2016, pp. 88–104.

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24. Ileana Ober, **Aniruddha Gokhale,** James Hill, Jean-Michel Bruel, Michael Felderer, David Lugato, and Akshay Dabholkar, MDHPCL 2013 Workshop Summary, *Organizers Report for the Second International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL), Satellite event of ACM/IEEE MODELS 2013,* Miami Beach, FL, Sept 29, 2013.

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32. **Aniruddha Gokhale**, "Resource Provisioning and Dynamic Resource Management in Intelligent Transportation Systems," *2nd Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks (In conjunction with 11th International Mobile Data Management Conference),* Kansas City, USA, May 23, 2010.

33. Akshay Dabholkar and **Aniruddha Gokhale**, An Approach to Middleware Specialization for Cyber Physical Systems, Proceedings of the *Second Workshop on Cyber Physical Systems (WCPS 09),* Montreal, Canada, June 22, 2009, pp. 73–79.

34. **Aniruddha Gokhale**, Akshay Dabholkar, and Sumant Tambe, Towards a Holistic Approach to Integrating Middleware with Software Product Lines Research, *Workshop on Modularization, Composition and Generative Techniques (McGPLE 08),* ACM GPCE 2008 Conference, Nashville, TN, Oct 23, 2008.

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41. Amogh Kavimandan and **Aniruddha Gokhale**, "Automated Middleware QoS Configuration Techniques using Model Transformations, " Invited keynote, Proceedings of *EDOC workshop on Advances in Quality of Service Management, (AQuSerM 2007),* Annapolis, Maryland, October 15-19, 2007.

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70. Huang-Ming Huang, Christopher Gill, **Aniruddha Gokhale**, and Balachandran Natarajan, "Replication Strategies for Fault-tolerant Real-time CORBA Services," OMG Workshop on Distributed Object Computing for Real-time and Embedded Systems, Arlington, VA, July 14-17, 2003.

71. **Aniruddha Gokhale**, Douglas C. Schmidt, Tao Lu, Balachandran Natarajan, Nanbor Wang, "CoSMIC: An MDA Generative Tool for Distributed Real-time and Embedded Applications," Model Driven Approaches to Middleware Application Development (MAMAD) Workshop, Middleware 2003, Rio De Janeiro, Brazil, June 2003.

72. Lisa DiPippo, Jiangyin Zhang, Matthew Murphy, Victor Fay Wolfe, Joseph Loyall, Richard Schantz, Craig Rodrigues, Jeff Parsons, Sandeep Neema, Balachandran Natarajan, and **Aniruddha Gokhale**, "Towards Reducing the Complexity of Adaptive Real-time Large-scale Distributed Embedded Systems," IEEE Workshop on Large Scale Real-time and Embedded Systems, Austin, TX, Dec 2, 2002.

73. **Aniruddha Gokhale**, Balachandran Natarajan, Douglas C. Schmidt, Andrey Nechypurenko, Jeff Gray, Nanbor Wang, Sandeep Neema, Ted Bapty and Jeff Parsons, "CoSMIC: An MDA Generative Tool for Distributed Real-time and Embedded Component Middleware and Applications," Proceedings of the ACM OOPSLA 2002 Workshop on Generative Techniques in the Context of the Model Driven Architecture, Seattle, WA, Nov 2002.

74. Jeff Gray, Ted Bapty, Sandeep Neema, and **Aniruddha Gokhale**, "Generating Aspect-Oriented Systems from Domain-Specific Models," ACM OOPSLA Workshop on Generative Techniques for Model-Driven Architecture, Seattle, WA, November, 2002.

75. Douglas C. Schmidt, **Aniruddha Gokhale**, and Christopher D. Gill, "Applying Model-Integrated Computing and DRE Middleware to High Performance Embedded Computing,", Proceedings of the Sixth Annual Workshop on High Performance Embedded Computing, Sept 2002, MIT Lincoln Labs, MA.

76. Gabor Karsai, Sandeep Neema, Arpad Bakay, Akos Ledeczi, Feng Shi and **Aniruddha Gokhale**, "A Model based Front End to ACE/TAO: Embedded Systems Modeling Language," Second Annual TAO Workshop, Arlington, VA, July 2002.

77. Aniruddha S. Gokhale, Douglas C. Schmidt, Balachandran Natarajan, and Nanbor Wang, "Applying Model Driven Architecture to Distributed Real-time and Embedded Applications,", Third Annual OMG Workshop on Embedded and Real-time Distributed Object Computing, Arlington, VA, July 2002.

78. Balachandran Natarajan, **Aniruddha Gokhale**, Christopher D. Gill, Joseph Cross, Christopher Andrews and Sylvester Fernandez, "Adding Fault tolerance to Real-time CORBA Systems," Third Annual OMG Workshop on Embedded and Real-time Distributed Object Computing, Arlington, VA, July 2002.

79. Balachandran Natarajan, **Aniruddha Gokhale**, Douglas C. Schmidt, Chris Gill, Nanbor Wang, Joseph Cross, Christopher Andrews and Sylvester Fernandez, "Towards Dependable Real-time and Embedded CORBA Systems," Workshop on Dependable Middleware Systems, DSN 2002, Washington DC, June 2002.

80. **Aniruddha Gokhale**, "Patterns in Bluetooth," ACM *OOPSLA 2000* Jini Pattern Language Workshop, October 2000, Minneapolis, MN, USA.

81. **Aniruddha Gokhale**, "Fault Tolerant CORBA Extensions for JINI Pattern Language," ACM *OOPSLA 2000* Jini Pattern Language Workshop, October 2000, Minneapolis, MN, USA.

82. **Aniruddha Gokhale**, Tim Harrison, Douglas C. Schmidt, and Guru Parulkar, "Operating System Support for Real-time CORBA," *Proceedings of the 5th International Workshop on Object-Orientation in Operating Systems*: IWOOOS 1996 workshop, October 27–28, 1996, Seattle, Washington.

Technical Reports [Total = 21]

1. Shashank Shekhar, Ajay Dev Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, Xenofon Koutsoukos, and Gabor Karsai, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *Vanderbilt University Institute for Software Integrated Systems,* No. ISIS-19-101, Nashville, TN, USA, March 2019.

2. Subhav Pradhan, Abhishek Dubey, William Otte, Gabor Karsai and **Aniruddha Gokhale,** Towards a Product Line of Heterogeneous Distributed Applications, *Vanderbilt University, ISIS Technical Report #ISIS-15-117,* 2015.

3. Kyoungho An, **Aniruddha Gokhale,** Sumant Tambe and Takayuki Kuroda, Wide Area Network-Scale Discovery and Data Dissemination in Data-centric Publish/Subscribe Systems, *Vanderbilt University, ISIS Technical Report #ISIS-15-120,* 2015.

4. Prithviraj Patil, **Aniruddha Gokhale,** and Akram Hakiri, Modular and Highly Configurable Computation Mobility Framework for Internet of Things, *Vanderbilt University, ISIS Technical Report #ISIS-15-116,* 2015.

5. Akram Hakiri, Pascal Berthou, Prithviraj Patil, and **Aniruddha Gokhale,** Towards a Publish/Subscribe-based Open Policy Framework for Proactive Overlay Software Defined Networking, *Vanderbilt University, ISIS Technical Report #ISIS-15-115,* 2015.

6. Subhav Pradhan, William Otte, Abhishek Dubey, Csanad Szabo, **Aniruddha Gokhale,** and Gabor Karsai Towards a Self-adaptive Deployment and Configuration Infrastructure for Cyber-Physical Systems, *Vanderbilt University, ISIS Technical Report #ISIS-14-102,* 2014.

7. Kyoungho An, Sumant Tambe, A. Sorbini, Sheeladitya Mukherjee, J Povedano-Molina, Michael Walker, Nirjhar Virmani, **Aniruddha Gokhale,** and Paul Pazandak, Real-time Sensor Data Analysis Processing of a Soccer Game Using OMG DDS Publish/Subscribe Middleware, *Vanderbilt University, ISIS Technical Report #ISIS-13-102,* 2013.

8. **Aniruddha Gokhale**, Steven Drager and William McKeever, A Cyber Physical Systems Solution for Real-time and Reliable Information Dissemination in Intelligent Transportation Systems, *Vanderbilt University, ISIS Technical Report #ISIS-10-102,* 2010.

9. Amogh Kavimandan, **Aniruddha Gokhale**, Gabor Karsai and Jeff Gray, Templatized Model Transformations: Enabling Reuse in Model Transformations, *Vanderbilt University, ISIS Technical Report #ISIS-07-810,* 2009.

10. Amogh Kavimandan and **Aniruddha Gokhale**, Automated Middleware QoS Configuration Techniques using Graph Transformations, *Vanderbilt University, ISIS Technical Report #ISIS-07-810,* 2007.

11. James Hill and **Aniruddha Gokhale**, Using Generative Programming to Enhance the Reuse in Visitor Pattern-based DSML Model Interpreters, *Vanderbilt University, ISIS Technical Report #ISIS-07-810,* 2007.

12. Sumant Tambe, Akshay Dabholkar, Amogh Kavimandan, **Aniruddha Gokhale** and Sherif Abdelwahed, A Platform Independent Component QoS Modeling Language for Distributed Real-time and Embedded Systems, *Vanderbilt University, ISIS Technical Report #ISIS-07-809,* 2007.

13. James H. Hill, Sumant Tambe and **Aniruddha Gokhale**, Applying model-driven development and generative programming techniques to evaluate component-based software system QoS, *Vanderbilt University, ISIS Technical Report #ISIS-06-707,*, 2006.

14. Amogh Kavimandan, Reinhard Klemm, Ajita John, Doree Seligmann, **Aniruddha Gokhale**, A Client-Side Architecture for Supporting Pervasive Enterprise Communications (extended version of the ICPS paper), *Avaya Labs Research Technical Report, ALR-2006-004,* February, 2006.

15. Amogh Kavimandan, Reinhard Klemm, Ajita John, Doree Seligmann, **Aniruddha Gokhale**, A Browser-Based Architecture for Supporting Context-Aware Communications Applications, *Avaya Labs Research Technical Report, ALR-2005-041,* November, 2005.

16. Wonsuck Lee, Marina Thottan, Ramesh Viswanathan, Aniruddha Gokhale, Amogh Kavimandan, Network Simulation via Hybrid System Modeling: A Time-Stepped Approach (extended version of the IC3N paper), *Lucent Technologies Technical Memorendum, ITD-05-46094C,* March, 2005.

17. Balachandran Natarajan, **Aniruddha Gokhale**, Shalini Yajnik, and Douglas C. Schmidt, "Measuring the Impact of Fault-tolerant CORBA on the Performance of Distributed Systems,", *Bell Labs Technical Memorandum #10009675-000207-02,* Lucent Technologies, Murray Hill, NJ.

18. **Aniruddha Gokhale**, Douglas C. Schmidt, Carlos O'Ryan, Alexander Arulanthu, "Applying Patterns to Design and Optimize a CORBA IDL Compiler," *Bell Labs Technical Memorandum #11356-990916-09,* Lucent Technologies, Murray Hill, NJ.

19. **Aniruddha Gokhale** and Douglas C. Schmidt, "Optimizing a CORBA IIOP Protocol Engine for Minimal Footprint Multimedia Systems," Bell Labs Technical Memorandum #11356-990415-02, Lucent Technologies, Murray Hill, NJ.

20. **Aniruddha Gokhale** and Douglas C. Schmidt, "Optimizing the Performance of the CORBA Internet Inter-ORB Protocol Over ATM," Washington University, Computer Science technical report #WUCS-97-10.

21. **Aniruddha Gokhale**, George Varghese. and Ron Cytron, "Design of a Tool for Rapid Prototyping of Protocols," Washington University, Computer Science, Technical report WUCS-95-30.

Submitted for Review/Planned Submissions

1. Akram Hakiri, **Aniruddha Gokhale,** Sadok Ben Yahia and Nedra Mellouli, "A Comprehensive Survey on Digital Twin for Future Networks and Emerging IoT Industry," Submitted to the Elsevier Journal of Computer Networks, June 2023.

Presentations [Total = 122]

Tutorials [Total = 9]

1. "FECBench: An Extensible Framework for Pinpointing Sources of Performance Interference in Cloud-to-Edge hosted Applications," Shashank Shekhar, Yogesh Barve, Anirban Bhattacharjee, Shweta Khare, and **Aniruddha Gokhale,** Half-day tutorial at IEEE International Conference on Cloud Engineering (IC2E), Orlando, FL, USA, Apr 17, 2018.

2. "Understanding Performance Interference Benchmarking and Application Profiling Techniques for Cloud-hosted Latency-sensitive Applications," Shashank Shekhar, Yogesh Barve, and **Aniruddha Gokhale,** Half-day tutorial at the 10th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2017), Austin, TX, USA, Dec 6, 2017.

3. "PADS – A Model-driven Engineering Framework for Learning Distributed Systems Algorithms," Presented by Yogesh Barve, Anirban Bhattacharjee and **Aniruddha Gokhale,** Half day tutorial at the ACM/IEEE 20th International Conference on Model-driven Engineering Languages and Systems (MODELS), Austin, TX, USA, Sept 17–22, 2017.

4. "Resource-aware Deployment, Configuration and Adaptation for Fault-tolerance in Distributed Real-time Embedded Systems," Tutorial at OMG Real-time Workshop, Arlington, VA, USA, May 2010.

5. "Model-Driven Engineering for Distributed Real-time and Embedded Systems," Joint tutorial with Dr. James Hill, IEEE/ACM MODELS 2009 Conference, Denver, CO, USA, Sep 30-Oct 5, 2009.

6. "Model-driven Engineering for Continuous System Integration of Large-scale Component-based Systems," Joint tutorial with James Hill, IEEE/ACM MODELS 2008 Conference, Toulouse, France, Sep 28–Oct 3, 2008.

7. "Model-Driven Engineering for Distributed Real-time and Embedded Systems," IEEE/ACM MODELS 2007 Conference, Nashville, TN, USA, Sep 30-Oct 5, 2007.

8. "Model-Driven Engineering for Distributed Real-time and Embedded Systems," OMG Real-time and Embedded Systems Workshop, Arlington, VA, USA, July 9–12, 2007.

9. "MDE4DRE: Model-Driven Engineering for Distributed Real-time and Embedded Systems," Joint tutorial with Dr. Doug Schmidt, 13th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2007), Bellevue, WA, United States, April 3–6, 2007.

Invited and Colloquium Talks and Presentations [Total = 30]

1. "A Novel 5G Digital Twin Approach for Traffic Prediction and Elastic Network Slice Management," Invited speaker at COMSNET 2024, Bengaluru, India, Jan 4–7, 2024.
2. Invited keynote speaker, Fifth WCE National Research Symposium on Computing - RSC 2021, March 20, 2021.
3. Panel speaker at the 19th Workshop on Adaptive and Reflexive Middleware (ARM), 2020, ACM/IFIP Middleware conference, Delft, The Netherlands, Dec 8, 2020 (virtual).
4. Panel speaker on OMG DDS, Object Management Group Technical Committee Meeting, Nashville, TN, USA, Sept 23, 2019.
5. "Middleware Design Considerations for Performance and Mobility-Aware Fog/Edge Resource Management," Ecole de Technologie Superieure, Invited Seminar Speaker, Montreal, Quebec, Canada, April 17, 2019.
6. "ALGORITHMS AND TECHNIQUES FOR DYNAMIC RESOURCE MANAGEMENT ACROSS CLOUD-EDGE RESOURCE SPECTRUM," Colloquium speaker at Nanyang Technological University (NTU), Singapore, July 9, 2018.
7. "Overcoming Deployment and Configuration Challenges in High Performance Computing via Model-driven Engineering Technologies," Invited speaker at the First Workshop on Software Challenges to Exascale Computing (https://scecforum.github.io/), Jaipur, India, Dec 17, 2017. Talk delivered via video recorded lecture, and Q/A over Skype.
8. "Exploiting Fog and Edge Resources for Cloud-hosted Cyber Physical Systems," Invited Speaker for the First Cyber Physical Systems Symposium (CyPhySS), Robert Bosch Center for Cyber Physical systems, Indian Institute of Science (IISc), Bengaluru, India, July 19–21, 2017.
9. VandyApps Talk, Vanderbilt University, April 2017.
10. "Cloud Computing Challenges and Solutions for Smart Cyber Physical Systems," Missouri Science and Technology University, Rolla, MO, Oct 24, 2016.
11. "Fog Computing Challenges and Solutions for Smart Grid Cyber Physical Systems," Tennessee Tech University, Cookeville, TN, Aug 15, 2016.
12. National Science Foundation – 2014 National Workshop on Transportation Cyber-Physical Systems, Arlington, VA, USA, Jan 23-24, 2014.
13. **Aniruddha Gokhale,** "Short Panel Summary of Open Issues," Workshop on Real-time and Distributed Computing in Emerging Applications (REACTION '12) at IEEE Real-time Systems Symposium (RTSS '12), San Juan, Puerto Rico, USA, Dec 2012.
14. "Towards High Confidence and Trustworthy Cyber Physical Systems," LAAS-CNRS, University of Toulouse, Toulouse, France, July 11, 2012 `http://www.laas.fr/1-31318-Detail.php?id=861`
15. Gautam Biswas, Douglas Fisher, **Aniruddha Gokhale,**, John Kinnebrew, Chris Daly, and Kim McCormick, "Community-Situated Challenge-based STEM Education using Gigabit Networks," NSF IGNITE Workshop, GENI Conference, Kansas City, MO, USA, Nov 2–4, 2011.
16. "Deployment and Runtime Techniques for Fault-tolerance in Distributed, Real-time and Embedded Systems," Department of Computer Science, Indiana University-Purdue University Indianapolis (IUPUI), Colloquiuim Series, April 2011.
17. "Open Challenges in Real-time and Reliable Information Dissemination in Intelligent Transportation Systems,", Vanderbilt University Dept of Electrical Engineering and Computer Science's CSWithIT Seminar Series, Nov 2009.

18. "Considering Deployment & Configuration Issues in DSMLS for Non-functional Properties", Panelist Position Statement, Workshop on 2nd International Workshop on Non-functional System Properties in Domain Specific Modeling Languages, ACM/IEEE 12th International Conference on Model Driven Engineering Languages and Systems (MODELS 2009), Denver, Colorado, USA, Oct 4-9, 2009.

19. Automated Middleware QoS Configuration Techniques using Model Transformations, Invited speaker at the *EDOC Workshop on Advances in Quality of Service Management, (AQuSerM 2007),* Annapolis, Maryland, October 15-19, 2007.

20. Multidimensional QoS Management in Distributed Real-time and Embedded Systems, May 1, 2007, TechX Corporation, Boulder, CO, [Host: Dr. Nanbor Wang].

21. Multidimensional QoS Management in Distributed Real-time and Embedded Systems, April 30, 2007, Colorado State University, Fort Collins, CO, [Host: Dr. Indrakshi Ray].

22. Model Driven Engineering for QoS Management in Distributed Real-time & Embedded Systems, April 14, 2006, Avaya Research Labs, Basking Ridge, NJ, [Host: Dr. Reinhard Klemm].

23. QoS-driven Lifecycle Management of Service-oriented Distributed Real-time & Embedded Systems, Vanderbilt University Dept of Electrical Engineering and Computer Science's CSWithIT Seminar Series, Feb 16, 2006.

24. Design and Performance Evaluation of a Novel Data Dissemination Sensor Network Protocol, June 10, 2005, Symantech/Veritas Corporation, Pune, India, [Host: Mr. Balachandran Natarajan].

25. Design and Performance Evaluation of a Novel Data Dissemination Sensor Network Protocol, June 8, 2005, Honeywell, Bangalore, India [Host: Dr. Raghababu Sahu].

26. Design and Performance Evaluation of a Novel Data Dissemination Sensor Network Protocol, June 8, 2005, GE Research, Bangalore, India, [Host: Dr. Manohar Kollegal].

27. Towards Automated Middleware Optimizations for Product-line Architectures, University of Toronto, Toronto, Canada, May 25, 2005 [Host: Dr. Arno Jacobsen].

28. Dual Use of Performance Analytical Techniques for Systems Design and Improving Cybertrustworthiness, Naval Surface Warfare Center (NSWC), Dahlgren, VA, April 13, 2005, [Host: Dr. William Farr].

29. "Model Driven Middleware,", Vanderbilt University Dept of Electrical Engineering and Computer Science's CSWithIT Seminar Series, Oct 2003.

30. "ISIS and DOC Group Research," Vanderbilt University Chapter of Society of American Military Engineers (SAME), Oct 2003.

Conference, Workshop, Poster and Demo Presentations [Total = 83]

1. Zhuangwei Kang, Ziran Min, Shuang Zhou, Yogesh Barve and **Aniruddha Gokhale,** Towards High-Performance Data Loading in Cloud-Native Deep Learning Systems, *16th International Conference on COMmunication Systems & NETworkS (COMSNETS)*, Bengaluru, India, Jan 3–7, 2024, pp. 361–369.

2. Ziran Min, Shuang Zhou, Zhuangwei Kang, Shashank Shekhar, Charif Mahmoudi, Swapna Gokhale, and **Aniruddha Gokhale,** Managing and Optimizing 5G & Beyond Network Resources for Multi-Task Digital Twin Applications in Industry 4.0, Workshop on Digital Twin for Next Generation Networks, IEEE ISORC 2023 Conference, Nashville, TN, USA, May 23–25, 2023, To Appear.

3. **Aniruddha Gokhale,** Research and Educational Experiences using Chameleon for Distributed Systems, Cloud Computing and Computer Networks, 4th Chameleon User Meeting, Chicago, IL, USA, May 2–3, 2023.

4. Robert Canady, Xingyu Zhou, Yogesh Barve and **Aniruddha Gokhale,** Applying DDDAS Principles for Realizing Optimized and Robust Deep Learning Models at the Edge, DDDAS Annual Conference, Cambridge, MA, Oct 6–10, 2022, pp. 15.

5. Xiaoyang Qiu, Arjun Keerthi, Teppei Kotake, and **Aniruddha Gokhale,** Demo Abstract: A Monocular Vision-based Obstacle Avoidance Android/Linux Middleware for the Visually Impaired, *ACM/IFIP International Middleware Conference (Middleware) Demo Session,* Davis, CA, USA, December 9–13, 2019, pp. 25–26.

6. Shashank Shekhar, Ajay Dev Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, and Xenofon Koutsoukos, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *IEEE Symposium on Real-time Computing (ISORC 2019),* Valencia, Spain, May 7–9, 2019, pp. 118–125.

7. Presentation made on behalf of author Shivakumar Sastry, "Coordinated Conveying," *IEEE Symposium on Real-time Computing (ISORC 2019),* Valencia, Spain, May 7–9, 2019.

8. Shashank Shekhar, Ajay Dev Chhokra, Hongyang Sun, **Aniruddha Gokhale,** Abhishek Dubey, and Xenofon Koutsoukos, URMILA: Dynamically Trading-off Fog and Edge Resources for Performance and Mobility-Aware IoT Services, *Poster in the Internet of Things Design and Implementation (IoTDI), Part of the IEEE/ACM CPSWeek 2019,* Montreal, Canada, April 2019, pp. 2.

9. **Aniruddha Gokhale,** Yogesh Barve, Anirban Bhattacharjee, and Shweta Khare, Software-defined and Programmable CPS/IoT-OS: Architecting the Next-generation of CPS/IoT Operating Systems, *1st International Workshop on Next-Generation Operating Systems for Cyber-Physical Systems (NGOSCPS), On Beyond POSIX,* CPSWeek 2019, Montreal, Quebec, Canada, April 5, 2019, pp. 3.

10. Akram Hakiri, **Aniruddha Gokhale,** and Prithviraj Patil, Work-in-Progress: Towards Real-time Smart City Communications using Software Defined Wireless Mesh Networking, *RTSS@Brief Session of the 39th IEEE Real-time Systems Symposium (RTSS),* Nashville, TN, USA, Dec 11–14, 2018, pp. 4.

11. "Uncertainties in Resource Management for Cloud-Fog-Edge Computing," Panelist at the TREC4CPS Workshop, IEEE Real-time Systems Symposium (RTSS), Nashville, TN, Dec 11–14, 2019.

12. Uttam Ghosh, **Aniruddha Gokhale,** Mohammad Rahman, Zhenkai Zhang, Shivakumar Sastry, Nilanjan Sarkar and Satish Mahajan, "Model-driven Automated and Adaptive Deployment Techniques for Secure Cyberinfrastructures," Presented at SSCET 2018, Huntsville, AL, USA, Aug 3, 2018.

13. Yogesh Barve, Himanshu Neema, **Aniruddha Gokhale,** and Janos Sztipanovits, Towards an Automated Deployment Framework for Large-scale CPS Co-simulations in the Cloud, First Cyber Physical Systems Symposium (CyPhySS), Robert Bosch Center for Cyber Physical systems, Indian Institute of Science (IISc), Bengaluru, India, July 19–21, 2017.

14. Shashank Shekhar and **Aniruddha Gokhale,** Poster Abstract: Enabling IoT Applications via Dynamic Cloud-Edge Resource Management, *2nd ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI),* Pittsburgh, PA, USA, April 17–21, 2017.

15. Akram Hakiri and **Aniruddha Gokhale,** "Data-Centric Publish/Subscribe Routing Middleware for Realizing Proactive Overlay Software-Defined Networking," *10th ACM International Conference on Distributed and Event-based Systems (DEBS)* ACM publisher, Irvine, CA, USA, June 20–24, 2016, pp. 246–257.

16. Akram Hakiri and **Aniruddha Gokhale,** "Rethinking the Design of LR-WPAN IoT Systems with SDN," IoTIP Workshop, The 12th International Conference on Distributed Computing in Sensor Systems (DCOSS), Washington D.C, May 28, 2016, pp. 238–243.

17. Shashank Shekhar, Subhav Pradhan, Fangzhou Sun, Abhishek Dubey, and **Aniruddha Gokhale,** "Empowering the Next Generation City-Scale Smart Systems," *Proceedings of HiPC Workshop on DDDAS/Infosymbiotics,* IEEE publisher, Bengaluru, India, 2015, one page abstract.

18. Hamzah Abdel-aziz, Faruk Caglar, Shashank Shekhar, Michael Walker, Xenofon Koutsoukos, and **Aniruddha Gokhale,** "Online Performance Model Learning to Minimize Performance Interference in Cloud Computing Infrastructure," *Proceedings of HiPC Workshop on DDDAS/Infosymbiotics,* IEEE publisher, Bengaluru, India, 2015, one page abstract.

19. Presentation on behalf of Marisol Garcia-Valls and Paolo Bellavista, "Adaptive middleware design for CPS: Considerations on the OS, resource managers, and the network run-time," *Proceedings of the Adaptive and Reflective Middleware Workshop at ACM/IFIP/Usenix Middleware Conference,* ACM/IFIP/Usenix publisher, Vancouver, Canada, 2015.

20. Kyoungho An, **Aniruddha Gokhale,** Sumant Tambe, and Takayuki Kuroda, Wide Area Network-scale Discovery and Data Dissemination in Data-centric Publish/Subscribe Systems, *Proceedings of the ACM/IFIP/Usenix Middleware Conference,* ACM/IFIP/Usenix publisher, Vancouver, Canada, 2015, pp. 234–245.

21. Demo participant, NIST Global City Teams Challenge (GCTC), Washington DC, June 1, 2015.

22. Position paper presentation at the Global Smart City and Community Coalition: Building a global partnership to accelerate collaboration and smart city deployments, Royal Netherlands Embassy, Washington DC, June 2, 2015.

23. Super Computing Conference (SC'14) Panel on Infosymbiotics/DDDAS, New Orleans, LA, Nov 2014.

24. Position Paper Presentation, NIST Global City Teams Challenge, Sept 2014, Gaithersburg, MD.

25. Annual US Ignite Summit, Demo Presentation of C3STEM Technology, Sunnyvale, CA, July 2014.

26. Anton Dukeman, Liyan Hou, Shashank Shekhar, Faruk Caglar, John Kinnebrew, Gautam Biswas, **Aniruddha Gokhale,** and Doug Fisher, "Modeling Student Program Evolution in STEM Disciplines," *Poster paper at the 121st ASEE Annual Conference, K-12 and Pre-Engineering Track,* ASEE publisher, Indianapolis, IN, USA, June 2014, pp..

27. Shashank Shekhar, Faruk Caglar, Anton Dukeman, Liyan Hou, **Aniruddha Gokhale,** John Kinnebrew, Gautam Biswas, and Doug Fisher, "An Evaluation of a Collaborative STEM Education Framework for High and Middle School Students," *Poster Paper at 121st ASEE Annual Conference, K-12 and Pre-Engineering Track,* ASEE publisher, Indianapolis, IN, USA, June 2014, pp..

28. Dili Wu, and **Aniruddha Gokhale,** A Self-Tuning System based on Application Profiling and Performance Analysis for Optimizing Hadoop MapReduce Cluster Configuration, *20th Annual IEEE International Conference on High Performance Computing (HiPC '13),* IEEE publisher, Bengaluru, India, 2013, pp. 89–98.

29. Kyoungho An, Takayaki Kuroda, **Aniruddha Gokhale,** Sumant Tambe, and Andrea Sorbini, Model-driven Generative Framework for Automated OMG DDS Performance Testing in the Cloud, *12th International Conference on Generative Programming: Concepts & Experiences (GPCE'13),* ACM publisher, Indianapolis, IN, USA, 2013, pp. 179–182.

30. Shashank Shekhar, Faruk Caglar, Kyoungho An, Takayaki Kuroda, **Aniruddha Gokhale,** and Swapna Gokhale, A Model-driven Approach for Price/Performance Tradeoffs in Cloud-based MapReduce Application Deployment, *2nd International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL) at MODELS 2013,* ACM/IEEE publisher, Miami Beach, FL, USA, Sept 29, 2013, pp. 37–42.

31. Kyoungho An, Takayaki Kuroda, **Aniruddha Gokhale,** Sumant Tambe, and Andrea Sorbini, "Model-driven Generative Framework for Automated OMG DDS Performance Testingin the Cloud," *Poster Session of SPLASH '13,* ACM/IEEE publisher, Indianapolis, IN, USA, 2013, pp. .

32. Faruk Caglar, Shashank Shekhar, Kyoungho An, and **Aniruddha Gokhale,** Intelligent Power- and Performance-aware Tradeoffs for Multicore Servers in Cloud Data Centers, *Proceedings of the Work-in-Progress Session of the 4th ACM/IEEE International Conference on Cyber Physical Systems (ICCPS' 13),* IEEE/ACM publisher, Philadelphia, PA, USA, April 2013, pp. .

33. Kyoungho An, and **Aniruddha Gokhale,** Model-driven Performance Analysis and Deployment Planning for Real-time Stream Processing, *Proceedings of the Work-in-Progress Session of the 19th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS '13),* IEEE publisher, Philadelphia, PA, USA, April 2013, pp. 21–24.

34. **Aniruddha Gokhale,** Gautam Biswas, Nilanjan Sarkar, Shivakumar Sastry, and Michael Branicky, CPS Laboratory-as-a-Service: Enabling Technology for Readily Accessible and Scalable CPS Education, *Proceedings of the First Workshop on Cyber-Physical Systems Education (CPS-Ed) at CPSWeek 2013,,* IEEE publisher, Philadelphia, PA, USA, April 2013, pp. 21–24.

35. Subhav Pradhan, **Aniruddha Gokhale,** William Otte, and Gabor Karsai, Real-time Fault-tolerant Deployment and Configuration Framework for Cyber Physical Systems, *Work-in-Progress Session at the 33rd IEEE Real-time Systems Symposium (RTSS '12),* IEEE publisher, San Juan, Puerto Rico, USA, 2012, pp. .

36. Laura Poff, **Aniruddha Gokhale,** and Mark McDonald, A Framework for Broker Placement in Vehicular Ad hoc Networks, *The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012), Session on Collaboration for Dynamic Resource Management in Mobile P2P Networks,* Denver, CO, USA, May 21–25, 2012, pp. 182–189.

37. **Aniruddha Gokhale,** "Cyber-Physical Systems Perspective for Distributed Event-based Systems," Presented as a five minute talk on new directions at the *5th ACM International Conference on Distributed Event-based Systems (DEBS' 11),* Yorktown Heights, NY, USA, July 11–15, 2011.

38. Laura Poff, Mark McDonald and **Aniruddha Gokhale,** Poster: A Capacity Planning Framework for Event Brokers in Intelligent Transportation Cyber Physical Systems, Poster Proceedings of the *5th ACM International Conference on Distributed Event-based Systems (DEBS' 11),* Yorktown Heights, NY, USA, July 11–15, 2011.

39. Akram Hakiri, Berthou Pascal, Gayraud Thierry, **Aniruddha Gokhale,** Joe Hoffert and Douglas C. Schmidt, Poster: SIP-based QoS Support and Session Management for DDS-based Distributed Real-time and Embedded Systems, Poster Proceedings of the *5th ACM International Conference on Distributed Event-based Systems (DEBS' 11),* Yorktown Heights, NY, USA, July 11–15, 2011.

40. Sumant Tambe, and **Aniruddha Gokhale,** Rectifying Orphan Components using Group-Failover in Distributed Real-time and Embedded Systems, *14th International ACM SIGSOFT Symposium on Component Based Software Engineering (CBSE-2011),* Boulder, CO, USA, June 21–23, 2011.

41. Amogh Kavimandan, **Aniruddha Gokhale**, Gabor Karsai and Jeff Gray, Managing the Quality of Software Product Line Architectures through Reusable Model Transformations, *Seventh International Conference on the Quality of Software Architectures (QoSA 2011),* Boulder, CO, June 21–23, 2011.

42. Aniruddha Gokhale, Resource Provisioning and Dynamic Resource Management in Intelligent Transportation Systems, *2nd Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks (In conjunction with 11th International Mobile Data Management Conference),* Kansas City, USA, May 23, 2010.

43. Middleware for Resource-Aware Deployment and Configuration of Fault-tolerant Real-time Systems, *16th IEEE Real-time and Embedded Technology and Applications Symposium (RTAS '10),* Stockhom, Sweden, April 12–15, 2010.

44. A Model-transformation Approach to Improving the Quality of Software Architectures for Distributed Real-time and Embedded Systems, Proceedings of the *Fifth International Conference on the Quality of Software Architectures (QoSA 2009),* East Stroudsberg, PA, June 22–26, 2009, pp. 18–35

45. An Approach to Middleware Specialization for Cyber Physical Systems, Proceedings of the *Second Workshop on Cyber Physical Systems (WCPS 09),* Montreal, Canada, June 22, 2009.

46. Evaluating the Effectiveness of Model-based Techniques for Middleware QoS Configurations in Distributed Real-time and Embedded Systems, *11th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC 2008),* Orlando, FL, USA, 5-7 May, 2008, pp. 100–107. (co-author: Amogh Kavimandan)

47. CaDANCE: Ensuring Deployment Predictability of Distributed Real-time and Embedded Systems, *11th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC 2008),* Orlando, FL, USA, 5-7 May, 2008, pp. 317–321. (co-authors: Gan Deng and Douglas Schmidt).

48. Exact Schedulability Analysis of Global Multiprocessor Scheduling with NuSMV, *11th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC 2008),* Orlando, FL, USA, 5-7 May, 2008, pp. 317–321. (Presented on behalf of authors: Zhonghua Gu et. al.).

49. Physical Assembly Mapper: A Model-driven Optimization Tool for QoS-enabled Component Middleware, *14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 08),* St. Louis, MO, USA, April 22–24, 2008, pp 123–134 (Presented on behalf of authors: Krishnakumar Balasubramanian and Douglas C. Schmidt).

50. A QoS Policy Configuration Modeling Language for Publish/Subscribe Middleware Platforms, *Proceedings of the First Annual Usenix Conference on Distributed Event-based Systems (DEBS 2007),* Toronto, Canada, June 20-22, 2007 (co-authors: Joe Hoffert and Douglas C. Schmidt).

51. Developing High Confidence Software for Cyber Physical Systems, *NSF Workshop on High Confidence Software for Cyber Physical Systems,* Nov 30-Dec 1, 2006, Alexandria, VA (co-authors: Sherif Abdelwahed and Nagarajan Kandasamy).

52. Provisioning Dynamic Reconfiguration and Redeployment Capabilities for Enterprise DRE Systems, *OMG's 2006 Real-time and Embedded Systems Workshop,* Arlington, VA, July 10-13, 2006, (co-authors: Gan Deng, Douglas C. Schmidt)

53. Model-driven Generative Techniques for Scalable Performability Analysis of Distributed Systems, *NSF NGS Workshop, International Parallel and Distributed Processing Symposium,* Rhodes Island, Greece, April 2006 (co-authors: Arundhati Kogekar, Dimple Kaul, Aniruddha Gokhale, Paul Vandal, U. Praphamontripong, Swapna Gokhale, Jing Zhang, Yuehua Lin and Jeff Gray).

54. Performance Analysis of the Reactor Pattern in Network Services, *PMEO-PDS Workshop, IEEE IPDPS,* Rhodes, Greece, April 29, 2006.

55. Context-Specific Middleware Specialization Techniques for Optimizing Software Product-line Architectures, *Proceedings of the ACM EuroSys 2006,* Leuven, Belgium, April 18-21, 2006, (co-authors: Arvind S. Krishna, Aniruddha Gokhale, Douglas C. Schmidt, John Hatcliff, and Venkatesh Prasad Ranganath).

56. DARPA ARMS PI Meeting, April 2006, Arlington, VA.

57. Towards Highly Optimized Real-time Middleware for Software Product-line Architectures, *26th IEEE RTSS Symposium, Work in Progress and Demo session,* Dec 5-8, 2005, Miami, FL (co authors - Arvind Krishna, Doug Schmidt, John Hatcliff and Venkatesh Ranganathan).

58. Performance Evaluation of Middleware Event Demultiplexing Patterns in Distributed Performance-Sensitive Software Systems, *IEEE Globecom 2005,* St. Louis, Nov 2005 (co-authors: Swapna Gokhale and Jeff Gray).

59. DARPA ARMS PI Meeting, Sept 2005, Arlington, VA.

60. "CoSMIC: Addressing Crosscutting Deployment and Configuration Concerns of Distributed Real-time and Embedded Systems via Aspect-oriented and Model-driven Software Development," Demonstration presentation, Fourth International Conference on Aspect-oriented Software Development (AOSD), Chicago, IL, Mar 2005 (co-authors: Arvind Krishna and Douglas C. Schmidt).

61. "COSMIC: An Aspect-Oriented Software Development Tool Suite," Model Integrated Computing Workshop On Aspect Oriented Modeling, OMG Technical Meeting, Burlingame, CA, Feb 2005.

62. "CoSMIC: Addressing Crosscutting Deployment and Configuration Concerns in QoS-sensitive Distributed Systems,", ACM OOPSLA Poster, Vancouver, Canada, Oct 2004.

63. "Introduction to LaTeX Typesetting,", ISIS IGROWS Workshop, Vanderbilt University, Jan 2004.

64. "CoSMIC Model Driven Middleware Tool-chain,", Real-time CCM Workshop, Vanderbilt University, Dec 2003.

65. "Model-driven Techniques for Proactive Fault Tolerance," Third Annual TAO Workshop, Arlington, VA, July 18, 2003.

66. "CoSMIC: An OMG MDA Toolsuite for Distributed Real-time and Embedded Applications," OMG Workshop on Distributed Object Computing for Real-time and Embedded Systems, Arlington, VA, July 14-17, 2003.

67. "Applying Model-Integrated Computing and DRE Middleware to High Performance Embedded Computing," Sixth Annual Workshop on High Performance Embedded Computing, Sept 2002, MIT Lincoln Labs, MA.

68. "A Model based Front End to ACE/TAO: Embedded Systems Modeling Language," Second Annual TAO Workshop, Arlington, VA, July 2002.

69. "Applying Model Driven Architecture to Distributed Real-time and Embedded Applications," Third Annual OMG Workshop on Embedded and Real-time Distributed Object Computing, Arlington, VA, July 2002.

70. "Applying Patterns to Improve the Performance of Fault Tolerant CORBA," First TAO Workshop, Washington University, St. Louis MO, Aug 2001.

71. "Applying Patterns to Improve the Performance of Fault Tolerant CORBA," 7th International Conference on High-Performance Computing, ACM/IEEE, Bangalore, India, December 17-20, 2000 (co-authors: Balachandran Natarajan, Douglas C. Schmidt and Shalini Yajnik).

72. "Patterns in Bluetooth," *ACM OOPSLA 2000 Jini Pattern Language Workshop,* October 2000, Minneapolis, MN, USA.

73. "Fault Tolerant CORBA Extensions for JINI Pattern Language," *ACM OOPSLA 2000 Jini Pattern Language Workshop,* October 2000, Minneapolis, MN, USA.

74. "Transparent Fault Tolerance for CORBA based Distributed Components," *ACM OOPSLA 2000 Poster Session,* October 2000, Minneapolis, MN, USA (co-authors: Ronald de Man, Rudynell Millian, Maarten Wegdam, and Shalini Yajnik).

75. Aniruddha Gokhale and Douglas C. Schmidt, "Techniques for Optimizing CORBA Middleware for Distributed Embedded Systems," Proceedings of IEEE INFOCOM '99, New York, New York, March 21–25th, 1999.

76. "Frameworks and components to build highly reliable systems," Lucent Software Symposium '98, Holmdel, NJ, October 1998 (co-authors: Douglas Schmidt, Shalini Yajnik, Jack McKnight).

77. "Evaluating the Performance of Demultiplexing Strategies for Real-time CORBA," Proceedings of GLOBECOM '97 conference, IEEE, Phoenix, AZ, November, 1997 (co-author: Doug Schmidt).

78. "Design Principles and Optimizations for High Performance ORBs," *ACM OOPSLA 97*, Poster Session, Oct 1997, Atlanta, GA, USA (co-author: Doug Schmidt).

79. "Tools for Automating the Migration from DCE to CORBA," *IEEE International Switching Symposium (ISS 97): World Telecommunications Congress,* Toronto, Canada, September, 1997 (co-author: Doug Schmidt and Stan Moyer).

80. "Evaluating Latency and Scalability of CORBA Over High-Speed ATM Networks," *IEEE International Conference on Distributed Computing Systems (ICDCS 97),* Baltimore, Maryland, May 27–30, 1997 (co-author: Doug Schmidt).

81. "Performance of the CORBA Dynamic Invocation Interface and Internet Inter-ORB Protocol over High-Speed ATM Networks," *IEEE GLOBECOM '96,* London England, November, 1996 (co-author: Doug Schmidt).

82. "Optimizations for High Performance ORBs," *ACM OOPSLA 96,* Poster Session, San Jose, CA, USA, Oct 1996 (co-author: Doug Schmidt).

83. "Optimizations for High Performance ORBs," *ACM OOPSLA 96,* Doctoral Symposium, San Jose, CA, USA, Oct 1996.

Professional Service

Steering Committees

1. ACM Distributed and Event-Based Systems (DEBS), www.debs.org, from August, 2009.

Journal/Book Editorial Responsibilities [Total = 10]

1. Guest Co-Editor, Special Issue of Elsevier Journal of Systems Architecture (JSA) on "AI-Driven Real-Time Distributed Computing for the Edge-Cloud Continuum of Journal of Systems Architecture,", 2025.
2. Guest Co-Editor, Special Issue of Elsevier Computer Networks on "Artificial Intelligence for Future 6G Systems", 2025.
3. Guest Co-Editor, FGCS 2023 Special Issue of the Elsevier Future Generation of Computer Systems on Digital Twins for IoT/5G with Akram Hakiri, Sadok Ben Yahia and Nedra Mellouli-Nauwycnk. Issue to be published by end of 2023.
4. Guest Co-Editor, ISORC 2019 Special Issue of the Elsevier Journal of Systems Architecture with Mathias Pacher, Zhenkai Zhang and Di Liu. Issue published in 2020.
5. Member of Editorial Board, Elsevier Journal of Systems Architecture (JSA), https://www.journals.elsevier.com/journal-of-systems-architecture, starting Jan 1, 2018.
6. Guest co-editor (with Vaidy Sunderam, and Adrian Sandu), Springer Cluster Computing Journal, Special Issue of DDDAS, published Spring 2018.
7. Guest co-editor (with Ulrik Pagh Schultz and Kenichi Asai), Elsevier COMLAN (Computer Languages, Systems and Structures) Special issue of the best papers from the 14th GPCE 2015 conference, Published in 2017.
8. Guest co-editor (with Marisol Garcia-Valls and Paolo Bellavista), Elsevier FGCS (Future Generation Computer Systems), Special issue of the best papers from the SAC 2016 Conference RST Track, Published in 2017.
9. Primary guest co-editor, Special issue on best papers of IEEE International Conferences on Embedded Software and Systems (ICESS '11) of Elsevier Journal of Software Architectures (JSA), 2012.
10. Co-editor, Special issue on Data Distribution for Large-Scale Complex Critical Infrastructures (DD4LLCI) of Journal of Network Protocols and Algorithms (JNPA), vol. 2, no. 3, Oct 2010.

Conference, Program and Workshop Chairships [Total = 32]

1. General Chair, 26th ACM/IFIP International Middleware Conference, Nashville, TN, USA, Dec 15–19, 2025.
2. General Co-Chair with Akram Hakiri and Gayraud Thierry, 28th IEEE International Symposium on Real-time Distributed Computing (ISORC), Toulouse, France, May 26–28, 2025.
3. Workshop Co-Chair (with Akram Hakiri), "Workshop on Middleware for Digital Twins (Midd4DT)," Workshop collocated with ACM Middleware Conference, Hong Kong, Dec 3–15, 2024.
4. General Co-Chair with Akram Hakiri and 27th IEEE International Symposium on Real-time Distributed Computing (ISORC), Carthage, Tunisia, May 24–26, 2024.
5. Workshop Co-Chair (with Akram Hakiri), "Workshop on Middleware for Digital Twins (Midd4DT)," Workshop collocated with ACM Middleware Conference, Bologna, Italy, Dec 11–15, 2023.
6. General Co-Chair with Mohammad Ashjaei and Guan Nan, 26th IEEE International Symposium on Real-time Distributed Computing (ISORC), Nashville, TN, May 23–25, 2023.
7. Technical Program Committee Co-Chair, 9th IEEE International Conference on Cloud Engineering (IC2E) San Francisco, CA, USA, Oct 4–8, 2021.

8. General Co-Chair with Mathias Pacher and Weichen Liu, 23rd IEEE International Symposium on Real-time Distributed Computing (ISORC), Nashville, TN, May 19–21, 2020 (Virtual).

9. Technical Program Committee Co-Chair, 22nd IEEE International Symposium on Real-time Distributed Computing (ISORC), Valencia, Spain, May 7–9, 2019.

10. Workshop Co-Chair (with Vaidy Sunderam, Salim Hariri and Adrian Sandu), "Workshop on Dynamic Data-driven Smart Systems (DDDSS)," Half-day workshop collocated with IEEE High Performance Computing (HiPC), Jaipur, India, Dec 2017.

11. Technical Program Committee Track Chair, SOA Track, 14th IEEE International Conference on Services Computing, Honolulu, HI, USA, June 25–30, 2017.

12. Workshop Co-organizer and Co-chair (with Abhishek Dubey, Sokwoo Rhee, and Monika Sturm), Second International Workshop on Science of Smart City Operations and Platforms Engineering (SCOPE) in partnership Global City Team Challenge (GCTC), Collocated with CPSWeek 2017, Pittsburgh, PA, USA, April 18, 2017.

13. Technical Program Committee Co-chair and Co-organizer (with Marisol Garcia-Valls, Faruk Caglar and Paolo Bellavista), Reliable Software Technologies and Communications Track, of the 32nd ACM/SIGAPP Symposium on Applied Computing (SAC), Marrakech, Morocco, April 3–7, 2017.

14. Workshop Co-organizer and Co-chair (with Abhishek Dubey), Scientific Challenges in Data and Event-driven Smart City Service and Applications (SDESS), Collocated with ACM DEBS 2016, Irvine, CA, USA, June 24, 2016.

15. Workshop Co-organizer and Co-chair (with Abhishek Dubey, Sokwoo Rhee, and Monika Sturm), First International Workshop on Science of Smart City Operations and Platforms Engineering (SCOPE) in partnership Global City Team Challenge (GCTC), Collocated with CPSWeek 2016, Vienna, Austria, April 11, 2016.

16. Technical Program Committee Co-chair and Co-organizer (with Marisol Garcia-Valls and Paolo Bellavista), Reliable Software Technologies and Communications Track, of the 31st ACM/SIGAPP Symposium on Applied Computing (SAC), Pisa, Italy, April 4–8, 2016.

17. Workshop Co-Chair (with Vaidy Sunderam, Salim Hariri and Adrian Sandu), "Workshop on InfoSymbiotics/Dynamic Data Driven Applications Systems (DDDAS) for Smarter Systems," Half-day workshop collocated with IEEE High Performance Computing (HiPC), Bengaluru, India, Dec 16, 2015.

18. Workshop Co-Chair (with Vaidy Sunderam, Salim Hariri and Adrian Sandu), "Workshop on Architectural Support and Middleware for InfoSymbiotics/ Dynamic Data Driven Applications Systems (DDDAS)," Half-day workshop collocated with IEEE High Performance Computing (HiPC), Bengaluru, India, Dec 16, 2015.

19. Workshop Co-organizer and Co-chair (with Nikolaos Georgantas) 2015 Adaptive and Reflective Middleware (ARM'15) Workshop, Collocated with ACM/IFIP/Usenix Middleware Conference, Vancouver, Canada, Dec 8, 2015.

20. Technical Program Committee Chair, 14th Generative Programming Conference, GPCE'15, Pittsburgh, PA, USA, Oct 26–27, 2015.

21. General Co-chair (with Partha Roop and Paul Townend), IEEE Computer Society's ISORC 2015 Conference, Auckland, New Zealand April 13–17, 2015.

22. Track Co-chair (with Rodolfo Pellizoni), "RTSS@Work: Open Demo Session of Real-Time Systems," IEEE Real-time Systems Symposium (RTSS), Vancouver, Canada, December 3, 2013.

23. Workshop Co-organizer and Co-chair (with Ileana Ober, James Hill, Jean-Michel Bruel, Michael Felderer, David Lugato, and Akshay Dabholkar), "International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL)," Satellite event of ACM/IEEE MODELS 2013, Miami Beach, FL, Sept 29, 2013.

24. Workshop Co-organizer and Co-chair (with Ileana Ober, Geri Georg, Jean-Michel Bruel, Michael Felderer, and David Lugato), "First International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL)," Satellite event of ACM/IEEE MODELS 2012, ACM publisher, Innsbruck, Austria, 2012.

25. Technical Program Committee Track Chair for Middleware track, The 9th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC '11), Melbourne, Australia, Oct 24–26, 2011.

26. Workshop Organizing Co-chair (with Chris Esposito and others), First Workshop on Data Distribution for Large-Scale Complex Critical Infrastructures (DD4LLCI '10), Part of the Eight European Dependable Computing Conference (EDCC '10), Valencia, Spain, Apr 27, 2010.

27. Workshop Organizing Co-chair, Workshop on Enterprise Architecture for Service Enablement (EASE '09), Auckland, New Zealand, Aug 31st, 2009.

28. Conference General Co-Chair and Organizer (with Douglas Schmidt), The 3rd ACM International Conference on Distributed Event-based Systems (DEBS '09), Nashville, TN, July 6–9, 2009.

29. Workshop Organizing Co-chair (with Dr. Jeff Gray and Dr. Randy Smith), First Workshop on Automating Service Quality (WRASQ 07), Automated Software Engineering (ASE 2007) conference, Nov 6, 2007, Atlanta, GA.

30. Workshop Organizing Co-chair of the First Generative Programming and Component Engineering for Quality of Service (GPCE4QoS) Workshop, OOPSLA/GPCE 2006 conference, Oct 23, 2006, Portland, OR.

31. Workshop Organizing Co-chair of "Fourth Annual TAO Workshop," July 2004, Washington DC.

32. Workshop Organizing Co-chair of the ACM OOPSLA '02 workshop on "Patterns in Distributed Real-time and Embedded Systems", Seattle, WA, November 2002.

Other Conference Organizing Responsibilities [Total = 31]

1. Workshops Co-chair, 24th ACM/IFIP International Middleware Conference, Bologna, Italy, Dec 11–15, 2023.

2. Workshops Co-chair, 23rd ACM/IFIP International Middleware Conference, Quebec City, Quebec, Canada, Nov 7–11, 2022.

3. Workshops Co-chair, 22nd ACM/IFIP International Middleware Conference, Virtual, Dec 6–10, 2021.

4. Sponsorship Co-chair, CPS-IoT Week, Nashville, TN, USA, May 18–21, 2021.

5. Panel Co-Moderator with Mohan Kumar on *Data-driven Techniques for Adaptive and Reflective Middleware,* 18th Workshop on Adaptive and Reflexive Middleware (ARM), at the ACM Middleware 2019 conference, Dec 10, 2019, Davis, CA, USA.

6. Tutorials Chair, IEEE International Conference on Cloud Computing (IC2E), 21–24 April 2020, Sydney, Australia.

7. Travel Grant Chair, ACM/IFIP International Middleware Conference, UC Davis, CA, USA, Dec 9–13, 2019.

8. Sponsorship Co-chair with Jayaram Radhakrishnan, ACM/IFIP International Middleware Conference, UC Davis, CA, USA, Dec 9–13, 2019.

9. Local Arrangements Co-Chair with Abhishek Dubey, Taylor Johnson, and Zhenkai Zhang IEEE Real-time Systems Conference, Nashville, TN, USA, Dec 11–14, 2018.

10. Tutorials Chair, IEEE International Conference on Cloud Computing (IC2E), Orlando, FL, Apr 2018.

11. Doctoral Symposium Mentor, IEEE International Conference on Cloud Computing (IC2E), Orlando, FL, Apr 2018.

12. Doctoral Symposium Chair, IEEE International Conference on Cloud Computing (IC2E), Vancouver, Canada, Apr 2017.
13. Workshop and Tutorials Co-Chair, ACM/IFIP/Usenix Middleware Conference, Trento, Italy, Dec 12–16, 2016.
14. Doctoral Symposium Mentor, ACM Distributed and Event-based Systems (DEBS), Irvine, CA, USA, June 20–24, 2016.
15. Session Chair, ACM Distributed and Event-based Systems (DEBS), Irvine, CA, USA, June 20–24, 2016.
16. Session Chair, ACM/IFIP/Usenix Middleware Conference 2015, Vancouver, Canada, Dec 7–11, 2015.
17. PhD Forum Co-chair, Software Product-line Conference (SPLC '15), Nashville, TN, USA, June 2015.
18. Session Chair, IEEE Real-time Systems Symposium (RTSS' 12) Dec 2012, San Juan, PR, USA.
19. PhD Forum Co-Chair, 31st International Symposium on Reliable Distributed Systems (SRDS '12), Irvine, CA, USA, Oct 8-11, 2012.
20. Workshop Proposals Review Co-Chair, IEEE International Conferences on Embedded Software and Systems (ICESS 2011), Changsha, China, 2011.
21. Doctoral Symposium Mentor, ACM/IEEE 12th International Conference on Model Driven Engineering Languages and Systems (MODELS 2009), Denver, Colorado, USA, Oct 4-9, 2009.
22. Session Chair, Seventh International Conference on Generative Programming and Component Engineering (GPCE), Oct 2008, Nashville, TN, USA.
23. Publicity Co-Chair, The 12th IEEE Enterprise Computing Conference (EDOC 2008), Munchen, Germany, September 15-19, 2008.
24. Publicity Co-Chair, The 2nd International Conference on Distributed Event-Based Systems (DEBS 08), Rome, Italy, July 2-4, 2008.
25. Publications Chair, The 16th International Workshop on Parallel and Distributed Real-Time Systems (WPDRTS '08), Miami, Florida, USA, April 14-18, 2008.
26. Session Chair for Short Papers, IEEE EDOC 2007, Annapolis, MD, USA, Oct 2007.
27. Workshop Proposals Review Co-Chair, IEEE EDOC 2007, Annapolis, MD, USA, Oct 2007.
28. Local Arrangements Chair, IEEE/ACM MODELS 2007 Conference, Nashville, TN, USA, Sep 30 - Oct 5, 2007.
29. Session Chair, Eight Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, July 2007, Washington DC, USA.
30. Session Chair, Fourth International Service Availability Symposium (ISAS 2007), May 21-22, 2007, Durham, New Hampshire, USA.
31. Session Chair, Fifth International Conference on Generative Programming and Component Engineering (GPCE), Oct 2006, Portland, OR, USA.

National & International Grant Proposal Reviewing [Total = 35]

1. NSF Panel, 2024.
2. Swiss National Science Foundation, 2024.
3. NSF Panel, 2023.
4. United Arab Emirates, 2023.
5. Two different NSF panels, 2022.

6. Swiss National Science Foundation, second round, 2021.
7. Swiss National Science Foundation, two rounds, 2020.
8. The Netherlands Organization for Scientific Research, Applied Engineering and Sciences (NWO AES), 2020.
9. NSF Panel, 2018.
10. Army Research Office (ARO), 2018.
11. Israel Science Foundation (ISF), 2018.
12. Canada NSERC-EG, 2018.
13. Czech Science Foundation, 2017.
14. NSF panel, 2017.
15. Reviewer for Dutch Research Council on Smart Industry Program, 2016.
16. NSF panel, 2016.
17. NSF ad hoc reviewer, 2015.
18. AFOSR Young Investigator Program reviewer, 2014.
19. AFOSR reviewer, 2014.
20. NSF panel, 2014.
21. University of Missouri Research Board, 2013.
22. NSF panel, 2012.
23. Belgium Scientific Policy Evaluator, 2012.
24. FONDECYT Program, Ministry of Education, Chile, 2011.
25. Belgium Scientific Policy Evaluator, 2010.
26. University internal grant competition (Belgium), External reviewer, 2009.
27. NSF Panel, 2009
28. Ireland Science Foundation, 2008
29. NSF Panel, 2008
30. Louisiana Board of Regents, 2006
31. Belgium Scientific Policy, 2006
32. NSF SGER Proposal Electronic Review, 2006
33. NSF Panel, 2006
34. NSF Panel, 2005
35. NSF Panel, 2003

Professional Journal/Book Reviewer Responsibilities [Total = 142]

1. Software Practice and Experience, Second review, Sep 2024.
2. Software Practice and Experience, First review, Jun 2024.
3. Elsevier Future Generation Computer Systems (FGCS), Second Review, Mar 2024.
4. Elsevier Future Generation Computer Systems (FGCS), First Review, Dec 2023.
5. Springer Journal of Scheduling, Sep 2023.
6. Elsevier Future Generation Computer Systems, June 2023.
7. Elseview Journal of Parallel and Distributed Computing, May 2023.
8. Elsevier Computer Networks Journal, Second Review, Apr 2022.
9. Elsevier Computer Networks Journal, Feb 2022.
10. Elsevier Information Systems (InfoSys) Journal, July 2021.
11. Elsevier Journal of Systems Architecture (JSA) Special Issue of ISORC 2020, May 2021.
12. IEEE Transactions on Parallel and Distributed Systems (TPDS), second review, Mar 2021.
13. Elsevier Journal of Systems Architecture (JSA), Second review, Feb 2021.
14. IEEE Transactions on Cloud Computing, second review, Feb 2021.
15. Elsevier Journal of Systems Architecture (JSA), Two papers for Special issue, Nov 2020.
16. Software and Systems Modeling (SoSym) second review, Nov 2020.
17. IEEE Transactions on Parallel and Distributed Systems (TPDS), Sept 2020.
18. IEEE Transactions on Industrial Informatics, June 2020.
19. Software and Systems Modeling (SoSym), May 2020.
20. IEEE Transactions of Cloud Computing, March 2020.
21. IEEE Transactions on Parallel and Distributed Systems (TPDS), Second Review, Dec 2019.
22. Shepherd for a paper published at the 20th ACM/IFIP International Middleware Conference. Middleware 2019, Davis, CA, USA, Dec 9–13, 2019.
23. Wiley Software Practice and Experience (SPE), Sept 2019.
24. IEEE Transactions on Automation Science and Engineering (ASE), Sept 2019.
25. Springer Artificial Intelligence Review (AIRE), July 2019.
26. Elsevier Journal of Parallel and Distributed Computing (JPDC), May 2019.
27. IEEE Transactions on Parallel and Distributed Systems (TPDS), March 2019.
28. IEEE Transactions on Automation Science and Engineering (ASE) Second Review, June 2018.
29. IEEE Transactions on Automation Science and Engineering (ASE), Jan 2018.
30. Elsevier Computer Languages, Systems and Structures (COMLAN), Sep 2017.
31. Elsevier Wireless Networks (WINE), Sep 2017.
32. ACM Computing Surveys (CSUR), 2nd Review, Sep 2017.

33. IEEE Transactions on Services Computing (TSC), Sep 2017.
34. Elsevier Journal of System Architecture (JSA), 2nd Review, Apr 2017.
35. Journal of Medical Systems (JOMS), Mar 2017.
36. Journal of Big Data Research (BDR), 2nd Review, Feb 2017.
37. IEEE Transactions on Services Computing (TSC), Jan 2017.
38. STTT Online Journal Service, 2nd Review, Jan 2017.
39. DDDAS Book chapters reviewer, Nov 2016.
40. ACM Computing Surveys (CSUR), Nov 2016.
41. Artificial Intelligence Review (AIRE), Nov 2016.
42. Transactions of Pattern Languages of Programming (TPLoP), Sept 2016.
43. ACM Transactions on Networking (TONS), Sept 2016.
44. Journal of Big Data Research (BDR), Sept 2016.
45. STTT Online Journal Service, July 2016.
46. Elsevier Science of Computer Programming, May 2016.
47. Springer Real Time Systems (TIME), 2nd review, Apr 2016.
48. Springer Real Time Systems (TIME), Nov 2015.
49. IEEE Transactions on Parallel and Distributed Systems (TPDS) second review, Aug 2015.
50. IEEE Transactions on Parallel and Distributed Systems (TPDS), May 2015.
51. Elsevier Journal of Systems and Software (JSS), Dec 2014.
52. IEEE Transactions on Cloud Computing (TCC), Sep 2014.
53. Software Practice and Experience (SPE), Aug 2014.
54. Systems, Man and Cybernetics (SMCA), Jun 2014.
55. Elsevier Journal of Network and Computer Applications (JNCA), Mar 2014.
56. IEEE Transactions on Computers (TC), review of second revision, Feb 2014.
57. Journal of Medical Systems (JOMS), Feb 2014.
58. IEEE Transactions on Cloud Computing (TCC), Feb 2014.
59. IEEE Transactions on Autonomous and Adaptive Systems (TAAS), Jan 2014.
60. Reviewer for ACM Transactions on Autonomous and Adaptive Systems (TAAS), Jan 2014.
61. Transactions on Service Computing (TSC), Oct 2013.
62. Proceedings of the IEEE, Oct 2013.
63. IEEE Software, 2 papers, Oct 2013.
64. Elsevier Journal of Systems Architecture (JSA), Review of revised submission, Sep 2013.
65. IEEE Transactions on Computers, Sep 2013.

66. IEEE/ACM Transactions on Networking (ToN), Review of revised submission, Aug 2013.
67. Transactions of Pattern Languages of Programming (TPLoP), Aug 2013.
68. Elsevier Journal of System Software (JSS), July 2013.
69. Reviewer for Elsevier Book Proposal, June 2013.
70. Elsevier Journal of System Software (JSS), Jun 2013.
71. Elsevier Journal of Systems Architecture (JSA), May 2013.
72. Journal of Network and Computer Applications (JNCA), Jan 2013.
73. IEEE/ACM Transactions on Networking (ToN), Jan 2013.
74. Journal of Knowledge and Information Systems (KAIS), Second Review, Oct 2012.
75. Springer Innovations in Systems and Software Engineering (ISSE), Aug 2012.
76. Reviewer for Real-time Systems Journal (RTJ), July 2012.
77. Reviewer for Elsevier Journal of Software and Systems (JSS), second review, June 2012.
78. Reviewer for Transactions of Services Computing (TSC), second review, June 2012.
79. Reviewer for Elsevier Software and Systems Journal (SoSym), June 2012.
80. Reviewer for Springer Knowledge and Information Systems (KAIS), June 2012.
81. Reviewer for IEEE Transactions on Parallel and Distributed Systems (TPDS) Special Issue, May 2012.
82. Reviewer for Elsevier Journal of Systems and Software (JSS), Jan 2012.
83. Reviewer for Transactions of Services Computing (TSC), Nov 2011.
84. Reviewer for Elsevier Journal of Software and Systems (JSS), Sept 2011.
85. Reviewer for Wiley's Software Practice and Experience (SPE), Sept 2011.
86. Reviewer for Journal of Systems and Software (JSS), June 2011.
87. Reviewer for Journal of Computer Science - Research and Development (CSRD), Mar 2011.
88. Reviewer for Software Quality Journal, Feb 2011.
89. Reviewer for Wiley's Software Practice and Experience (SPE), Nov 2010.
90. Reviewer of Book Proposal for IEEE Press, Nov 2010.
91. Reviewer for a paper ISEC 2011, Oct 2010.
92. Reviewer for IEEE Transactions on Parallel and Distributed Computing (TPDS), Sep 2010.
93. Reviewer for Elsevier Journal of Systems and Sofware (JSS), Sep 2010.
94. Reviewer for a paper for the 18th International Conference on Software, Telecommunications and Computer Networks (SoftCom 2010), July 2010.
95. Reviewer for a paper for Industrial Electronics Society's ISRCS 2010, May 2010.
96. Elsevier Journal of Software Systems (JSS), Jan 2010.
97. Elsevier Journal of Systems Architecture (JSA), Jan 2010.
98. IEEE Transactions on Industrial Informatics (TII), Oct 2009.

99. Book chapter reviewer for "Model-Driven Domain Analysis and Software Development: Architectures and Functions," IGI Global Publishers, Oct 2009.

100. IFIP Working Conference on Domain Specific Languages (DSL WC 09), Oxford, UK, July 15-17, 2009.

101. The 39th IEEE/IFIP International Conference on Dependable Systems and Networks (DSN 2009), Estoril, Lisbon, Portugal, June 29–July 2, 2009.

102. Elsevier Journal of Software Systems (JSS), Apr 2009.

103. SoSym Journal Theme Issue on Non Functional Properties in Domain-specific Modeling Languages, Jan 2009.

104. IEEE Software Special Issue on Domain-specific Modeling, Jan 2009.

105. Elsevier Journal of Parallel and Distributed Computing (JPDC), Dec 2008.

106. Book chapter reviewer for "Methodologies for Non-Functional Requirements in Service Oriented Architecture," Nov 2008.

107. Transactions on Pattern Languages of Programs (TPLoP), Nov 2008.

108. Book chapter reviewer for "Behavioral Modeling for Embedded Systems and Technologies: Applications for Design and Implementation," Sept 2008.

109. IEEE Internet Computing Magazine, Special Issue on Dependable Service-oriented Computing, Aug 2008.

110. IEEE Transactions on Software Engineering, May 2008.

111. ACM OOPSLA Conference, April 2008.

112. Elsevier Journal of Parallel and Distributed Computing (JPDC), Jan 2008.

113. Software and Systems Modeling (SoSym), Jan 2008.

114. Software and Systems Modeling (SoSym), Aug 2007.

115. Computer Languages, Systems and Structures (COMLAN), May 2007.

116. IEEE Distributed Systems Online (DSOnline), May 2007.

117. Elsevier Journal of Systems and Software (JSS), February 2007.

118. EDOC Journal, January 2007.

119. *Handbook on Dynamic System Modeling,* (Paul Fishwick, ed.), CRC Press, ISBN: 1584885653, 2007.

120. HICSS 40 Minitrack: Tools for Model Driven Development, Hilton Waikoloa Village Resort, Waikoloa, Big Island, Hawaii, January 3-6, 2007.

121. Transactions on Sensor Networks, June 2006.

122. IEEE Transactions on Software Engineering, Nov 2005

123. IEEE Transactions on Aspect Oriented Software Development, Oct 2005 (2 papers)

124. IEEE Software, Special Issue on Aspect Oriented Software Development, June 2005

125. IBM Systems Technical Journal, 2005.

126. 25th IEEE International Conference on Distributed Computing Systems (ICDCS), Embedded Systems Track, Jun 2005, Columbus, OH.

127. IEEE International Conference of Dependable Systems and Networks, Dependable Computing and Communications Track, Italy, June 2004

128. IEE Proceedings on Software, UK, Nov 2003
129. ACM Distributed Systems, Oct 2003
130. IEEE Transactions on Systems, Man and Cybernetics, 2003
131. Second Annual Southeast Software Engineering Conference (SESE), 2003
132. ACM Programming Languages Design and Implementation (PLDI), 2003
133. International Conference on Communications, ICC 2002
134. USENIX COOTS 2001
135. Electronic Commerce Journal (October 2000)
136. Distributed Computing Journal (August 2000)
137. International Conference on Information Technology (CIT-2000)
138. IEEE Globecom 2000
139. IEEE International Conference on Communications, ICC 2000
140. USENIX COOTS 1999
141. ACM SIGCOMM 1997
142. IEEE/ACM Transactions on Networking, 1996

Conference Technical Program Committees [Total = 212]

1. USENIX Annual Technical Conference (ATC), Boston, MA, USA, Jul 7–9, 2025.
2. 28th IEEE International Symposium on Real-time Distributed Computing (ISORC), Toulouse, France, May 26–28, 2025.
3. IEEE International Conference on Communications (ICC'25) - SAC-02 CCNS track, Montreal, Canada, Jun 8–12, 2025.
4. "Workshop on Middleware for Digital Twins (Midd4DT)," Workshop collocated with ACM Middleware Conference, Hong Kong, Dec 3–15, 2024.
5. 12th IEEE International Conference on Cloud Engineering, Paphos, Cyprus, Sep 24–27, 2024.
6. 5th IEEE International Conference on Autonomic Computing and Self-Organizing Systems - ACSOS 2024, Aarhus, Denmark, Sep 16–20, 2024.
7. 28th International Conference on Enterprise Design, Operations, and Computing (EDOC 2024) Vienna, Austria, Sep 10–13, 2024.
8. USENIX Annual Technical Conference (ATC), Santa Clara, CA, USA, Jul 10–12, 2024.
9. 27th IEEE International Symposium on Real-time Distributed Computing (ISORC), Tunis, Tunisia, May 22–25, 2024.
10. 8th IEEE International Conference on Fog and Edge Computing (ICFEC), Philadelphia, PA, USA, May 6–9, 2024.
11. 24th IEEE/ACM international Symposium on Cluster, Cloud and Internet Computing (CCGrid), Philadelphia, PA, USA, May 6–9, 2024.
12. The Enterprise Computing Conference (EDOC) 2023, Groningen,, The Netherlands, Oct 30–Nov 3, 2023.

13. 11th IEEE International Conference on Cloud Engineering (IC2E) 2023, Boston, MA, USA, Sep 25–29, 2023.
14. 4th IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS) 2023, Toronto, Canada, Sep 25–29, 2023.
15. 26th IEEE International Symposium on Real-time Distributed Computing (ISORC) 2023, Nashville, TN, USA, May 23–25, 2023.
16. 7th IEEE International Conference on Fog and Edge Computing (ICFEC 2023), Bengaluru, India, May 1–4, 2023.
17. The International Conference for High Performance Computing, Networking, Storage, and Analysis, Cloud and Distributed Computing Track, Dallas, TX, USA, Nov 13–18, 2022.
18. 23rd ACM/IFIP International Middleware Conference, 2022, Quebec City, Quebec, Canada, Nov 7–11, 2022.
19. The Enterprise Computing Conference (EDOC) 2022, Bolzano-Bozen, Italy, Oct 3–7, 2022.
20. 10th IEEE International Conference on Cloud Engineering (IC2E), 2022, Pacific Grove, CA, USA, Sep 26–30, 2022.
21. 3rd IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS) 2022, Virtual, Sep 19–23, 2022.
22. 20th International Workshop on Assurance in Distributed Systems and Networks (ADSN) 2022, Calabria, Italy, Sep 12–15, 2022.
23. 6th IEEE International Conference on Fog and Edge Computing (ICFEC) 2022, Taormina, Italy, May 18–19, 2022.
24. 7th ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI) 2022, Poster Track, Milan, Italy, May 3–6, 2022.
25. 25th IEEE International Symposium on Real-time Distributed Computing (ISORC) 2022, Vasteras, Sweden, May 17–18, 2022.
26. 6th Research Symposium on Computing (RSC) 2022, Walchand College of Engineering, Sangli, India, Apr 23–24, 2022.
27. 22nd ACM/IFIP International Conference on Middleware, Quebec City, Quebec, Canada, Dec 6–10, 2021.
28. ACM Graduate Posters, The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC 21), St. Louis, MO, USA, Nov 14–19, 2021.
29. "Workshop on Blockchains for Inter-Organizational Collaboration (BIOC)"
30. 25th Enterprise Computing Conference (EDOC '21), Gold Coast, Australia, Oct 25–29, 2021.
31. 19th International Workshop on Assurance in Distributed Systems and Networks (ADSN) 2021, Virtual, Oct 25–28, 2021.
32. IEEE International Conference on Autonomic Computing and Self-Organizing Systems, Washington DC, USA, Sept 27 – Oct 1, 2021.
33. 15th ACM International Conference on Distributed and Event-based Systems, Milan, Italy, June 28–July 2nd, 2021.
34. The 24th International Symposium on Real-time Distributed Computing (ISORC), Daegu, South Korea, June 1–3, 2021.
35. 5th IEEE International Conference on Fog and Edge Computing (ICFEC), Melbourne, Australia, May 10–13, 2021.

36. ACM Graduate Posters, The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC 20), Atlanta, GA, USA, Nov 15–19, 2020.

37. 19th International Conference on Generative Programming: Concepts & Experiences, Chicago, IL, USA, Nov 15–16, 2020.

38. 24th Enterprise Computing Conference (EDOC '20), Eindhoven, The Netherlands, Oct 5–8, 2020.

39. 14th ACM International Conference on Distributed and Event-based Systems (DEBS), Montreal, Quebec, Canada, July 13–17, 2020.

40. 19th International Workshop on Assurance in Distributed Systems and Network (ADSN), Collocated with the 18th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC 2020), Calgary, Canada, June 22–26, 2020.

41. 23rd IEEE International Symposium on Real-time Distributed Computing (ISORC), Nashville, TN, USA, May 19–21, 2020.

42. 20th ACM/IFIP International Middleware Conference. Middleware 2019, Davis, CA, USA, Dec 9–13, 2019.

43. 37th IEEE International Conference on Computer Design (ICCD), Abu Dhabi, United Arab Emirates, Nov 17–20, 2019.

44. IEEE International Conference on Industrial Internet (IEEE ICII 2019), Orlando, FL, USA, Nov 11–12, 2019.

45. 23rd Enterprise Computing Conference (EDOC '19), Paris, France, Oct 28–31, 2019

46. 18th International Workshop on Assurance in Distributed Systems and Network (ADSN), Collocated with the 17th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC 2019), Fukuoka, Japan, August 5–8, 2019.

47. The 13th ACM International Conference on Distributed and Event-Based Systems (DEBS '19), Darmstadt, Germany, June 24–28, 2019.

48. Sustainability of Fog/Edge Computing Systems (SFECS) Track, The 34rd ACM/SIGAPP Symposium On Applied Computing (SAC), Limassol, Cyprus April 8-12, 2019.

49. Software Challenges to Exascale Computing (SCEC) Workshop, New Delhi, India, Dec 13–14, 2018.

50. IEEE International Conference on Industrial Internet (ICII), Bellevue, WA, USA, Oct 21–23, 2018.

51. 17th International Workshop on Assurance in Distributed Systems and Network (ADSN), Collocated with Advanced and Trusted Computing (ATC) 2018, Guangzhou, China, Oct 2018.

52. 22nd Enterprise Computing Conference (EDOC' 18), Stockholm, Sweden, October 16–19, 2018.

53. 21st IEEE INTERNATIONAL SYMPOSIUM ON REAL-TIME COMPUTING (ISORC), NTU, Singapore, May 29–31, 2018.

54. 32nd IEEE International Parallel and Distributed Processing (IPDPS) Symposium, Vancouver, BC, Canada, May 21–25, 2018.

55. 3rd IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI 2018), Orlando, FL, USA, Apr 17–20, 2018.

56. Adaptive Reflective Middleware Workshop at ACM/Usenix/IFIP Middleware 2017, Las Vegas, NV, USA, Dec 2017.

57. Doctoral Symposium of ACM/Usenix/IFIP Middleware 2017, Las Vegas, NV, USA, Dec 2017.

58. 21st Enterprise Computing Conference (EDOC' 17), Quebec City, Canada, Oct 10–13 2017.

59. 46th International Conference on Parallel Processing (ICPP-2017), Bristol, UK, Aug 14–17, 2017.

60. 14th IEEE International Conference on Services Computing, Honolulu, HI, USA, June 25–30, 2017.

61. The 11th ACM International Conference on Distributed and Event-Based Systems (DEBS '17), Barcelona, Spain, June 19–23, 2017.

62. 16th International Workshop on Assurance in Distributed Systems and Network, Collocated with ICDCS'17, Atlanta, GA, June 5–8, 2017.

63. IEEE International conference on Computer Communications and Networks (ICCCN '17), Vancouver, BC, Canada, 2017.

64. 18th IEEE International Conference on Mobile Data Management, KAIST, Daejeon, South Korea, May 29–Jun 1, 2017.

65. 20th IEEE INTERNATIONAL SYMPOSIUM ON REAL-TIME COMPUTING (ISORC), Toronto, Canada, May 16–18, 2017.

66. Demo Track of 2017 IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), Pittsburgh, PA, USA, Apr 2017.

67. 2nd IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI 2017), Pittsburgh, PA, USA, Apr 18–21, 2017.

68. Adhoc reviewer for 22nd ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), Xi'an, China, April 8–12, 2017.

69. 35th International Symposium on Reliable Distributed Systems (SRDS 2016), Budapest, Hungary, Sep 26–28, 2016.

70. First Infosymbiotics/DDDAS Conference, Hartford, CT, USA, Aug 9–12, 2016.

71. 20th IEEE Enterprise Computing Conference, EDOC '16, Vienna, Austria, Sept 5–9, 2016.

72. 45th International Conference on Parallel Processing (ICPP '16), Philadelphia, PA, USA, Aug 16–19, 2016.

73. 14th IEEE International Conference on Embedded Software and Systems (ICESS '16), Chengdu, China, Aug 13–14, 2016.

74. 13th IEEE International Conference on Services Computing (SCC), San Francisco, CA, USA, June 27–Jul 2, 2016.

75. The 10th ACM International Conference on Distributed and Event-Based Systems (DEBS '16), Irvine, CA, USA, June 20–24, 2016.

76. ACM/IFIP/Usenix Middleware Conference, Vancouver, Canada, Dec 7–11, 2015.

77. 14th International Conference on Generative Programming: Concepts and Experience (GPCE '15), Pittsburgh, PA, USA, Oct 26–27, 2015.

78. 34th International Symposium on Reliable Distributed Systems, Montreal, Canada, Sept 28–Oct 2, 2015.

79. 19th IEEE Enterprise Computing Conference, EDOC '15, Adelaide, Australia, Sept 22–25, 2015.

80. 12th IEEE International Conference on Embedded Software and Systems (ICESS '15), New York City, NY, USA, Aug 24–26, 2015.

81. IEEE Scalable Computing and Communications (ScalCom 2015), Beijing, China, Aug 10–14, 2015.

82. 14th International Workshop on Assurance in Distributed Systems and Network, Collocated with ICDCS, Columbus, OH, June 29, 2015.

83. 27th International Conference on Advanced Information Systems Engineering (CAiSE '15), Stockholm, Sweden, June 8–12, 2015.

84. 21st IEEE Real-time and Embedded Technology and Applications Symposium (RTAS '15) Demo track, Seattle, WA, USA, April 13–16, 2015.

85. "International Conference for Transformations in Engineering Education (ICTIEE 2015)," Bengaluru, India, Jan 5–8, 2015.

86. 3rd International Workshop on Real-time and Distributed Computing in Emerging Applications (REACTION '14), part of IEEE Real-time Systems Symposium (RTSS '14), Rome, Italy, Dec 2, 2014.

87. 11th IEEE International Conference on Services Computing (SCC '14), Anchorage, AK, June 27–Jul 2, 2014.

88. 10th International ACM Sigsoft Conference on the Quality of Software Architecture (QoSA '14), Lille, France, June 30–July 4, 2014.

89. 11th IEEE International Conference on Embedded Software and Systems (ICESS '14), Paris, France, Aug 20–22, 2014.

90. 18th IEEE Enterprise Computing Conference, EDOC '14, Ulm, Germany, Sept 1–5, 2014.

91. 13th International Conference on Generative Programming: Concepts and Experience (GPCE '14), Vasteras, Sweden, Sept 15-16, 2014.

92. "CloudMDE Workshop at MODELS 2014," Valencia, Spain, Sept 30, 2014.

93. 20th IEEE Real-time and Embedded Technology and Applications Symposium (RTAS'14), Berlin, Germany, April 15–17, 2014.

94. 2nd SDMCMM Workshop on Secure and Dependable Middleware for Cloud Monitoring and Management (SDMCMM' 13), In conjunction with Middleware 2013, Beijing, China, Dec 9–13, 2013.

95. 34th IEEE Real-time Systems Symposium (RTSS '13), Vancouver, Canada, Dec 3-6, 2013.

96. Demo Session of the 34th IEEE Real-time Systems Symposium (RTSS@Work 13), Vancouver, Canada, Dec 3-6, 2013.

97. International Workshop on Real-time and Distributed Computing in Emerging Applications (REACTION), Vancouver, Canada, Dec 3, 2013.

98. Principles, Systems and Applications of IP Telecommunications (IPTComm' 13), Chicago, IL, USA, Oct 15–17, 2013.

99. 2nd International Workshop on Model-Driven Engineering for High Performance and CLoud computing (MDHPCL), Miami, FL, USA, Sep 29, 2013.

100. The 17th IEEE International EDOC Conference (EDOC 2013), Vancouver, Canada, Sept 9–13, 2013.

101. 11th International Conference on Software Engineering Research, Management and Applications (SERA 2013), Prague, Czech Republic, Aug 7–9, 2013.

102. Ninth International ACM Sigsoft Conference on the Quality of Software Architectures (QoSA 2013), Vancouver, Canada, Jun 17–21, 2013.

103. 6th International Workshop on OMNeT++, Cannes, French Riviera, Mar 5, 2013.

104. The 16th IEEE Enterprise Computing Conference (EDOC 2012), Beijing, China, Sep 2012.

105. 38th Euromicro Conference on Software Engineering and Advanced Applications (SEAA '12), Cesme, Izmir, Turkey, Sep 5–8, 2012.

106. The 18th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA '12), Seoul, Korea, Aug 20–22, 2012.

107. The 9th IEEE International Conference on Service Computing (SCC '12), Honululu, HI, USA, June 24–29, 2012.

108. The 9th IEEE International Conference on Embedded Software and Systems (ICESS '12), Liverpool, UK, June 25–27, 2012.

109. Eighth International ACM Sigsoft Conference on the Quality of Software Architectures (QoSA '12), Bertinoro, Italy, June 25-28, 2012.

110. The 32nd International Conference on Distributed Computing Systems (ICDCS '12) OS and Middleware Track, Macau, China, June 18–21, 2012.

111. Special Session on Collaboration for Dynamic Resource Management in Mobile P2P Networks (CDRM '12), Denver, CO, USA, May 21–25, 2012.

112. Thirteenth Annual OMG Workshop on Real-time and Embedded Computing (RTWS), Paris, France, Apr 2012.

113. The 13th IEEE International High Assurance Systems Engineering Symposium (HASE '11), Boca Raton, FL, USA, Nov 10–12, 2011.

114. 1st International Symposium on Secure Virtual Infrastructures (DOA-SVI '11), Crete, Greece, Oct 17–19, 2011.

115. The 9th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC '11), Middleware track Melbourne, Australia, Oct 24–26, 2011.

116. NExt-generation Applications of smarTphones (NEAT 2011), Part of SPLASH 2011, Portland, OR, USA, Oct 24, 2011.

117. Tenth International Conference on Generative Programming and Component Engineering (GPCE'11), Portland, OR, USA, Oct 22–24, 2011.

118. ACM/IEEE 14th International Conference on Model Driven Engineering Languages and Systems (MODELS 2011), Foundations track, Wellington, New Zealand, Oct 16–21, 2011.

119. The 15th IEEE Enterprise Computing Conference (EDOC 2011), Helsinki, Finland, Aug 29–Sept 2, 2011.

120. 17th IEEE International Conference on Embedded and Real-time Computing Systems and Applications (RTCSA 2011), Toyama, Japan, Aug 28–31, 2011.

121. Principles, Systems and Applications of IP Telecommunications(IPTComm '11), Illinois Institute of Technology, Chicago, IL, USA, Aug 1–2, 2011.

122. Fifth ACM International Conference on Distributed Event-based Systems (DEBS 2011), New York City, NY, USA, July 11–14, 2011.

123. The 31st Int'l Conference on Distributed Computing Systems (ICDCS 2011), Fault tolerance and Dependability Track, Minneapolis, MN, USA, June 20–24, 2011.

124. Seventh International ACM Conference on the Quality of Software Architectures (QoSA 2011), Boulder, CO, USA, June 20–24, 2011.

125. The 2011 International Conference on Collaboration Technologies and Systems (CTS 2011), Special Session on Collaboration for Dynamic Resource Management in Mobile P2P Networks (CDRM 2011), Philadelphia, PA, USA, May 23–27, 2011.

126. SmartPhones in the Currriculum Workshop (SMACK 2011), part of the 24th IEEE Conference on Software Engineering Education and Training, Waikiki, Honolulu, Hawaii, May 22, 2011.

127. The 17th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2011), Chicago, IL, USA, Apr 11–14, 2011.

128. Fourth International Workshop on OMNeT++, Barcelona, Spain, Mar 21, 2011.

129. Twelveth Annual OMG Workshop on Real-time and Embedded Computing (RTWS), Washington DC, Mar 2011.

130. Fifth Workshop on Variability Modeling of Software-intensive Systems (VAMOS '11, Namur, Belgium, Jan 27–29, 2011.

131. The 14th IEEE Enterprise Computing Conference (EDOC 2010), Vitoria, ES, Brazil, Oct 25–29, 2010.

132. SPLASH 2010 Workshop Proposals, Reno, NV, USA, Oct 17–21, 2010.

133. 3rd International Workshop on Non-Functional System Properties in Domain Specific Modeling Languages (NFPinDSML 2010), Part of IEEE/ACM MODELS 2010, Oslo, Norway, Oct 3–5 2010.

134. 12th International Conference on High Performance Computing and Communications, Melbourne, Australia, Sept 1–3, 2010.

135. 16th IEEE International Conference on Embedded and Real-time Computing Systems and Applications (RTCSA 2010), Macau SAR, China, Aug 23–25, 2010.

136. Principles, Systems and Applications of IP Telecommunications(IPTComm '10), Leibniz Supercomputing Center, Munich, Germany, Aug 2-3, 2010.

137. Fourth ACM International Conference on Distributed Event-based Systems (DEBS '10), Cambridge University, Cambridge, UK, July 12–15, 2010.

138. Poster Fourth ACM International Conference on Distributed Event-based Systems (DEBS '10), Cambridge University, Cambridge, UK, July 12–15, 2010.

139. The 7th IEEE International Conference on Embedded Software and Systems (ICESS-10), Bradford, UK, June 29 – July 1, 2010.

140. Sixth International Conference on the Quality of Software Architectures (QoSA 2010), Charles University, Prague, Czech Republic, June 23–25, 2010.

141. Eleventh Annual OMG Workshop on Real-time and Embedded Computing (RTWS), Washington DC, May 2010.

142. 1st International Workshop on Data Dissemination for Large scale Complex Critical Infrastructures (DD4LCCI 2010), Valencia, Spain, April 27, 2010.

143. Third International Workshop on OMNeT++, Malaga, Spain, Mar 19, 2010.

144. The Fourth Workshop on Variability Modeling of Software-intensive Systems (VAMOS '10, Johannes Kepler University Linz, Austria, Jan 27-29, 2010.

145. The 30th IEEE Real-time Systems Symposium (RTSS 2009) Work-in-progress Session, Washington DC, Dec 1–4, 2009.

146. The 30th IEEE Real-time Systems Symposium (RTSS 2009), Washington DC, Dec 1–4, 2009.

147. IEEE/ACM MODELS Doctoral Symposium 2009, Denver CO, Oct 4–9, 2009.

148. 2nd International Workshop on Non-Functional System Properties in Domain Specific Modeling Languages (NFPinDSML 2009), Part of IEEE/ACM MODELS 2009, Denver CO, Oct 4–9 2009.

149. The 13th IEEE Enterprise Computing Conference (EDOC 2009), Auckland, New Zealand, Aug 31–Sep 4, 2009.

150. Fifth International Conference on the Quality of Software Architectures (QoSA 2009), East Stroudsberg University, Pennsylvania, June 22–26, 2009.

151. Tenth Annual OMG Workshop on Real-time and Embedded Computing (RTWS), Washington DC, July 2009.

152. Sixth International Workshop on Enabling Technologies: Infrastructures for Collaborative Enterprises (WET-ICE 2009), Gronighen, The Netherlands, June 29 – Jul 1, 2009.

153. The Fourth International Conference on COMmunication System softWAre and middlewaRE (COMSWARE 2009), Trinity College, Dublin, Ireland, June 15–19, 2009.

154. International Conference on Embedded Software and Systems (ICESS09), Zhejiang, China, May 25–27, 2009

155. Sixth International Service Availability Symposium (ISAS 2009), Budapest, Hungary, May 18–20, 2009.

156. 12th IEEE International Symposium on Object/component/service-oriented Real-time Distributed Computing (ISORC 09), Tokyo, Japan, March 17–20, 2009.

157. 2nd International Workshop on OMNeT++: OMNeT++ 2009, held in conjunction with SIMUTools 2009, Rome, Italy, March 6, 2009.

158. The IEEE/IFIP International Conference On Embedded and Ubiquitous Computing (EUC 2008), Embedded Systems and Hardware/Software Co-Design Track, Shanghai, China, December 17–20, 2008.

159. The 29th IEEE Real-Time Systems Symposium (RTSS '08), Barcelona, Spain, November 30 - December 3, 2008.

160. The 10th International Symposium on Distributed Objects, Middleware, and Applications (DOA'08), Monterrey, Mexico, November 10–12, 2008.

161. Seventh International Conference on Generative Programming and Component Engineering (GPCE'08), Nashville, Tennessee, October 19-23, 2008.

162. ACM/IEEE 11th International Conference on Model Driven Engineering Languages and Systems (MODELS 2008), Toulouse, France, September 28 – October 3, 2008.

163. 1st Interational Workshop on Non-Functional System Properties in Domain Specific Modeling Languages (NF-PinDSML 2008), Part of MODELS 2008, Toulouse, France, September 28 – October 3, 2008.

164. The 12th IEEE Enterprise Computing Conference (EDOC 2008), Munchen, Germany, September 15-19, 2008.

165. 6th International Conference on Software Engineering Research, Management and Applications (SERA '08), Prague, Czech Republic, August 20-22, 2008.

166. 17th IEEE International conference on Computer Communications and Networks (ICCCN '08), St. Thomas, Virgin Islands (USA), August 4-7, 2008.

167. Ninth Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2008.

168. 10th international conference on Coordination Models and Languages (Coordination'08), Oslo, Norway, June 4-6, 2008.

169. Fifth International Service Availability Symposium (ISAS 2008), Tokyo, Japan, May 19–21, 2008.

170. 14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 08), Area B Track, St. Louis, MO, USA, April 22–24, 2008.

171. The 9th International Symposium on Distributed Objects, Middleware, and Applications (DOA 2007), Lisbon, Portugal, Oct 28-Nov 2, 2007.

172. Eight Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2007.

173. 9th International Conference on Coordination Models and Languages (Coordination 07), Paphos, Cyprus, June 6-8, 2007.

174. Fourth International Workshop on Emerging Technologies for Next-generation GRID (ETNGRID 2007), GET/INT Paris, France, June 2007.

175. Fourth International Service Availability Symposium (ISAS 2007), Durham, New Hampshire, May 21–22, 2007.

176. IEEE Workshop on Parallel and Distributed Real-time Systems (WPDTRS 2007), Long Beach, CA, March 2007.

177. Workshop on MOdel Driven Development for Middleware (MODDM) at Middleware 2006, Melbourne, Australia, Dec 2006.

178. Fifth International Conference on Generative Programming and Component Engineering (GPCE), Portland, OR, Oct 2006.

179. Tenth International Enterprise Distributed Computing Conference (EDOC), Hong Kong, China, Oct 16-20, 2006.

180. Seventh Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2006.

181. Third International Workshop on Emerging Technologies for Next-generation GRID (ETNGRID 2006), Manchester, UK, June 2006.

182. Hawaii International Conference on System Science (HICSS-39) mini track on Adaptive and Evolvable Software Systems: Techniques, Tools and Applications (AESS), Kauai, HI, January 2006.

183. IEEE Real-time Systems Symposium (RTSS) 2005, Middleware Track, Miami, FL, Dec 2005.

184. Second International Conference on Distributed Computing and Internet Technology (ICDCIT 2005), Bhubaneshwar, India, Dec 2005.

185. MODELS 2005 workshop: MDD for Software Product-lines: Fact or Fiction?, Montego Bay, Jamaica, Oct 2005.

186. Fifth International Workshop on Software Engineering and Middleware (SEM 2005), Lisbon, Portugal, Sept 2005.

187. Ninth IEEE International Conference on Enterprise Distributed Object Computing Conference (EDOC 2005), Enschede, The Netherlands, Sept 2005.

188. Sixth Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2005.

189. Workshop on Emerging Technologies for Next Generation GRID (ETNGRID-2004), Linkoping University, Sweden, June 2005.

190. IEEE Workshop on Parallel and Distributed Real-time Systems (WPDTRS), Denver, CO, April 2005.

191. Forty third Annual ACM Southeast Conference (ACM SE), Kennesaw, GA, March 2005.

192. Eleventh IEEE Real-time and Embedded Technology and Applications Symposium (RTAS 2005), Modeling Track, San Francisco, CA, March 2005.

193. IEEE Real-time Systems Symposium (RTSS) 2004, Lisbon, Portugal, Dec 2004.

194. ACM/IFIP/Usenix Middleware 2004, Toronto, Canada, Oct 2004.

195. Eight IEEE International Conference on Enterprise Distributed Object Computing Conference (EDOC 2004), Monterey, California, Sept 2004.

196. Fifth Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2004.

197. Fourth Annual TAO Workshop, Washington DC, July 2004.

198. Workshop on Emerging Technologies for Netxt Generation GRID (ETNGRID-2004), University of Modena and Reggio Emilia, Italy, June 2004.

199. Tenth IEEE Real-time and Embedded Technology and Applications Symposium (RTAS 2004), Toronto, Canada, May 2004.

200. Forty second Annual ACM Southeast Conference (ACM SE), Huntsville, AL Apr 2004.

201. Mini track on Adaptive and Evolvable Software Systems: Techniques, Tools, and Applications, Hawaii International Conference of Systems Sciences, Big Island, Hawaii, Jan 5-8, 2004.

202. Seventh IEEE International Conference on Enterprise Distributed Object Computing Conference (EDOC 2003), Brisbane, Australia, Sept 2003.

203. Third Annual TAO Workshop, Washington DC. July 2003.

204. Fourth Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2003.

205. ACM Middleware 2003, Rio De Janeiro, Brazil, June 2003.

206. Workshop on Model Driven Approaches to Middleware Applications Development (MAMAD), Middleware 2003, Rio De Janeiro, Brazil, June 2003.

207. 23rd IEEE International Conference on Distributed Computing Systems (ICDCS), Middleware Track, Providence, RI , May 2003.

208. Second Annual Southeast Software Engineering Conference (SESE), Huntsville, AL, April 2003.

209. The Second AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software (ACP4IS 2003), Boston, USA, March 2003.

210. International Symposium on Distributed Objects and Applications (DOA), UCI Campus, Irvine, CA, Oct 2002.

211. Second Annual TAO Workshop, Washington DC, July 2002.

212. Third Annual OMG Workshop on Real-time and Embedded Distributed Object Computing, Washington DC, July 2002.

Dissertation/Thesis Committees

Ph.D Primary Advisor and Committee Chair

1. Robert Canady (ECE, Ph.D Dissertation Defense, Jun 2024; Ph.D Topic Defense, Aug 2022; Vanderbilt University).

2. Shuang Zhou (CS, Ph.D Topic Defense, May 2024; Vanderbilt University).

3. Zhuangwei Kang (CS, Ph.D Dissertation Defense, Aug 2023; Ph.D Topic Defense, Mar 2023; Vanderbilt University).

4. Ziran Min (CS, Ph.D Dissertation Defense, Apr 2023; Ph.D Topic Defense, Feb 2023; Vanderbilt University).

5. Xingyu Zhou (CS, Ph.D Dissertation Defense, April 2022; Ph.D Topic Defense, June 2021; Vanderbilt University).

6. Yogesh Barve (CS, Ph.D Dissertation Defense, Jan 2020; Ph.D Topic Defense, Feb 2019; Vanderbilt University).

7. Anirban Bhattacharjee (CS, Ph.D Dissertation Defense, Jan 2020; Ph.D Topic Defense, ; Vanderbilt University).

8. Shweta Khare (CS, Ph.D Dissertation Defense, Jan 2020; Ph.D Topic Defense, Apr 2019; Vanderbilt University).

9. Shashank Shekhar (CS, Ph.D Dissertation Defense, May 2018; Ph.D Topic Defense, May 2017; Vanderbilt University).

10. Subhav Pradhan (CS, Ph.D Dissertation Defense, Sept 2016; Ph.D Topic Defense, Sept 2015; Vanderbilt University) (Co-advised with Abhishek Dubey).

11. Prithviraj Patil (CS, Ph.D Dissertation Defense, June 2016; Ph.D Topic Defense, Oct 2015; Vanderbilt University).

12. Faruk Caglar (CS, Ph.D Dissertation Defense, July 2015; Ph.D Topic Defense, Nov 2014; Vanderbilt University).

13. Kyoungho An (CS, Ph.D Dissertation Defense, Mar 2015; Ph.D Topic Defense, Oct 2014; Vanderbilt University).

14. James Edmondson (CS, Ph.D Dissertation Defense, Nov 2011; Ph.D Topic Defense, Dec 2011; Vanderbilt University).

15. William Otte (CS, Ph.D Dissertation Defense, Nov 2011; Ph.D Topic Defense, Feb 2011; Vanderbilt University).

16. Akshay Dabholkar (CS, Ph.D Topic Defense, Feb 2011; Vanderbilt University).

17. Joseph Hoffert (CS, Ph.D Dissertation Defense, Feb 2011; Ph.D Topic Defense (as co-advisor), Nov 2009; Vanderbilt University).

18. Nilabja Roy (CS, Ph.D Dissertation Defense, Nov 2010; Ph.D Topic Defense, Apr 2010; Vanderbilt University).

19. Sumant Tambe (CS, Ph.D Dissertation Defense, Sept 2010; Ph.D Topic Defense, Mar 2010; Vanderbilt University).

20. James Hill (CS, Ph.D Dissertation Defense, Mar 2009; Ph.D Topic Defense, Oct 2008; Vanderbilt University).

21. Amogh Kavimandan (CS, Ph.D Dissertation Defense, Nov 2008; Ph.D Topic Defense, Jan 2008; Vanderbilt University).

Ph.D Co-advisor and Committee Co-chair

1. Shunxing Bao (CS, Ph.D Dissertation Defense, September 2018; Ph.D Topic Defense, March 2017; Vanderbilt University), Co-advised with Bennett Landman.

2. Brian Dougherty (CS, Ph.D Dissertation Defense, Mar 2011; Ph.D Topic Defense Aug 2010; Vanderbilt University), Co-advised with Douglas C. Schmidt.

3. Jaiganesh Balasubramanian (CS, Ph.D Dissertation Defense, Sep 2009; Ph.D Topic Defense, Aug 2008; Vanderbilt University), Co-advised with Douglas C. Schmidt.

4. Gan Deng (CS, Ph.D Dissertation Defense, Dec 2007; Ph.D Topic Defense, Mar 2006; Vanderbilt University), Co-advised with Douglas C. Schmidt.

5. Krishnakumar Balasubramanian (CS, Ph.D Dissertation Defense, Sep 2007; Ph.D Topic Defense, Mar 2006; Vanderbilt University), Co-advised with Douglas C. Schmidt.

6. Arvind Krishna (CS, Ph.D Dissertation Defense, Nov 2005; Ph.D Topic Defense, May 2005; Vanderbilt University), Co-advised with Douglas C. Schmidt.

Internal Committee Member on PhD Exam

1. Tyler Nicewarner, (CS, Ph.D Topic Defense, Nov 2024; Vanderbilt University).
2. Michael Sandborn (Ph.D Dissertation Defense, Aug 2024; Ph.D Topic Defense, Mar 2024; Vanderbilt University)
3. Carlos Olea (Ph.D Topic Defense, May 2024; Vanderbilt University).
4. Henry Gilbert (Ph.D Dissertation Defense, Mar 2024; Vanderbilt University)
5. Sam Hayes (Ph.D Dissertation Defense, Mar 2024; Vanderbilt University)
6. Purboday Ghosh (ECE, Ph.D Dissertation Defense, Feb 2023; Ph.D Topic Defense, Nov 2021; Vanderbilt University)
7. Quchen Fu (CS, Ph.D Dissertation Defense, Feb 2023, Ph.D Topic Defense, Sep 2022; Vanderbilt University).
8. Michael Wilbur (CS, Ph.D Topic Defense, Feb 2023; Vanderbilt University).
9. Zhongwei Teng (CS, Ph.D Dissertation Defense, Nov 2022, Ph.D Topic Defense, Feb 2021; Vanderbilt University).
10. Huan Zhao (ECE, PhD. Dissertation Defense, Dec 2019; Ph.D Topic Defense, Oct 2018; Vanderbilt University).
11. Dana Zhang (CS, Ph.D Dissertation Defense, Aug 2018; Ph.D Qualifying Exam, Jan 2018; Vanderbilt University).
12. Xiaowen Wang (CS, Ph.D Dissertation Defense, Aug 2018; Ph.D Topic Defense, Jan 2014; Vanderbilt University).
13. Fangzhou Sun (CS, Ph.D Dissertation Defense, Mar 2018; Ph.D Qualifying Exam, Sep 2017; Vanderbilt University).
14. Brian Broll (CS, Ph.D Dissertation Defense, Mar 2018; Ph.D Topic Defense, Nov 2017; Vanderbilt University).
15. Hui Jiang (CS, Ph.D Dissertation Defense, Feb 2018; Ph.D Topic Defense, May 2017; Vanderbilt University).
16. Wei Xie (CS, Ph.D Dissertation Defense, Feb 2018; Ph.D Topic Defense, Aug 2016; Vanderbilt University).
17. Hamzah Abdel-Aziz (CS, Ph.D Dissertation Defense, Dec 2017; Ph.D Topic Defense, Mar 2017; Vanderbilt University).
18. Yao Pan (CS, Ph.D Dissertation Defense, Nov 2017; Ph.D Topic Defense, Feb 2017; Vanderbilt University).
19. Andrew Plassard (CS, Ph.D Dissertation Defense, Aug 2017; Ph.D Topic Defense, ; Vanderbilt University).
20. Thiago Assis (ECE, Ph.D Dissertation Defense, Nov 2015; Ph.D Topic Defense, Jan 2015; Vanderbilt University).
21. William Emfinger (ECE, Ph.D Dissertation Defense, Oct 2015; Ph.D Topic Defense, May 2015; Vanderbilt University).
22. Wei Yan (CS, Ph.D Dissertation Defense, May 2015; Ph.D Topic Defense, Feb 2014; Vanderbilt University).
23. Benjamin Babjak (CS, Ph.D Dissertation Defense, Sept 2014; Ph.D Topic Defense, Nov 2013; Vanderbilt University).
24. Indranil Chatterjee (ECE, Ph.D Dissertation Defense, July 2014; Ph.D Topic Defense, Oct 2012; Vanderbilt University).
25. Andrew Asman (CS, Ph.D Dissertation Defense, Apr 2014; Ph.D Topic Defense, Dec 2012; Vanderbilt University).

26. Eli Hooten (CS, Ph.D Dissertation Defense, Feb 2014; Ph.D Topic Defense, Nov 2012; Vanderbilt University).
27. William Hedgecock (ECE, Ph.D Dissertation Defense, Mar 2014; Ph.D Topic Defense, Nov 2012; Vanderbilt University).
28. Tareq Hossain (CS, Ph.D Dissertation Defense, Apr 2011; Ph.D Topic Defense, Aug 2010; Vanderbilt University).
29. Joe Porter (CS, Ph.D Dissertation Defense, Mar 2011; Ph.D Topic Defense, Sept 2010; Vanderbilt University).
30. Nathan Hamm (CS, Ph.D Dissertation Defense, Mar 2011; Ph.D Topic Defense, April 2010; Vanderbilt University).
31. Yanchuan Cao (CS, Ph.D Dissertation Defense, Feb 2011; Ph.D Topic Defense, Dec 2008; Vanderbilt University).
32. Shanshan Jiang (CS, Ph.D Dissertation Defense, Nov 2009; Ph.D Topic Defense, Nov 2008; Vanderbilt University).
33. Jules White (CS, Ph.D Dissertation Defense, Oct 2008; Ph.D Topic Defense, Apr 2008; Vanderbilt University).
34. Anantha Narayanan (CS, Ph.D Dissertation Defense, Mar 2008; Ph.D Topic Defense, May 2007; Vanderbilt University).

External Committee Member or Dissertation Evaluator for PhD Exam

1. External dissertation reviewer, IISc Bengaluru, India, Oct 2024.
2. Bassem Sellami (Ph.D Dissertation Defense, Oct 24, 2022), University of Carthage, Tunisia.
3. Gavin Puddy, (Ph.D Dissertation Evaluation), University of Adelaide, Australia, Jan 2022.
4. Sandeep DeSouza (PhD Dissertation Defense Dec 9, 2019; PhD Topic Defense, July 24, 2019), Carnegie Mellon University, Pittsburgh, PA, USA.
5. Akram Hakiri (PhD Dissertation Defense July 12, 2012), LAAS-CNRS, University of Toulouse, France.
6. Yu Sun (Ph.D Defense, Feb 2010), University of Alabama at Birmingham.
7. Christian Esposito (Ph.D Dissertation Defense, Dec 2009), University of Napoli, Italy.
8. Jing Zhang (Ph.D Dissertation Defense, Apr 2009; Ph.D Topic Defense, Dec 2005), University of Alabama at Birmingham.
9. Yuanfang Zhang (Ph.D Dissertation Defense, Jul 2008; Ph.D Topic Defense, Aug 2007), Washington University in St. Louis.
10. Yuehua Lin (Ph.D Dissertation Defense, Jul 2007; Ph.D Topic Defense, Dec 2005), University of Alabama at Birmingham.

MS Primary Adviser and Thesis Committee Chair

1. Matthew Kenigsberg (Masters Thesis Defense, May 2021; Vanderbilt University).
2. Ziqi Li (Masters Thesis Defense, May 2021; Vanderbilt University).
3. Evan Wang (Masters Thesis Defense, May 2021; Vanderbilt University).
4. Lian Liu (Masters Thesis Defense, June 2016; Vanderbilt University).
5. Shunxing Bao (Masters Thesis Defense, Mar 2014; Vanderbilt University).
6. Dili Wu (Masters Thesis Defense, Mar 2013; Vanderbilt University).

7. Kyoungho An (Masters Thesis Defense, Mar 2011; Vanderbilt University).
8. Anushi Shah (Masters Thesis Defense, Nov 2010; Vanderbilt University).
9. Ritesh Neema (Masters Thesis Defense, May 2010; Vanderbilt University).
10. Deepti Thopte (Masters Thesis Defense, July 2009; Vanderbilt University).
11. Tina Devkota (Masters Thesis Defense, Mar 2009; Vanderbilt University).
12. Dimple Kaul (Masters Thesis Defense, Mar 2007; Vanderbilt University).
13. Arundhati Kogekar (Masters Thesis Defense, Mar 2007; Vanderbilt University).

MS Thesis Defense Second Reader

1. Weichen Wang (Masters Thesis Defense, Apr 2015; Vanderbilt University).
2. Kelsie Covington (Masters Thesis Defense, Dec 2011; Vanderbilt University).
3. Pooja Varshneya (Masters Thesis Defense, May 2010; Vanderbilt University).
4. Friedhelm Wolf (Masters Thesis Defense, Mar 2009; Vanderbilt University).
5. Emre Turkay (Masters Thesis Defense, Aug 2005; Vanderbilt University).
6. Gabriele Trombetti (Masters Thesis Defense, Oct 2004; Vanderbilt University).
7. Sachin Kogekar (Masters Thesis Defense, Aug 2004; Vanderbilt University).

Departmental and University Service

1. Led the Department's efforts on renewing the Broadening Participation Plan (starting Fall 2024); Dept BPC plan established originally Fall 2022.
2. Member of Ad hoc committee on Curriculum Improvement, Fall 2024.
3. Judge for VandyHacks, Fall 2024.
4. Chaired University ARB committee deliberations, Summer 2024.
5. Member of the 2-year Evaluation Committee for Prof. Bryan Ward, Spring 2024.
6. Judge for VandyHacks, Fall 2023.
7. Member of the 4-year Evaluation Committee for Prof. Yuankai Huo, Summer 2023.
8. Substitute Member of School of Engineering Dean's Consultative Committee on Promotion and Tenure for Prof. Maithilee Kunda, Spring 2023.
9. Substitute Member of School of Engineering Dean's Consultative Committee on Promotion and Tenure for Prof. Jason Valentine, Spring 2023.
10. Chair of 2-year Evaluation Committee for Prof. Meiyi Ma, Spring 2023.
11. Temporary advising of CS second majors and minors, Fall 2022.
12. Chair of the Best Paper Award selection committee for CS, Spring 2022.
13. Led the Department's efforts on creating the Broadening Participation Plan (starting Fall 2020); Dept BPC plan established Fall 2022.
14. Member of the 4-year Evaluation Committee for Prof. Matt Berger, Dept of CS, Vanderbilt University, Spring 2022.

15. Member of the Tenure Committee for Prof. Abhishek Dubey Dept of CS, Vanderbilt University, Fall 2021/Spring 2022.

16. Member of the 4-year Evaluation Committee for Prof. Jack Noble, Dept of ECE, Vanderbilt University, Fall 2021.

17. Judge for VandyHacks, Fall 2021.

18. Member of the Graduate Faculty Council and its Executive Committee, Vanderbilt University, Fall 2018–Spring 2021.

19. Member of Appellate Review Board, Vanderbilt University, Fall 2011–present.

20. Undergraduate Advisor, Computer Science, Dept of EECS, Vanderbilt University (30+ currently Junior students, Fall 2018 – present).

21. High school student mentoring, Summer 2019.

22. Undergraduate mentor for three students supported on VUSE SUGRE program, Summer 2019.

23. Contribution to ABET data collection for Department of EECS, Vanderbilt University 2018-2019.

24. Served as a judge for VandyHacks hackathon event, Nov 2018.

25. Undergraduate mentor for student supported on VUSE SUGRE program, Summer 2018.

26. Member of the Tenure Committee for Prof. Eugene Vorobeychik, Dept of EECS, Vanderbilt University, Fall 2017.

27. Member of the Tenure Committee for Prof. Jules White, Dept of EECS, Vanderbilt University, Fall 2017.

28. Presentation to Industrial Advisory Board, Dept of EECS, Vanderbilt University, Fall 2017.

29. Undergraduate mentor for student supported on VUSE SUGRE program, Summer 2017.

30. Member of 4-year Contract Review Panel for Prof. Jules White, Dept of EECS, Vanderbilt University, Spring 2017.

31. Undergraduate Advisor, Computer Science, Dept of EECS, Vanderbilt University (30+ students, Dec 2015–May 2018).

32. Undergraduate Advisor, Computer Science, Dept of EECS, Vanderbilt University (22 students most of whom graduated in May 2015)

33. Member of the University Technology Review Committee, since Spring 2016.

34. Member of 2-year Contract Review Panel for Prof. Jules White, Dept of EECS, Vanderbilt University, Spring 2015.

35. ISIS Mentoring committee member for Graham Hemingway, 2011.

36. IEEE Faculty adviser and HKN mentor (Fall 2011).

37. Undergraduate mentor for student supported on VUSE SUGRE program, Summer 2011.

38. Elected to University Senate for 3 year term (Sep 2011–Aug 2014) and member of SPAF committee of the Senate, and Chair of the SPAF committee in 2013–14, Vanderbilt University.

39. Member of the Departmental Adhoc committee on evaluating the CS 101, 103, and 201 curriculum, 2011–2012.

40. Member of the Departmental Adhoc committee on evaluating Network courses, 2011.

41. Member of 2-year Contract Review Panel for Prof. Bennett Landman, Dept of EECS, Vanderbilt University, Jun 2011 – Apr 2012.

42. Contribution to ABET data collection for Department of EECS, Vanderbilt University 2010-2011.
43. Undergraduate Advisor, Computer Engineering, Dept. of EECS, Vanderbilt University, Fall 2009 onwards.
44. School of Engineering Web Committee Member, since Fall 09
45. Undergraduate research mentor for one student supported by VUSRP, Summer 2009.
46. Science Outreach, High School Research Internship Program mentor, Summer 2008.
47. Undergraduate research mentor for two students supported by VUSRP and faculty startup funds, Summer 2008.
48. Spring 2008, Member of Ad hoc committee for Reforming Computer Science Graduate Program prelim and area changes.
49. Summer 2007, Chair of Ad hoc committee for the Computer Systems and Networks Emphasis area for marketing the Computer Engineering program.
50. Contribution to ABET data collection for Department of EECS, Vanderbilt University 2006-2007.
51. Fall 2006, CS Graduate Program Review Committee
52. Undegraduate mentor for Independent Study (Fall 2005, Spring 2006).
53. 2005 Faculty search committee member for Networking position.
54. Undergraduate Advisor, Computer Engineering, Dept. of EECS, Vanderbilt University, Fall 2004 to Spring 2008.
55. Undergraduate Curriculum Review Committee, CS Program, Dept. of EECS, Vanderbilt University, since Fall 2004.
56. SUGRE Mentor, Summer 2004
57. Graduate student summer internship mentor, Summer 2004.
58. Freshmen Mentor for ES 140 seminar project in Computer Science, Vanderbilt University, Fall 2004.
59. Member of Software Engineering Prelims Committee, CS Program, Dept. of EECS, Vanderbilt University, since Fall 2003.
60. Member of Systems Prelims Committee, CS Program, Dept of EECS, Vanderbilt University, since Fall 2003.

Standards Organizations Participation:

1. Participating in the activities of the IEEE OpenRAN
2. IEEE P1930.1 Working Group on Software Defined Networking Middleware Standardization, since Spring 2017.
3. Vanderbilt University representative to the Object Management Group since Fall 2002.
4. Lucent Technologies' representative to the Object Management Group August 2001 - January 2002.

Professional Society Memberships:

1. Senior Member of IEEE (Mar 2011 – present); Member of IEEE (1995 – 2011); IEEE Communications Society (1995 – present); IEEE Computer Society (1995-2002, 2007 – present).
2. Senior Member of ACM (2013–present); Member of ACM (1999 – 2013).
3. Member of Usenix since 2021.
4. Member of ASEE (American Society of Engineering Education), 2013–2021.

Patents (Total: 4)

1. Takayuki Kuroda (NEC Corporation, Japan) and **Aniruddha Gokhale** (Vanderbilt University), "Fast Change Planning System, Fast Change Planning Method, and Fast Change Planning Program," **US Patent #20150323916**, Filed: Aug 28,2014; Publication: Nov 15, 2015.

2. Takayuki Kuroda (NEC Corporation, Japan) and **Aniruddha Gokhale**(Vanderbilt University), "Change Planning System, Change Planning Method, and Change Planning Program," **US Patent #20150324211**, Filed: Aug 28,2014; Publication: Nov 15, 2015.

3. Takayuki Kuroda (NEC Corporation, Japan) and **Aniruddha Gokhale** (Vanderbilt University), "Change Management System, Change Management Method, and Change Management Program," **US Patent #20150324305**, Filed: Aug 28,2014; Publication: Nov 15, 2015.

4. Vijay Gurbani, Suhasini Sabnis, Victoria Heiring, Luis Nieto, Aniruddha Gokhale, Richard Hull, Reinhard Klemm, Bharat Kumar, and Gang Zhou "Customer relationship management system with network contact center server configured to control automated web and voice dialogues". **US Patent #8024401**, Alcatel-Lucent Technologies; Filed: June 3, 2002; Publication: Sept 20, 2011.

Software Development

- **06/2014 – present** Aniruddha Gokhale's github, Scaffolding code for various courses taught by me.
- **09/2014 – 2021: IoT, DDDAS** ISIS, Vanderbilt University
  Involved in the infrastructure for IoT-enabled smart cities, support for DDDAS application, and Big Data analytics infrastructure.
- **06/2011 – 09/2013: Fractionated Spacecraft Information Architecture,** ISIS, Vanderbilt University
  Designing and developing the information architecture for the DARPA F6 program.
- **05/2009 – ongoing: ITS and Reconfigurable Conveyor,** ISIS, Vanderbilt University
  Developing simulations and real-time CORBA-based code for intelligent transportation systems and reconfigurable conveyor systems, both of which are part of the cyber physical systems R&D agenda.
- **01/2002 – 2010: CoSMIC MDE Framework,** ISIS, Vanderbilt University
  Involved with developing an OMG Model Driven Architecture tool for model driven synthesis of real-time and embedded middleware. Development is ongoing in association with R&D agenda.
- **12/2000 – 01/2002. Fault Tolerance and Network Element Software Management,** Bell Labs, Murray Hill and Holmdel, NJ.
  - Provide fault tolerance and network management services to next generation wireless infrastructure.
  - Design and implement fault escalation strategies.
- **7/98 – 01/2002. Fault tolerant CORBA,** Bell Labs, Murray Hill and Holmdel, NJ.
  - Prototyping solutions that provide fault-tolerance to applications using middleware such as the TAO ORB.
  - Implementing the Fault-tolerant CORBA specification.
- **7/99 – 11/2000. Network Contact Center,** Bell Labs, Murray Hill, NJ.
  - Design and development of a network call center with support for multimedia for calls including PSTN, VoIP, Electronic Commerce, Email, and Fax.
  - Research on implementing innovative solutions in network contact centers such as total scriptability of business rules and customer relationship management (CRM).

- **8/95 – 7/98: TAO High Performance, Real-time ORB Implementation,** Washington University, St. Louis, MO.
  As part of my Ph.D. dissertation, I implemented major portions of The ACE ORB (TAO). TAO is a widely used, high-performance, real-time implementation of CORBA. TAO's implementation is heavily influenced by the optimizations and components developed as part of my Ph.D. research, including:
  - High-performance IIOP protocol marshaling engine.
  - Real-time Object Adapter demultiplexing engine.
  - OMG IDL compiler implementation generating stubs and skeletons permitting tradeoff between performance and footprint.
  - Performance optimizations and emperical benchmarking.
- **8/96 – 12/96: Telcordia (formerly Bellcore)'s DCE to CORBA Migration Tool,** Washington University, St. Louis, MO.
  Worked with Dr. Douglas Schmidt and Stan Moyer of Telcordia, USA in the production of a OSF DCE RPC to OMG CORBA migration tool.
- **5/93 – 12/93, 5/94 – 7/95: DICOM Protocol Implementation,** Electronic Radiology Laboratory, Washington University Medical School, St. Louis, MO.
  Served in a team headed by Dr. G. James Blaine on the implementation of the Digital Imaging and Communications in Medicine (DICOM) v3.0 protocol.
- **5/91 – 8/92: Automatic Test Suite Generator,** Arizona State University, Tempe, AZ.
  Developed a tool in C++ as part of my Master's thesis that enhanced NIST's PET tool for the Estelle formal protocol description technique and generated test suites to test protocols for conformance testing. This work was done with my advisor Dr. Arunabha Sen.

Citizenship, Nationality, and Visa Status

- **Citizenship and Nationality** – United States

Grants and Contracts

Funding Summary

Total research funding since January 2002: **$41,107,214,** which includes the internal academic venture funding of $8.3M received for establishing the Vanderbilt ACCRE cluster for which I served as one of the many investigators on the proposal. The total funding can be divided into pre and post tenure (include before and after promotion to full professor), and into the role as lead PI/Co-PI as follows:

- **As Tenured Full Professor/Research Scientist (07/2018–present):** $8,542,537
  - **Grants/Contracts as Sole/Lead PI:** $341,419
  - **Grants/Contracts as Co-PI/Senior Personnel:** $7,998,118
  - **Gifts/Internal Grants as Sole/Lead PI:** $3,000
  - **Gifts/Internal Grants as Co-PI:** $200,000
- **As Tenured Associate Professor/Research Scientist (09/2010–06/2018):** $13,555,883.
  - **Grants/Contracts as Sole/Lead PI:** $2,978,683
  - **Grants/Contracts Managed as PI on behalf of Douglas Schmidt during his leave of absence:** $968,841
  - **Grants/Contracts as Co-PI:** $8,500,578
  - **Gifts/Internal Grants as Sole/Lead PI:** $12,500
  - **Gifts/Internal Grants as Co-PI:** $1,095,281
- **As Tenure Track Assistant Professor/Research Scientist (01/2002–08/2010):** $19,008,794 (including $8.3M for ACCRE)
  - **Grants/Contracts as Sole/Lead PI:** $4,534,779
  - **Grants/Contracts as Co-PI:** $5,684,514
  - **Gifts/Internal Grants as Sole/Lead PI:** $59,976
  - **Gifts/Internal Grants as Co-PI:** $429,525
  - **Internal Grant for establishing ACCRE (as Investigator on a team):** $8.3M

Proposals Funded as Contracts/Grants in the role of Lead/Sole PI

1. Argonne National Labs, "Development of Reinforcement Learning Based Methods for Dynamic Power Management," Aniruddha Gokhale (PI, 4% AY), $66,492, 6 months, 1 grad; Submitted: 10/21/2022.
2. Siemens Fellowship, "Evaluating DDS Implementations," Aniruddha Gokhale (PI, 4% AY, 5% Summer), $100,000, 1 year, 1 grad student; Submitted: 8/8/2022.
3. Siemens Fellowship, "Intelligent Architecture for Accelerated Edge Learning," Aniruddha Gokhale (PI, 2.5% AY, 5% Summer), $119,927, 1 year (9/1/22–8/31/23); Submitted: 8/23/2021.
4. NSF CNS, "NSF Student Travel Grant for 2019 ACM International Middleware Conference (Middleware)," Aniruddha Gokhale (PI), 1 year, $14K, 1 year, Travel grant only, Submitted: 04/29/2019.
5. Missile Defense Agency (MDA) SBIR Phase 1, 'A Next-Generation Simulation Architecture for Collaborative Development'," Real-time Innovations (RTI) (prime), Vanderbilt (sub): Aniruddha Gokhale (PI), $25,000, 1 grad student, 6 months, Jan 1, 2019 – June 30, 2019; Submitted 06/18/2018.
6. NSF US Ignite, "US Ignite: Collaborative Research: Cloud Computing and Software-Defined Networking Enhancements to Support Collaborative, Problem-based STEM Education," REU Supplement request, $16,000, 2 undergraduate students for summer; Submitted 2/2/2018.

7. AFRL StreamlinedML program, "Learning Ecosystem with Adaptive Repository Navigation (LEARN)," Lockheed Martin (Prime), Vanderbilt (sub): Aniruddha Gokhale (PI) and Xenofon Koutsoukos (Co-PI), $319,925, 2 grad students, 18 months, Mar 1, 2018–June 30, 2019; Submitted 3/17/2017 (whitepaper) and 5/2017 (proposal).

8. AFOSR DDDAS, "DDDAS-as-a-Service: Dynamic Resource Management Algorithms and Systems Software for an Infosymbiotics Hosting Platform," $600,748, 3 yrs, Aniruddha Gokhale (PI), Xenofon Koutsoukos and Yevgeniy Vorobeychik (Co-PIs); Submitted: 9/8/2016; Awarded 2/1/2018.

9. NSF US Ignite, "US Ignite: Collaborative Research: Cloud Computing and Software-Defined Networking Enhancements to Support Collaborative, Problem-based STEM Education," REU Supplement request, $8,000, 1 undergraduate student for summer; Submitted 1/26/2017.

10. Lockheed Martin Advanced Technology Labs, Phase 1, "Domain-specific Language Design for Big Data Analytics Ecosystem," $100K, 8 months, Aniruddha Gokhale (PI); Aug 2016–Mar 2017.

11. NEC Phase 2, "Automation of System Configuration Definition: Phase 2," $17K, 7 months, Aniruddha Gokhale (PI); Aug 2016–Feb 2017.

12. NEC, "Automation of System Configuration Definition," $17,000, 3 months, Aniruddha Gokhale (PI); Submitted: 01/2016.

13. DURIP, "SCOPE Laboratory: Experimental Testbed for Evaluating Secure Cyber Operations in Physical Environments," $95,400, 1 yr, Aniruddha Gokhale (PI), Abhishek Dubey and William Otte (Co-PIs); Submitted: 10/4/2015.

14. NSF Ignite, "US Ignite: Collaborative Research: Cloud Computing and Software-defined Networking Enhancements to Support Collaborative, Problem-based STEM Education," $357,712 awarded to VU, Aniruddha Gokhale (PI), Gautam Biswas (Co-PI) in collaboration with Shivakumar Sastry (PI at Akron); Submitted: 1/21/2015.

15. AFOSR DDDAS, "Stochastic Hybrid Systems Modeling and Middleware-enabled DDDAS for Next-generation US Air Force Systems," $935,402, 3 years, Aniruddha Gokhale (PI), Doug Schmidt and Xenofon Koutsoukous (Co-PIs); Submitted: 12/7/2012.

16. DURIP, "DURIP 2011: Android Tactical Application Assessment and Knowledge Cloud," $70,000 for VU, Aniruddha Gokhale (PI at VU) in collaboration with Virginia Tech (Jules White, PI) and Univ of Maryland (Adam Porter, PI), Submitted 09/13/2010.

17. AFRL-LMCO, "SPRUCE Phase 3," $108,181, 06/15/2011–09/30/2012, Aniruddha Gokhale (PI), grad student, staff, Submitted 05/2011.

18. SAIC, "Environment-Specific Inter-ORB protocol (ESIOP) Phase 4," $75,872, 7/15/2011–05/14/2012, Aniruddha Gokhale (PI), grad student, staff, Submitted 7/2011.

19. SAIC, "Environment-Specific Inter-ORB protocol (ESIOP)," $118,894, 12/10/2010–07/15/2011, Aniruddha Gokhale (PI), grad student, staff, Submitted 12/10/2010.

20. Northrop Grumman, "MPC Packaging Capability," $121,649, 3 months, Aniruddha Gokhale (PI) in collaboration with OCI, grad student, Submitted 10/14/2010.

21. AFRL VFRP Extension, "Real-timeliness and Fault-tolerance in Cyber Physical Systems," $10,000, 4 months, Aniruddha Gokhale (PI, 7% acad), Submitted 9/18/2009.

22. NSF CNS Core Small, "SHS:Small:Automating the Deployment of Real-time and Embedded System Software using Hybrid Heuristics-based Search Techniques," $472,000, 3 years, Aniruddha Gokhale (PI, 0.9 acad, 0.25 summer), Jules White (co-PI, 25% annual), 2 grad students, Submitted 12/17/2008.

23. NSF CAREER 2009, "CAREER: Principles and Techniques for Automated Middleware Specializations in Distributed Systems," Aniruddha Gokhale (sole PI), $532,679, 5 years, 1.5 grad student, Submitted 07/22/2008. Funded in three parts

(a) NSF CAREER 2009, "CAREER: Principles and Techniques for Automated Middleware Specializations in Distributed Systems," Aniruddha Gokhale (sole PI), $499,779, 5 years, 1.5 grad student, Submitted 07/22/2008.

(b) NSF CAREER REU 2011, "CAREER: Principles and Techniques for Automated Middleware Specializations in Distributed Systems," Aniruddha Gokhale (sole PI), $16,400, 2 undergrads, Submitted 02/2011.

(c) NSF RET against NSF CAREER award, Research Support for Teachers, $16,500, 3 months of summer, Aniruddha Gokhale (PI); Funds used to support two high school teachers; Submitted: 01/2012.

24. NSF CSR: "CSR—SMA:Collaborative: A Model-driven Performance Analysis Framework for Distributed, Performance-sensitive Software Systems," 09/01/05-08/31/07, $125,665 for VU, Aniruddha Gokhale (Vanderbilt PI), in collaboration with Swapna Gokhale from Univ of Connecticut (Lead), and Jeff Gray from Univ of Alabama, Birmingham, 1 graduate student at Vanderbilt.

25. DARPA IXO ARMS Phase 2: "Adaptive Resource Control for Certifiable Systems (ARCCS)," ARMS Program, 04/2005 - 12/2006, $930,000, subcontract from LMCO ATL, Aniruddha Gokhale (PI), Xenofon Koutsoukos (co-PI), 3 graduate students.

26. DARPA IXO ARMS Phase 2: "QoS-enabled Middleware Capabilities for Multilayered Resource Management," ARMS Program, 04/2005 - 12/2006, $335,000, subcontract from BBN Technologies, Aniruddha Gokhale (PI), 3 graduate students.

27. DARPA IXO ARMS Phase 2: "Model-driven Configuration and Deployment of Dynamic and Multilayered Resource Management," ARMS Program, 04/2005-12/2006, $95,000, subcontract from Telcordia, Aniruddha Gokhale (PI), 1 graduate student.

28. ONR DURIP: "A Testbed for Assuring Quality of Distributed Real-time Embedded Software for Combat Systems," 09/2005-08/2006, $206,136, Aniruddha Gokhale (PI), Douglas C. Schmidt (co-PI), Adam Porter (co-PI) and Atif Memon (co-PI) of Univ of Maryland.

29. DARPA IXO: "ESCHER Supplement," PCES Program, 10/2003, $568,656, 18 months, Aniruddha Gokhale (PI), 2 ESCHER staff.

30. DARPA IXO: "Adaptive Middleware for Embedded Reflective Integrated QoS (AMERIQoS)," ARMS Program, 10/2003, $100,000, 18 months, subcontract from BBN Technologies, Aniruddha Gokhale (PI), Bala Natarajan (co-PI), 0.5 graduate student.

31. DARPA IXO: "Modeling and Generative Tools for Distributed Real-Time and Embedded Systems," PCES Program, 04/2003, $1,177,373, 2 years, Aniruddha Gokhale (PI), Bala Natarajan (co-PI), Jeff Gray (co-PI from UAB), 3 graduate students at VU.

32. Lockheed Martin, Eagan: "Research and Development of QoS-enabled Fault Tolerant and Highly Available CORBA Middleware," Subcontracted by Object Computing Inc (OCI), $15,170, 10/2002, 1 year, Aniruddha Gokhale (PI), Balachandran Natarajan (co-PI).

Proposals Funded as Contracts/Grants in the role of Co-PI/Senior Personnel

1. DARPA CASTLE, "RAMPART: Reinforcement Against Malicious Penetration by Adversaries in Realistic Topologies," Daniel Balasubramanian (PI), Aniruddha Gokhale (senior personnel), $6,898,657; Submitted: 12/21/2022. Started Aug 2023.

2. NSF Convergence Accelerator Phase 1, "NSF Convergence Accelerator Track D: Scalable, TRaceable Ai for Imaging Translation: INnovation to Implementation for accelerated Impact (STRAIT I3)," Bennett Landman (PI), Aniruddha Gokhale (Personnel), 1.5 yrs, $999,460, Submitted: 7/10/2020.

3. Siemens Corporate Research, "Publish/Subscribe Middleware Study and Evaluation ," Abhishek Dubey (PI), Aniruddha Gokhale (Co-PI), $100K, 6 months (04/2019–09/2019), 2 grads; Submitted 3/20/2019.

4. MARRIOTT, "Internet of Things Immersion," $29,998.86, 1.5 yrs (Dec 2017–Mar 2019), Abhishek Dubey (PI), Aniruddha Gokhale (Co-PI); Submitted Dec 2017

5. Siemens, $49,886, 1/1/2016–08/31/2016; Abhishek Dubey (PI), Doug Schmidt (Co-PI), Aniruddha Gokhale (Co-PI).

6. AFRL SPRUCE Phase 4, $99,810, 12/1/2012–9/30/2013; Doug Schmidt (PI), Aniruddha Gokhale (Co-PI).

7. NSF EAGER for the IGNITE Program, "C3STEM: Enabling Community-situated, Challenge-based, Collaborative STEM Education Using Broadband Cyber Infrastructure, $357,102, 2.5 years, Gautam Biswas (PI), Aniruddha Gokhale (Co-PI); Submitted: 8/2/2012. Funded in two parts.

   (a) NSF EAGER for the IGNITE Program, "C3STEM: Enabling Community-situated, Challenge-based, Collaborative STEM Education Using Broadband Cyber Infrastructure, $297,350, 2 years, Gautam Biswas (PI), Aniruddha Gokhale (Co-PI); Submitted: 8/2/2012.

   (b) NSF, Supplement to "EAGER: C3STEM: Enabling Community-Situated, Challenge-Based, Collaborative STEM Education Using Broadband Cyber Infrastructure," $ 59,753, Gautam Biswas (PI), Aniruddha Gokhale (Co-PI); Submitted: 7/21/2014.

8. STTR Phase 1 OSD, Subcontract from Zircon, "Automated Analysis and Deployment of Multicore Software using Model Driven Generative Programming," $30,000, 6 months (03/12–08/12), Douglas Schmidt (PI), Aniruddha Gokhale (Co-PI at VU, 2.5%AY, 5% Summer), 0.75 grad student, Submitted 09/21/2011.

9. STTR Phase 1 AirForce, Subcontract from InfoSciTex, "Assured Information Sharing in the Clouds," $30,000, 9 months (03/12–11/12), Yi Cui (PI), Aniruddha Gokhale (Co-PI, 2%AY, 5% Summer), 0.5 grad student, Submitted 09/21/2011.

10. DARPA F6, "F6 Model Driven Development Kit (F6MDK)," $6,245,040, 05/27/2011–07/31/2014, Gabor Karsai (PI), Aniruddha Gokhale (Co-PI), Abhishek Dubey (Co-PI). Project was funded in multiple phases.

11. DARPA, "Android Mobile Military Middleware Objects (AMMMO)," $1,658,741, 3 years (09/2010–08/2012), Sandeep Neema (PI), Ted Bapty (Co-PI), Aniruddha Gokhale (Co-PI).

12. Australia Defence Science and Technology Organization (DSTO), "Early Integration and Performance Testing of Heterogeneous Computing Environments," Douglas Schmidt (PI), Aniruddha Gokhale (co-PI), $180,000, 7 months, 2 staff, 1 grad student, Submitted 12/2008.

13. SBIR Phase 2 2007, "A Fault-tolerant Real-time CORBA Naming Service," $175,000 for VU, 2.5 years, Subcontracted by TechX Corporation, Boulder CO, Nanbor Wang (overall PI from TechX), Douglas C. Schmidt (PI), Aniruddha Gokhale (co-PI), 1 graduate student, Submitted 07/31/07.

14. NSF I/UCRC Planning grant, $10 K, Kevin Sullivan (Univ of Virginia, lead PI), Doug Schmidt (Vanderbilt, PI).

15. DARPA FCS: "Future Combat Systems," Subcontract from Boeing, 01/05-12/07, $3,117,194, Janos Sztipanovits (PI), Gabor Karsai (co-PI) and Douglas Schmidt (co-PI).

16. Raytheon: "Technologies for Integrating Distributed, Real-Time Embedded Infrastructure (DREI) and Model-Driven Computing (MDC) for Command Control," 09/2004-08/2007, $400,000, Douglas C. Schmidt (PI), Aniruddha Gokhale (co-PI), 1 grad student supported.

17. Lockeed Martin, Eagan: "QoS-enabled Fault-tolerant & Highly Available CORBA and Model-driven Tools," 04/2003, $516,434, 20 months, Douglas C. Schmidt (PI), Aniruddha Gokhale (Co-PI), Bala Natarajan (co-PI), 1 staff member supported, 3 graduate students.

18. DARPA IXO: "PCES-1 Supplement," PCES Program, 04/2002, $487,350 for 1 year, Ted Bapty (PI), Aniruddha Gokhale (co-PI), 2 staff, 2 grad students.

19. DARPA IXO: "Design-time Support for Run-time Adaptation Strategies," MoBIES Program, 06/2002, $798,536 for 2 years, subcontract from BBN Technologies, Sandeep Neema (PI), Aniruddha Gokhale (co-PI), 1 scientist, 2 grad students.

Proposals Funded as Contracts/Grants Managed as PI on Behalf of Douglas Schmidt

1. NSF RAPID, "RAPID: Collaborative Research: Cloud Environmental Analysis and Relief," $66,000, 07/10–07/12.

2. AFRL/LMCO, "Predictive Cache Modeling and Analysis (PCM)," $100,000, 06/10–12/11.

3. Northrop Grumman, "Common Tool Chain (Increase in Scope)," $111,791, 04/01/2010–07/22/2011, Aniruddha Gokhale (PI) managed for Doug Schmidt, 2 grad students, Submitted 03/2011.

4. AFRL/LMCO, "System and Software Producibility Collaboration & Experimentation Environment (SPRUCE)," $297,000, 04/08–06/11, Aniruddha Gokhale (PI) managed for Doug Schmidt. Funded in parts:

   (a) AFRL/LMCO, "System and Software Producibility Collaboration & Experimentation Environment (SPRUCE)," $280,000, 04/08–04/11, Aniruddha Gokhale (PI) managed for Doug Schmidt.

   (b) AFRL-LMCO, "" $17,000, 03/14/2011–06/15/2011, Aniruddha Gokhale (PI) managed for Doug Schmidt, grad student, staff, Submitted 03/2011.

5. AFRL/LMCO, "GUTS–System Execution Modeling Technologies for Large-scale Net-Centric DoD Systems," $244,000, 12/07–12/10.

6. SAIC-ESIOP, "Environment-Specific Inter-ORB Protocol (ESIOP)," $150,050, 08/09–11/10.

Funded Research without Overhead Costs (Gifts, Internal Grants)

1. Cisco Research Center, "EdgeNet: An online Edge Computing Based Generative Anomaly Detection and Prognostics Solution for Networked Equipment at Customer Premises," Abhishek Dubey (PI), Aniruddha Gokhale (Co-PI), Bharat Bhuva (Co-PI), 1 year, $100K, 1 year, Submitted: Oct 2020.

2. Cisco Research Center, "Spatio-Temporal AI Inference Engines for System-Level Reliability," Abhishek Dubey (PI), Aniruddha Gokhale (Co-PI), Bharat Bhuva (Co-PI), 1 year, $100K, 1 year, , Submitted: 09/13/2019.

3. Vanderbilt VUSE SUGRE (2 undergrads - Arjun Keerthi and Teppei Kotake), Summer 2019, $3,000, 10 weeks, Aniruddha Gokhale (mentor).

4. Vanderbilt VUSE SUGRE (1 undergrad - Seong Min), Summer 2018, $3,000, 10 weeks, Aniruddha Gokhale and Ravindra Duddu (mentors).

5. Vanderbilt VUSE SUGRE (1 undergrad - Jesse Seales), Summer 2017, $3,000, 10 weeks, Aniruddha Gokhale (mentor).

6. Vanderbilt TIPS ViA, "Vanderbilt Initiative for Smart City Operations Research (VISOR)," $199,948, 2 yrs, Gautam Biswas (PI) and several other Co-PIs including Abhishek Dubey, Aniruddha Gokhale, Hiba Baroud, Craig Philip, Mark Ellingham, Jonathan Gilligan, Douglas Clark, Douglas Perkins, and Douglas Schmidt; Submitted: pre proposal on 10/21/2015; Full submission: 01/2016.

7. Vanderbilt VUSE SUGRE (1 undergrad - Tianchi Wu), Summer 2016, $2,500, 10 weeks, Aniruddha Gokhale (mentor).

8. Vanderbilt TIPS VRA, Title: "Trans-Institutional Big Data Infrastructure at Vanderbilt," $ 895,333 for 3 years, Paul Sheldon (PI) and several others including Aniruddha Gokhale as Co-PIs; Submitted: preproposal on 12/5/2014; proposal in Jan 2015.

9. Vanderbilt VUSE SUGRE (1 undergrad - Jean Baptiste), Summer 2014, $2,000, 10 weeks, Aniruddha Gokhale (mentor).

10. Vanderbilt VUSE SUGRE (1 undergrad - Devron Milazzo), Summer 2011, $2,000, 10 weeks, Aniruddha Gokhale (mentor).

11. VU IDEAS Proposal, "eService: An Event-based Service Architecture Utilizing Ubiquitous Information Sources on the Internet," Yi Cui (PI, EECS), Aniruddha Gokhale (co-PI, EECS), Nilanjan Sarkar (co-PI, ME), Ken Pence (co-PI, EECS), Doug Schmidt (co-PI, EECS), Jules White (co-PI, EECS), $95,000 per year for 3 years; Submitted 11/2009.

12. VU Discovery Grant, "Cyber Physical Systems Solutions to Overcoming Vehicular Traffic Congestion," Mark McDonald (PI, Civil Eng), Aniruddha Gokhale (EECS, co-PI), $100,000, 2 years, 2 grad students, Submitted 11/04/2008.

13. VU Discovery Grant: "Secure and Adaptive Middleware for the Grid," submitted 11/1/04, $100,000 (2 yrs), Douglas C. Schmidt (PI), Paul Sheldon (co-PI), Aniruddha Gokhale (co-PI), 1.5 graduate students.

14. IBM Scholars Program: "Enhancing the Quality of Service of Service-Oriented Architectures Using Model-Driven Development on Eclipse," 12/02/04, $29,525, 1 year, Douglas C. Schmidt (PI), Aniruddha Gokhale (co-PI), 1 graduate student.

15. Cisco URP: "Model-Driven Development of BEEP Application Protocols", 8/24/04, $57,976 (1 year), Aniruddha Gokhale (PI)and Douglas C. Schmidt (co-PI), 1 grad and 1 undergrad.

16. Vanderbilt VUSE SUGRE (1 undergrad - Neeraj Utreja), Summer 2004, $2,000, 10 weeks, Aniruddha Gokhale and Xenofon Koutsoukos (mentors).

17. Vanderbilt Academic Venture Fund, "Vanderbilt Scientific Computing Center (SCC) for multidisciplinary research," Fall 2003, Funding secured for $8.3M (`http://www.accre.vanderbilt.edu/?page_id=26`); Paul Sheldon (PI) and several other investigators including Aniruddha Gokhale.