RENATO J. FIGUEIREDO

Electrical and Computer Engineering
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Education

Ph.D., Computer Engineering: 1995-2001 – Purdue University – West Lafayette, IN. Thesis: "On the Performance and Programming of Heterogeneous Distributed Shared-Memory Multiprocessors Organized as Processor-and-Memory Hierarchies"; Advisor: Professor José A. B. Fortes

M.S., Electrical Engineering: 1994-1995 – University of Campinas – São Paulo, Brazil

B.S., Electrical Engineering: 1989–1994 – University of Campinas – São Paulo, Brazil

Professional Experience

2015–present:	Professor of Electrical and Computer Engineering, University of Florida, Gainesville, FL
2008–2015:	Associate Professor of Electrical and Computer Engineering, University of Florida, Gainesville, FL
2012–2013:	Visiting Researcher, Vrije Universiteit, Amsterdam, the Netherlands
2002–2008:	Assistant Professor of Electrical and Computer Engineering, University of Florida, Gainesville, FL
2001–2002:	Assistant Professor of Electrical and Computer Engineering, Northwestern U., Evanston, IL
1998–2001:	Graduate Research Assistant, Purdue University, West Lafayette, IN
1997–1998:	Teaching Assistant, Purdue University, West Lafayette, IN
1993–1995:	Research Assistant, University of Campinas, São Paulo, Brazil
1993–1994:	Research Intern, R&D Center, Telecomm. of Brazil, São Paulo, Brazil

Honors and Awards

2017:	University of Florida Term Professorship
2012:	ACM HPDC Symposium, One of the 22 "Best papers of HPDC 1992-2012"
2008:	WETICE COPS Symposium, Best Paper Award
2008:	ACM HPDC Symposium, Best Paper Award
2007:	IBM Faculty Award
1999/2000:	Society of Hispanic Professional Engineers and Purdue University, Maria Canto Neuberger Award
1997/1998:	Purdue University, Estus H. and Vashti L. Magoon Award for Excellence in Teaching

Research Grants: Lead PI at UF (24 awards, $6.0M PI portion, $10.1M total)

1. "Collaborative Research: Elements: FaaSr: Enabling Cloud-native Event-driven Function-as-a-Service Computing Workflows in R", National Science Foundation, 2023-2026, US$500,000 (PI portion; total award US$ 600,000). Collaborative with R.Q. Thomas and C. Carey at Virginia Tech
2. "Collaborative Research: URoL:ASC: Applying rules of life to forecast emergent behavior of phytoplankton and advance water quality management", National Science Foundation, 2023-2027, US$154,681 (PI portion; total award $2.23M). Collaborative with C. Carey, R.Q. Thomas at Virginia Tech
3. "Resilient and Robust High Performance Computing Platforms for Scientific Computing Integrity", Department of Energy (DoE), 2022-2024, US$ 541,203. Sole PI after transfer from Y. Jin
4. "I-Corps: Software-Defined Overlay Virtual Private Network for Edge Computing", National Science Foundation, 2021-2022, US$ 50,000. Sole PI
5. "Collaborative Research: Elements: EdgeVPN: Seamless Secure Virtual Networking for Edge and Fog Computing", National Science Foundation, 2020-2024, US$ 519,581 (PI portion; total award US$ 600,000). Collaborative with C. Carey at Virginia Tech
6. "Collaborative Research: CIBR: Cyberinfrastructure Enabling End-to-End Workflows for Aquatic Ecosystem Forecasting", National Science Foundation, 2020-2023, US$ 651,664 (PI portion; total award $ 1,287,342). Collaborative with C. Carey at Virginia Tech
7. "Cloud Virtual Private Network", Chesapeake Technologies, 2018-2020, US$ 100,000. Sole PI.
8. "Software-Defined Overlay Virtual Networks: Enforcing Private Device-to-Device Communication", Florida Center for Cybersecurity (FC2) Seed Grant, 2017-2018. US$ 25,000. Sole PI
9. "NeTS: Small: PerSoNet: Overlay Virtual Private Networks Spanning Personal Clouds and Social Peers", National Science Foundation, 2015-2018. US$ 454,150. Sole PI
10. "IPOP-TinCan Virtual Private Network for C3SA Use Cases", US Army/Concurrent Technologies Corporation, 2015. US$ 35,000. Sole PI.
11. "Prevention and Detection of Disallowed Connections in Mobile and Pervasive Systems", Harris Corporation 2015. US$ 20,000. Sole PI.
12. "SI2-SSE: Peer-to-Peer Overlay Virtual Network for Cloud Computing Research", National Science Foundation, 2013-2016. US$ 494,107. Sole PI.
13. "Managing In-Database Array Analytics", HP Labs, 2013-2014. US$ 30,000. Sole PI.
14. "Student Travel Support for HPDC 2013", National Science Foundation, 2013. US$ 12,000. Sole PI.
15. "HECURA: Collaborative Research: QoS-driven Storage Management for High-end Computing Systems", National Science Foundation, 2009-2012. US$ 220,426 (PI portion; total award US$ 676,869). Collaborative with M. Zhao at FIU.
16. "Collaborative Research: II-New: Distributed Research Testbed (DiRT)", National Science Foundation, 2009-2011. US$ 48,312 (PI portion; total award US$ 241,560). Collaborative with Co-PIs: P. Rhodes, H. Casanova, K. Keahey, D. Thain
17. "CRI:CRD Archer - Seeding a Community-based Computing Infrastructure for Computer Architecture Research and Education", National Science Foundation, 2008-2011. US$ 350,000 (PI portion; total award: US$ 860,524). Collaborative with Co-PIs: D. Lilja, L. John, D. Kaeli, G. Memik, S. McKee, G. Tyson, A. Roy
18. "Machine Learning and Predictive Models in Support of Autonomic Computing in Virtualized Data Centers", IBM Faculty Award, 2007-2008. US$ 30,000. Sole PI
19. "High performance I/O Virtualization Architecture: A simulation-based approach", Intel Corporation, 2006-2007. US$ 135,000. Sole PI.

20. "Coastal and Estuarine Science Cyberinfrastructure: Training and Deployment", National Science Foundation (NSF), 2005-2007. US$ 250,000. Lead PI (Co-PIs Peter Sheng, José A. B. Fortes, Justin Davis)
21. "Virtualized Grids for On-demand Provisioning", IBM Shared University Research (SUR), 2003-2004. Equipment grant.
22. "Collaborative Research: Resource and Data Management for Virtualized End-resources in Computational Grids", National Science Foundation (NSF), 2002-2005. US$ 523,716 (PI portion). Lead PI, collaborative with José A. B. Fortes, Co-PI Peter A. Dinda (award transferred from Northwestern University to UFL)
23. "CISE-RR Collaborative Research on Wide-area Network Computing using Virtual Machines", NSF, 2002-2005, $515,000. Lead PI, collaborative with José A. B. Fortes, co-PI Peter A. Dinda (award transferred from Northwestern University to UFL)
24. "ITR: Fine-Grain Data Management in Computational Grids and Applications in Network-Enabled Medical Imaging for Early Cancer Detection", NSF, 2002-2005. US$ 350,000. Lead PI (co-PI Vadim Backman) (award transferred from Northwestern University to UFL)

Research Grants: Co-PI and Senior Personnel (29 awards, $3.2M Co-PI/senior personnel portion, over $37.6M total funding)

1. Senior Personnel, "iDigBio: Sustaining the digitization, mobilization, accessibility, and use of biodiversity specimen data in U.S. museum and academic collections", National Science Foundation, 2021-2026, $19,995,068 (total award)
2. Co-PI, "SCC-PG: Coordinated Safety Management Across Smart Communities", National Science Foundation, 2020-2021, US$ 30,000 (Co-PI portion), $150,000 (total award)
3. Co-PI, "IIBR RoL: Collaborative Research: A Rules of Life Engine", National Science Foundation, 2019-2023, US$ 150,541 (Co-PI portion), $340,212 (total award)
4. Co-PI, "SCC-IRG Track 2: Resilient water systems: Integrating environmental sensor networks and real-time forecasting to adaptively manage drinking water quality and build social trust", National Science Foundation, 2018-2020. US$ 124,955 (Co-PI portion), $999,998 (total award)
5. Senior Personnel, "iDigBio: Integrated Digitized Biocollections, Phase 2", National Science Foundation, 2016-2022. US$ 357,600 (Senior Personnel portion), $7,152,015 (total award)
6. Co-PI, "Eager: Collaborative Research: Model-based Autonomic Cloud Computing Software Technology", National Science Foundation, 2013-2015. US $83,500 (Co-PI portion), $167,000 (total award)
7. Co-PI, "SAVI: PRAGMA - Enabling Scientific Expeditions and Infrastructure Experimentation for Pacific Rim Institutions and Researchers", NSF, 2012-1017. US $321,317 (Co-PI portion), $1,071,059 (total award)
8. Co-PI, "Enabling Time-sensitive Applications on Virtualized Computing Systems", DoD, 2013-2015. US $65,446 (Co-PI portion)
9. Senior Personnel, "Digitization HUB: A Collections Digitization Framework for the 21st Century", National Science Foundation, 2011-2016. PI: Larry Page. US $442,000 (Co-PI portion), $2,889,984 (total award)
10. Co-PI, "IT Virtualization for Disaster Mitigation and Recovery", National Science Foundation, 2011-2012. $5,000 (Co-PI portion), $50,000 (total award)
11. Co-PI, "Autonomic Middleware for Self-protection, Data Transfers, and Anomaly Analytics as a Service", National Science Foundation, 2010-2011. $37,500 (Co-PI portion), $135,000 (total award)
12. Senior Personnel, "FutureGrid: An Experimental, High-performance Grid Testbed", National Science Foundation, 2009-2013. PI: Geoffrey Fox. US$ 377,000 (Co-PI portion), $753,815 (total award)
13. Co-PI, "Development of a Multimodal Transportation Educational Virtual Appliance (MTEVA)", U.S. Dept. of Transportation. PI: Peter Sheng, US$ 20,300 (Co-PI portion)

14. Co-PI, "Collaborative Research, II-NEW: An Instrumented Data Center Infrastructure for Research on Cross-Layer Autonomics", National Science Foundation, 2009-2011. PIs: M. Parashar, J. Fortes, S. Hariri. US$105,000 (Co-PI portion), US$ 210,000 (total award)
15. Co-PI, "A Regional Storm Surge and Inundation Model Testbed for SECOORA". PIs: Y. P. Sheng, R. Luettich, R. Weisberg, L. Xie, NOAA, 2008-2010. US$ 60,000 (Co-PI portion)
16. Co-PI, "Center for Autonomic Computing". PI: José A. B. Fortes. National Science Foundation, 2008-2013. $612,265 (Co-PI portion), $1,224,530 (total award)
17. Co-PI, "MRI: Acquisition of Instrumentation for Coupled Experimental-Computational Neuroscience and Biology Research", National Science Foundation, 2008-2011, US$50,000 (Co-PI portion), $500,000 (total award)
18. Co-PI, "SDCI NMI New: Middleware for Missing Links in Virtualized Grids". PI: José A. B. Fortes. National Science Foundation, 2007-2009. US$ 117,000 (Co-PI portion), US$ 700,000 (total award)
19. Co-PI, "QoS and autonomics in virtualized Grid and data-center environments". PI: José A. B. Fortes. Intel Corp., 2006. US$ 65,000 (Co-PI portion), US$ 130,000 (total award)
20. Co-PI, "DDDAS-TMRP: Dynamic Data-Driven Brain-Machine Interfaces". PI: José A. B. Fortes, Co-PIs José Principe, Justin Sanchez, Linda Hermer, NSF, 2006-2009. US$ 120,000 (Co-PI portion), $936,000 (total award)
21. Co-PI, "Virtualized Data Centers for Grid-computing and Enterprise Applications". PI: José A. B. Fortes. Intel Corp., 2005.
22. Co-PI, "NMI Deployment - nanoHUB", National Science Foundation (NSF), 10/01/04-9/30/07. PI: Sebastien Goasguen (Purdue University)
23. Co-PI, "Computational Resources for Web-enabled Memory-Intensive Nanotechnology Simulations", Army Research Office, equipment grant. PI: José Fortes
24. Co-PI, "Autonomic Computing applied to Biomolecular Simulations", IBM Shared University Research, equipment grant. PI: José Fortes
25. Co-PI, "SURA Coastal Ocean Observing and Prediction (SCOOP) Program", Office of Naval Research, 10/01/04-9/30/05. PI at U. Florida: Peter Sheng. US$ 45,000 (Co-PI portion)
26. Co-PI, "Development of a Prototype SURA-SCOOP Modeling Grid", Southeastern Universities Research Association (SURA), 12/1/03 - 9/30/04. PI: Peter Sheng.
27. Co-P.I. (P.I.s at Purdue University: Mark Lundstrom, Suppriyo Datta), "Network for Computational Nanotechnology (nCn)", NSF, 2002-2007
28. Co-P.I. (P.I.s at Purdue: M. Lundstrom, S. Datta), "NASA Institute for Nanoelectronics and Computing (INAC)", NASA, 2002-2007.
29. Co-P.I. (José A. B. Fortes), "Grid Computing on Virtual Machines", IBM Shared University Research (SUR) grant, 2002-2003.

Publications – Peer-reviewed Journals (total: 37)

1. K. Subratie, S. Aditya, R. Figueiredo, "EdgeVPN: Self-organizing layer-2 virtual edge networks." Future generations computer systems (FGCS). Future Generation Computer Systems, Volume 140, 2023, Pages 104-116, https://doi.org/10.1016/j.future.2022.10.007
2. Thomas, R.Q, R.P. McClure, T.N. Moore, W.M. Woelmer, C. Boettiger, R.J. Figueiredo, R.T. Hensley, C.C. Carey, "Near-term forecasts of NEON lakes reveal gradients of environmental predictability across the U.S.", Accepted Frontiers in Ecology and Environment, 2022. DOI (pre-print): 10.1002/essoar.10510642.1
3. Cayelan C. Carey, Whitney M. Woelmer, Mary E. Lofton, Renato J. Figueiredo, Bethany J. Bookout, Rachel S. Corrigan, Vahid Daneshmand, Alexandria G. Hounshell, Dexter W. Howard, Abigail S. L. Lewis, Ryan P.

McClure, Heather L. Wander, Nicole K. Ward, R. Quinn Thomas, "Advancing lake and reservoir water quality management with near-term, iterative ecological forecasting", Inland Waters, 2021, DOI: 10.1080/20442041.2020.1816421

4. K. J. Farrell, N. K. Ward, A. I. Krinos, P. C. Hanson, V. Daneshmand, R. J. Figueiredo, C.C. Carey, "Ecosystem-scale nutrient cycling responses to increasing air temperatures vary with lake trophic state", Ecological Modelling, Vol 430, 2020, DOI 10.1016/j.ecolmodel.2020.109134

5. R. Q. Thomas, R. J. Figueiredo, V. Daneshmand, B. J. Bookout, L. K. Puckett, C. C. Carey, "A Near-Term Iterative Forecasting System Successfully Predicts Reservoir Hydrodynamics and Partitions Uncertainty in Real Time", Water Resources Research, 56(11), 2020, DOI: 10.1029/2019WR026138

6. K. Subratie, S. Aditya, V. Daneshmand, K. Ichikawa, and R. Figueiredo, "On the Design and Implementation of IP-over-P2P Overlay Virtual Private Networks", IEICE Transactions, Vol., No.: Vol.E103-B, No.1, pp.2-10, 2020

7. D. Ding, R. J. Figueiredo, and M. Conti, "SAND: Social-Aware, Network-Failure Resilient, and Decentralized Microblogging System", Future Generation Computer Systems, vol. 93, no. April 2019, p. 637-650

8. C. C. Carey, N. K. Ward, K. J. Farrell, M. E. Lofton, A. I. Krinos, R. P. McClure, K. C. Subratie, R. J. Figueiredo, J. P. Doubek, P. C. Hanson, P. Papadopoulos, P. Arzberger, "Enhancing collaboration between ecologists and computer scientists: lessons learned and recommendations forward", Ecosphere Vol 10, No 5, May 2019

9. D. Ding, R. J. Figueiredo, and M. Conti, "Wide-scale Internet Disconnection: Impact and Recovery on Social-based P2P Overlays", IEEE Transactions on Network Science and Engineering, Volume: 6, Issue: 4 , Oct.-Dec. 2019

10. D. Ding, K. Jeong, S. Xing, M. Conti, R. Figueiredo, F. Liu, "SEnD: a Social Network Friendship Enhanced Decentralized System to Circumvent Censorships", IEEE Transactions on Services Computing

11. K. Subratie, S. Aditya, S. Mahesula, R. J. Figueiredo, C. C. Carey, and P. C. Hanson, "GRAPLEr: A distributed collaborative environment for lake ecosystem modeling that integrates overlay networks, high-throughput computing, and WEB services", Concurrency and Computation: Practice and Experience, vol. 29, no. 13, 2017

12. K. Ichikawa, P. U-chupala, C. Huang, C. Nakasan, T. Liu, J. Chang, L. Ku, W. Tsai, J. Haga, H. Yamanaka, E. Kawai, Y. Kido, S. Date, S. Shimojo, P. Papadopoulos, M. Tsugawa, M. Collins, K. Jeong, R. Figueiredo, J. Fortes. "PRAGMA-ENT: An International SDN Testbed for a Cyberinfrastructure in the Pacific Rim" Concurrency And Computation: Practice And Experience, vol. 29, no. 3, 2017

13. Y. Liu, J. Qin, and R. Figueiredo, "The Dispatch Time Aligning I/O Scheduling for Parallel File Systems", Cluster Computing 18(3): 1025-1039 (2015)

14. Youna Jung, Renato Figueiredo, José A. B. Fortes, "Emergency Response using Ephemeral Social Communities across Online Social Networks", EAI Endorsed Transactions on Collaborative Computing 15(5): e4, 2015

15. P. St Juste, K. Jeong, H. Eom, C. Baker, R. Figueiredo, 'TinCan: User-Defined P2P Virtual Network Overlays for Ad-hoc Collaboration', ICST Transactions on Collaborative Computing, Volume 14 Issue 2, 2014

16. Sheng, Yeayi P; Davis, Justin R; Figueiredo, Renato J; Paramygin, Vladimir A; Pardalos, Panagote M; Vogiatzis, Chrysafis. Strengthening the resiliency of a coastal transportation system through integrated simulation of storm surge, inundation, and nonrecurrent congestion in Northeast Florida. Journal of Marine Science and Engineering. 2014.

17. P. St Juste, H. Eom, B. Woodruff, C. Baker, and R. Figueiredo, "Enabling decentralized microblogging through P2PVPNs", International Journal of Security and Networks (IJSN), Vol. 8 No. 3, pp 169-178, 2013

18. D. Wolinsky, K. Lee, P. Chuchaisri, R. Figueiredo, "Experiences with Self-Organizing, Decentralized Grids Using the Grid Appliance", Cluster Computing 16(2): 265-283, 2013

19. Kyungyong Lee, Taewoong Choi, P. Oscar Boykin, Renato Figueiredo, "MatchTree: Flexible, Scalable, and Fault-tolerant Wide-area Resource Discovery with Distributed Matchmaking and Aggregation", Future Generation Computer Systems Journal, 29(6): 1596-1610, 2013

20. C. Jeffery, R. Figueiredo, "A Flexible Approach to Improving System Reliability with Virtual Lockstep", IEEE Transactions on Dependable and Secure Computing, 9(1), 2012, pp 2-15.

21. Girish Venkatasubramanian*, Ramesh Illikal, Don Newell, and Renato Figueiredo, "TMT - A TLB Tag Management Framework for Virtualized Platforms", Int. Journal on Parallel Programming, 40(3): 353-380 (2012).

22. Pierre St Juste, David Wolinsky, P. Oscar Boykin, Michael Covington, and Renato Figueiredo,``SocialVPN: Enabling Wide-Area Collaboration with Integrated Social and Overlay Networks,' Journal of Computer Networks, Vol. 54, No. 12. (26 August 2010), pp. 1926-1938.

23. Justin R. Davis, Renato J. Figueiredo, Y. Peter Sheng, Jose Fortes, Arijit Ganguly, Vladimir A. Paramygin, David Wolinsky, Jian Zhang, and Bilge Tutak, "Application of emerging cyberinfrastructure technologies to aid in the education and training of coastal and estuarine scientists", Journal of Ocean Technology, 5(1), pp 56-80, March 2010.

24. Jack DiGiovanna, Prapaporn Rattanatamrong, Ming Zhao, Babak Mahmoudi, Linda Hermer, Renato Figueiredo, Jose C . Principe, Jose Fortes and Justin C . Sanchez, "Cyber-workstation for computational neuroscience", Frontiers in Neuroengineering, 2:17. doi: 10.3389/neuro.16.017.2009.

25. Ganguly, D. Wolinsky, P. O. Boykin, R. Figueiredo, "Improving Peer Connectivity in Wide-area Overlays of Virtual Workstations", Cluster Computing Journal, 12(2), p239-256, Jan. 2009.

26. J. Zhang and R. Figueiredo, "Learning-aided Predictor Integration for System Performance Prediction", Cluster Computing, pp. 425-442, October 2007.

27. Ganguly, A. Agrawal, P. Boykin and R. Figueiredo, "WOW: Self-Organizing Wide Area Overlay Networks of Virtual Workstations", Journal of Grid Computing, 5(2), June 2007, pp. 151-172 (Special issue, invited as one of five nominated best papers from HPDC-2006).

28. R. Figueiredo, V. Backman, Y. Liu and J. Paladugula, "Architecture and Performance of a Grid-enabled Lookup-based Biomedical Optimization Application: Light Scattering Spectroscopy", IEEE Transactions on Information Technology in Biomedicine, 11(2), March 2007, pp. 170-178.

29. A. Matsunaga, M. Tsugawa, S. Adabala, R. Figueiredo, H. Lam and J. Fortes, "Science Gateways Made Easy: the In-VIGO Approach", Concurrency and Computation: Practice and Experience, 19(6), October, 2006, pp. 905-919.

30. Jeffery, R. Figueiredo, "Hierarchical Fault Tolerance for Nanoscale Memories", IEEE Transactions on Nanotechnology, 5(4), July 2006, pp 407-414.

31. M. Zhao, J. Zhang and R. Figueiredo, "Distributed File System Virtualization Techniques Supporting On-Demand Virtual Machine Environments for Grid Computing", Cluster Computing Journal, 9(1), January 2006, pp. 45-56.

32. J. Fortes, R. Figueiredo and M. Lundstrom, "Virtual Computing Infrastructures for Nanoelectronics Simulation", Proceedings of the IEEE, 93(10), August 2005, pp 1839-1847.

33. Sumalatha Adabala, Vineet Chadha, Puneet Chawla, Renato Figueiredo, José A. B. Fortes, Ivan Krsul, Andrea Matsunaga, Mauricio Tsugawa, Jian Zhang, Ming Zhao, Liping Zhu, and Xiaomin Zhu, "From Virtualized Resources to Virtual Computing Grids: The In-VIGO System", Future Generation Computing

Systems, special issue on Complex Problem-Solving Environments for Grid Computing, David Walker and Elias Houstis, Editors, 21(6), April 2005, pp 896-909.

34. Renato J. Figueiredo, Nirav H. Kapadia and José A. B. Fortes. "Seamless Access to Decentralized Storage Services in Computational Grids via a Virtual File System", Cluster Computing Journal, 7(2), April 2004, pp. 113-122.

35. Ali Butt, Sumalatha Adabala, Nirav Kapadia, Renato Figueiredo, Jose Fortes, "Grid-computing Portals and Security Issues", Journal of Parallel and Distributed Computing (JPDC), 63(10), October 2003, pp 1006-1014.

36. Nirav H. Kapadia, Renato J. Figueiredo and José A. B. Fortes. "PUNCH: Web Portal for Running Tools", IEEE Micro, 20(3), May/June 2000, pp 38-47.

37. Renato J. Figueiredo, José A. B. Fortes, Rudolf Eigenmann, Nirav H. Kapadia, Valerie Taylor, Alok Choudhary, Luis Vidal and Jan-Jo Chen. "On the Use of Simulation and Parallelization Tools in Computer Architecture and Programming Courses", Computers in Education Journal, 10(1), Jan-Mar 2001, pp 19-27.

Publications – Book Chapters and Periodicals (total: 4)

1. Fox, G., G. von Laszewski, J. Diaz, K. Keahey, J. Fortes, R. Figueiredo, S. Smallen, W. Smith, and A. Grimshaw. "FutureGrid - a reconfigurable testbed for Cloud, HPC, and Grid Computing", Chapter of Contemporary High Performance Computing: From Petascale toward Exascale, CRC Computational Science, 04/2013.

2. Jeff Chase, Geoffrey Charles Fox, Renato J. O. Figueiredo, Andrew Grimshaw, Paul Watson, Mazin S. Yousif: Thoughts on the State of Cloud over the Next Five Years. IEEE Cloud Computing 1(2): 26-40 (2014)

3. R. Figueiredo, P. Dinda, J. Fortes, "Resource Virtualization Renaissance", invited paper, guest editor introduction, IEEE Computer Magazine 38(5), Special Issue on Virtualization, May 2005, pp. 28-31.

4. M. Lundstrom, G. Klimeck, S. Goasguen, M. McLennan, R. Figueiredo and J. Fortes, "The Network for Computational Nanotechnology: A Global Infrastructure for Researchers, Educators, and Students",. International Union of Materials Research Society Facets 4(2), 2005, pp. 1-7.

Publications – Peer-reviewed Conferences and Workshops (total: 112)

1. Yichen Jiang, Shuo Wang, Renato Figueiredo, Yier Jin, "Warm-boot Attack in Modern DRAMs", Proceedings of the Design, Automation and Test in Europe (DATE) Conference, 2023

2. M. Chen, J. Sun, K. Aida, R. Figueiredo, Y-J. Ku, K. Subratie, "Intelligent Live Video Streaming for Object Detection", Proceedings of the 19th IEEE International Conference on Smart City, 2021

3. V. Daneshmand, A. Breef-Pilz, C. Carey, Y. Jin, Y-J. Ku, K. Subratie, R. Q. Thomas, R. Figueiredo, "Edge-to-cloud Virtualized Cyberinfrastructure for Near Real-time Water Quality Forecasting in Lakes and Reservoirs", 17th International IEEE eScience Conference, 2021

4. Renato J. Figueiredo, Kensworth Subratie, "Demo: Software-defined Virtual Networking Across Multiple Edge and Cloud Providers with EdgeVPN.io", 41st IEEE International Conference on Distributed Computing Systems (ICDCS), 2021

5. Renato J. Figueiredo, Kensworth Subratie, "Demo: EdgeVPN.io: Open-source Virtual Private Network for Seamless Edge Computing with Kubernetes", The Fifth ACM/IEEE Symposium on Edge Computing, Nov. 2020

6. S. Aditya and R. Figueiredo, "SocialEdge: Enabling trusted data processing workflow in smart communities", Proceedings of the 11th IEEE International Conference on Cloud Computing Technology and Science (CloudCom), 2019

7. K. Subratie, R. J. Figueiredo, "Towards Island Networks: SDN-Enabled Virtual Private Networks with Peer-to-Peer Overlay Links for Edge Computing", Proceedings of International Conference on Internet and Distributed Computing Systems (IDCS), 2018

8. S. Aditya, K. Subratie, R. J. Figueiredo, "PerSoNet: Software-defined Overlay Virtual Networks Spanning Personal Devices Across Social Network Users", Proceedings of CloudCom 2018

9. S. Aditya and R. J. Figueiredo, "Frugal: Building degree-constrained overlay topology from social graphs", in 1st IEEE International Conference on Fog and Edge Computing (ICFEC), Madrid, Spain, 2017.

10. K. Jeong, R. J. Figueiredo, and K. Ichikawa, "PARES: Packet Rewriting on SDN-Enabled Edge Switches for Network Virtualization in Multi-Tenant Cloud Data Centers", The IEEE International Conference on Cloud Computing (CLOUD), 2017. Acceptance rate: 18%

11. K. Jeong, K. Ichikawa, and R. Figueiredo, "On the Performance and Cost of Cloud-Assisted Multi-path Bulk Data Transfer", in IEEE International Conference on Cloud Computing Technology and Science (CloudCom), 2017. Acceptance rate: 29.4%

12. K. Subratie, S. Aditya, S. Sabogal, T. Theegala, R. Figueiredo, "Towards Dynamic, Isolated, Work-groups for Distributed IoT and Cloud Systems with Peer-to-Peer Virtual Private Networks", Proceedings of Sensors to Cloud Architectures Workshop (SCAW), Austin, TX, Feb 2017

13. Kyuho Jeong, Renato Figueiredo, "Self-configuring Software-defined Overlay Bypass for Seamless Inter- and Intra-cloud Virtual Networking", Proceedings of HPDC, Kyoto, Japan, May 2016 (acceptance rate: 16%)

14. Ding Ding, Mauro Conti, Renato Figueiredo, "Impact of Country-scale Internet Disconnection on Structured and Social P2P Overlays", In Proceedings of the IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (IEEE WoWMoM 2015), Boston, MA, USA, June 14-17, 2015 (acceptance rate: 21%)

15. Kensworth Subratie, Saumitra Aditya, Renato Figueiredo, Cayelan Carey and Paul Hanson, "GRAPLEr: A Lake Ecology Distributed Collaborative Environment Integrating Overlay Networks, High-throughput Computing and Web Services", PRAGMA Workshop on International Clouds for Data Science (PRAGMA-ICDS), Depok, Indonesia, Oct. 2015

16. Kaveh Razavi, Ana Ion, Genc Tato, Kyuho Jeong, Renato Figueiredo, Guillaume Pierre and Thilo Kielmann, "Kangaroo: A Tenant-Centric Software-Defined Cloud Infrastructure", IEEE International Conference on Cloud Engineering (IC2E), 2015. Acceptance rate: 27%

17. H. Eom, R. J. Figueiredo, H. Cai, Y. Zhang and K. Huang, "MALMOS: Machine Learning-based Mobile Offloading Scheduler with Online Training", IEEE MobileCloud, 2015. Acceptance rate: 28%

18. R. J. Figueiredo, S. Aditya, K. Jeong, K. Subratie, "Seamless Networking Among Edge Devices and Clouds with Fog Social Virtual Networks", Sensors to Cloud Architectures Workshop (SCAW-2015)

19. Y. Jung, R. J. Figueiredo, and J. A. B. Fortes, "Location-based Timely Cooperation over Social Private Network ", in 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, 2014.

20. H. Eom, P. St Juste, R. Figueiredo, O. Tickoo, R. Illikkal, R. Iyer, "OpenCL-based Remote Offloading Framework for Trusted Mobile Cloud Computing", IEEE International Conference on Parallel and Distributed Systems (ICPADS), December 2013. Acceptance rate: 30%

21. H. Eom, P. St Juste, R. Figueiredo, O. Tickoo, R. Illikkal, R. Iyer, "Machine Learning-based Runtime Scheduler for Mobile Offloading Framework", IEEE/ACM International Conference on Utility and Cloud Computing (UCC), December 2013. Acceptance rate: 24.1%

22. A. Matsunaga, A, Thompson, R. Figueiredo, M. Collins, J. Fortes, C. Germain-Aubrey, P. S. Soltis, "A Computational- and Storage-Cloud for Integration of Biodiversity Collections", Proceedings of e-Science 2013

23. Y. Liu, R. Figueiredo, Y. Xu and M. Zhao, "On the Design and Implementation of a Simulator for Parallel File System Research," (short paper) Proceedings of the 29th IEEE Conference on Massive Data Storage (MSST2013), May 2013. Acceptance rate: 25%.

24. S. Jia, P. St Juste, R. Figueiredo, "A multidimensional heuristic for social routing in peer-to-peer networks", Consumer Communications and Networking Conference (CCNC), 2013 IEEE, 329-335. Acceptance rate: 30%

25. P. St Juste, R. Figueiredo, "A peer-to-peer microblogging service based on IP multicast and social virtual private networking", Consumer Communications and Networking Conference (CCNC), 2013 IEEE, 873-874. Acceptance rate: 30%.

26. Kyungyong Lee and Renato Figueiredo, "MapReduce on Opportunistic Resources Leveraging Resource Availability", IEEE CloudCom 2012. Acceptance rate: 17.7%

27. Han Zhao, Ze Yu, Shivam Tiwari, Xing Mao, Kyungyong Lee, David Wolinsky, Xiaolin Andy Li and Renato Figueiredo, "CloudBay: Enabling an Online Resource Market Place for Open Clouds", The 5th IEEE/ACM International Conference on Utility and Cloud Computing - UCC'2012. Acceptance rate: 27%

28. Heungsik Eom, Pierre St Juste, Renato Figueiredo, Omesh Tickoo, Ramesh Illikkal, Ravishankar Iyer, "SNARF: A Social Networking-inspired Accelerator Remoting Framework", International Workshop on Mobile Cloud Computing (MCC), August 2012

29. Kyungyong Lee, David Wolinsky, Renato Figueiredo, "PonD : Dynamic Creation of HTC Pool on Demand Using a Decentralized Resource Discovery System", Proceedings of the 21st International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC-2012), June 2012. Acceptance rate: 16.3%

30. Yiqi Xu, Dulcardo Arteaga, Ming Zhao, Yonggang Liu, Renato Figueiredo, Seetharami Seelam, "vPFS: Virtualization-based Bandwidth Management for Parallel Storage Systems", 28th IEEE Conference on Massive Data Storage (MSST'12), April 2012

31. Davis, J. R., Paramygin, V. A., Figueiredo, R. J., Sheng, Y. P., Vogiatzis, C. and Pardalos, P. M., "The Coastal Science Educational Virtual Appliance (CSEVA)," Estuarine and Coastal Modeling, Proceedings of the Twelfth International Conference, Malcolm L. Spaulding ed., ASCE, Reston, VA, 2012.

32. Mauricio Tsugawa, R. Figueiredo, J. Fortes, T. Hirofuchi, H. Nakada, P. Takano, "On the Use of Virtualization Technologies to Support Uninterrupted IT Services", 2012 IEEE International Conference on Communications (ICC)

33. David Wolinsky, Renato Figueiredo, "Experiences with Self-Organizing, Decentralized Grids Using the Grid Appliance", Proceedings of the 20th International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC-2011). Acceptance rate: 13%

34. Girish Venkatasubramanian, Renato Figueiredo, Ramesh Illikkal, "On the Performance of Tagged Translation Lookaside Buffers: A Simulation-Driven Analysis", In the 19th International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), July 2011. Acceptance rate: 26%; selected as one of the top ten papers in the conference.

35. Yonggang Liu, Renato Figueiredo, Dulcardo Clavijo, Yiqi Xu, and Ming Zhao, "Towards Simulation of Parallel File System Scheduling Algorithms with PFSsim", 7th IEEE International Workshop on Storage Network Architecture and Parallel I/O (SNAPI), May 2011

36. Heungsik Eom, David Wolinsky, Renato Figueiredo, "SOLARE: Self-Organizing Latency-Aware Resource Ensemble", 13th IEEE International Conference on High Performance Computing and Communications (HPCC-2011). Acceptance rate: 22%.

37. Kyungyong Lee, Tae Woong Choi, Arijit Ganguly, David I Wolinsky, Oscar Boykin, Renato Figueiredo, "Parallel Processing Framework on a P2P System Using Map and Reduce Primitives", Eighth International Workshop on Hot Topics in Peer-to-Peer Systems (HotP2P), 2011

38. D. Wolinsky, A. Prakash, and R. Figueiredo, "Grid Appliance - On the Design of Self-Organizing, Decentralized Grids", In the IEEE Workshop on Management of Emerging Networks and Services (IEEE MENS 2010), December 2010

39. Y. Xu, L. Wang, D. Clavijo, Y. Liu, R. Figueiredo, M. Zhao, "Virtualization-based Bandwidth Management for Parallel Storage Systems", Proceedings of 5th Petascale Data Storage Workshop (with Supercomputing '10), November 2010

40. D. Wolinsky, K. Lee*, P. O, Boykin, and R. Figueiredo, "On the Design of Autonomic, Decentralized VPNs", In the 6th International Conference on Collaborative Computing (CollaborateCom 2010), October 2010

41. P. St. Juste, D. I Wolinsky, K. Lee, P. O. Boykin, and R. Figueiredo, "SocialDNS: A Decentralized Naming Service for Collaborative P2P VPNs", In the 6th International Conference on Collaborative Computing (CollaborateCom 2010), October 2010

42. P. Rattanatamrong, A, Matsunaga, P. Raiturkar, D. Mesa, M. Zhao, B. Mahmoudi, J. DiGiovanna, J. Principe, R. Figueiredo, J. C. Sanchez, J. Fortes, "Model Development, Testing and Experimentation in a CyberWorkstation for Brain-Machine Interface Research", Proceedings of 32nd Annual International IEEE EMBS Conference, September 2010.

43. D. Wolinsky, P. St.. Juste, P. O. Boykin, and R. Figueiredo, "Addressing the P2P Bootstrap Problem for Small Overlay Networks", In the Proceedings of the 10th IEEE International Conference on Peer-to-Peer Computing 2010 (P2P'10), August 2010 (Acceptance rate: 24%).

44. G. Venkatasubramanian, R. Figueiredo, R. Illikkal, D. Newell, "A Simulation Framework for the Analysis of TLB behavior in Virtualized Environments", 18th IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2010), August 2010. (Acceptance rate: 16%)

45. J. Xu, R. J. Figueiredo, "GatorShare: a file system framework for high-throughput data management", Proceedings of the 2010 International Workshop on Data Intensive Distributed Computing (DIDC), pp 776-786, June 2010.

46. D. Wolinsky, P. St. Juste, P. O. Boykin, and R. Figueiredo, "OverSoc: Social Profile Based Overlays". In the proceedings of the 6th Workshop on Collaborative Peer-to-Peer Systems (COPS), June 2010

47. A. Ganguly, P. O. Boykin, R. Figueiredo, "Techniques for Low-latency proxy selection in Wide-area P2P networks", Proceedings of Seventh International Workshop on Hot Topics in Peer-to-Peer Systems (HotP2P), April 2010.

48. D. Wolinsky, Y. Liu, G. Venkatasubramanian, P. St Juste, R. Figueiredo, "On the Design of Scalable, Self-Configuring Virtual Networks", Proceedings of SuperComputing 2009. Acceptance rate: 22%.

49. D. Wolinsky, Y. Liu, R. Figueiredo, "Towards a Uniform Self-Configuring Virtual Private Network for Workstations and Clusters in Grid Computing", Proceedings of VTDC-2009, Barcelona, Spain, June 2009.

50. Girish Venkatasubramanian, Ramesh Illikal, Donald Newell, Renato Figueiredo "TMT - A TLB Tag Management Framework for Virtualized Platforms'. In Proceedings of SBAC-PAD 21st International Symposium on Computer Architecture and High Performance Computing, October 2009

51. J. C. Sanchez; R. Figueiredo, J. Fortes, J. Principe, "Development of Symbiotic Brain-Machine Interfaces Using a Neurophysiology Cyberworkstation", 13th International Conference on Human-Computer Interaction, July 2009

52. Girish Venkatasubramanian, Ramesh Illikal, Donald Newell, Renato Figueiredo, "A Simulation Analysis of Shared TLBs with Tag-based Partitioning in Multicore Virtualized Environments", Proceedings of the 2nd International Workshop on Managed Multi-Core Systems, March 2009

53. K. Keahey, R. Figueiredo, J. A. B. Fortes, T. Freeman, M. Tsugawa, "Science Clouds: Early Experiences in Cloud Computing for Scientific Applications", Cloud Computing and its Applications (CCA) Workshop, Oct 2008.

54. R. Figueiredo, P. O. Boykin, J. A. B. Fortes, T. Li, J-K. Peir, D. Wolinsky, L. John, D. Kaeli, D. Lilja, S. McKee, G. Memik, A. Roy, G. Tyson, "Archer: A Community Distributed Computing Infrastructure for Computer Architecture Research and Education", invited paper, The 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom), Orlando, FL, Nov 2008.

55. P. St Juste, D. Wolinsky, J. Xu, M. Covington, R. Figueiredo, "On the Use of Social Networking Groups for Automatic Configuration of Virtual Grid Environments", Proceedings of GCE (Grid Computing Environments) Workshop, with SuperComputing, Austin, TX, Nov. 2008.

56. C. Jeffery and R. Figueiredo, "Reducing Fault Detection Latencies in Virtually-Lockstepped Systems", Proceedings of 3rd 3rd Workshop on Dependable Architectures (with the 41st International Symposium on Microarchitecture), Lake Como, Italy, Oct. 2008.

57. M. Zhao, P. Rattanatamrong, J. DiGiovanna, B. Mahmoudi, R. Figueiredo, J. Sanchez, J. Prncipe, J. Fortes, "BMI Cyberworkstation: Enabling Dynamic Data-Driven Brain-Machine Interface Research through Cyberinfrastructure", Proceedings of the 30th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vancouver, CA, Aug. 2008.

58. R. Figueiredo, P. O. Boykin, P. St Juste, D. Wolinsky, "Social VPNs: Integrating Overlay and Social Networks for Seamless P2P Networking", Proceedings of IEEE WETICE COPS (Collaborative Peer-to-peer Systems), Rome, Italy, June 2008. Best paper award. (Acceptance rate: 24%)

59. A. Ganguly, D. Wolinsky, P. O. Boykin, R. Figueiredo, "Improving peer-connectivity in Wide-area Overlays of Virtual Workstations", Proceedings of International Symposium on High Performance Distributed Computing (HPDC), Boston, MA, June 2008. Best paper award. (Acceptance rate: 17.5%)

60. S. Goasguen, K. Madhavan, D. Wolinsky, R. Figueiredo, J. Frey, A. Roy, P. Ruth and D. Xu, "Middleware Integration and Deployment Strategies for Cyberinfrastructures", Proceedings of International Confrrence on Grid and Pervasive Computing (GCC), Kunming, China, May 2008.

61. V. Chadha, D. Wolinsky and R. Figueiredo, "Provisioning of Virtual Environments for Wide Area Desktop Grids through Redirect-on-write Distributed File System", Proceedings of 2nd PCGrid Workshop, with IPDPS, April 2008.

62. D. Wolinsky and R. Figueiredo, "Simplifying Resource Sharing in Voluntary Grid Computing with the Grid Appliance", Proceedings of 2nd PCGrid Workshop, with IPDPS, April 2008.

63. C. Jeffery and Renato Figueiredo "Towards Byzantine Fault Tolerance in Many-core Computing Platforms', short paper, IEEE Pacific Rim Dependable Computing Conference (PRDC), Melbourne, Australia, Dec 2007.

64. V. Chadha and R. Figueiredo, "ROW-FS: A User-level Virtualized Redirect-on-write Distributed File System for Wide Area Applications", Proceedings of 14th Annual IEEE International Conference on High Performance Computing, Goa, India, December 2007 (Acceptance rate: 21%)

65. G. Venkatasubramanian, P. O. Boykin, R. Figueiredo 'Design of High-Yield Defect-Tolerant Self-Assembled Nanoscale Memories'. In IEEE/ACM International Symp. on Nanoscale Architectures (NANOARCH), 2007.

66. M. Zhao, R. Figueiredo 'Experimental Study of Virtual Machine Migration in Support of Reservation of Cluster Resources'. In 2nd International Workshop on Virtualization Technologies in Distributed Computing (VTDC), Nov. 2007.

67. M. Zhao and R. Figueiredo, "A User-level Secure Grid-wide File System", Proceedings of Supercomputing'2007, Reno, NV (acceptance rate: 20%).

68. J. DiGiovanna, L. Marchal, P. Rattanatamrong, M. Zhao, S. Darmanjian, B. Mahmoudi, J. Sanchez, J. Príncipe, L. Hermer-Vazquez, R. Figueiredo, and J. Fortes, "Towards Real-Time Distributed Signal Modeling for Brain Machine Interfaces", Dynamic Data Driven Application Systems Workshop – DDDAS – International Conference on Computational Science 2007.

69. V Chadha, R. Illikkal, R. Iyer, J. Moses, D. Newell, R. Figueiredo, "I/O Processing in a Virtualized Platform: A Simulation-Driven Approach", Proceedings of the ACM Virtual Execution Environments (VEE) Conference, San Diego, CA, June 2007 (Acceptance rate: 27%).

70. J. Zhang, M. Yousif, R. Carpenter, R. Figueiredo, "Application Resource Demand Phase Analysis and Prediction in Support of Dynamic Resource Provisioning", Poster, Proceedings of the IEEE International Conference on Autonomic Computing, Jacksonville, FL, June 2007. (Acceptance rate: 17%)

71. A. Ganguly, J. Yin, H. Shaikh, D. Chess, T. Eilem, R. Figueiredo, H. Hansom, A. Mohindra, G. Pacifici, "Reducing Complexity of Software Deployment with Delta Configuration", Proceedings of 10th IFIP/IEEE International Symposium on Integrated Management, May 2007.

72. J. Zhang and R. Figueiredo, "Adaptive Predictor Integration for System Performance Prediction", Proceedings of International Parallel and Distribute Processing Symposium (IPDPS), San Diego, CA, March 2007 (Acceptance rate: 26%).

73. A. Ganguly, D. Wolinsky, P. O. Boykin and R. Figueiredo, "Decentralized Dynamic Host Configuration in Wide-Area Overlays of Virtual Workstations", Invited paper. Proceedings of First Workshop on Large-Scale and Volatile Desktop Grids (PCGrid), with IPDPS-2007.

74. D. Wolinsky, A. Agrawal, P. O. Boykin, J. Davis, A. Ganguly, V. Paramygin, P. Sheng, R. Figueiredo 'On the Design of Virtual Machine Sandboxes for Distributed Computing in Wide Area Overlays of Virtual Workstations'. In Proc. First Workshop on Virtualization Technologies in Distributed Computing (VTDC), with Supercomputing, Nov. 2006.

75. J. Bintz et al, "SCOOP: Enabling A Network of Ocean Observations for Mitigating Coastal Hazards", Proceedings of The Coastal Society's 20th Biennial Conference, May 2006.

76. J. Fortes, R. Figueiredo, L. Hermer-Vazquez, J. Principe, J. Sanchez, "A New Architecture for Deriving Dynamic Brain-Machine Interfaces", Dynamic Data Driven Application Systems Workshop – DDDAS – International Conference on Computational Science 2006.

77. G. Venkatasubramanian and R. Figueiredo, "A Nanoscale Memory Interface Scheme Based on Hierarchical Memory Mapping", Proceedings of the IEEE Nano Conference, Cincinnati, OH, July 2006.

78. A. Ganguly, A. Agrawal, P. Boykin and R. Figueiredo, 'WOW: Self-Organizing Wide Area Overlay Networks of Virtual Workstations', Proceedings of IEEE International High Performance Distributed Computing (HPDC), Paris, France, 2006, pp 30-41. (Acceptance rate: 15%; one of the five nominated articles for best paper award)

79. J. Zhang and R. Figueiredo, "Autonomic Feature Selection for Application Classification", Proceedings of the IEEE International Conference on Autonomic Computing, Dublin, Ireland, June 2006, pp 43-52. (Acceptance rate: 22%)

80. M. Zhao, J. Xu and R. Figueiredo, "Towards Autonomic Grid Data Management with Virtualized Distributed File Systems", Proceedings of the IEEE International Conference on Autonomic Computing, Dublin, Ireland, June 2006, pp. 209-218. (Acceptance rate: 22%)

81. M. Zhao and R. Figueiredo, "Application-Tailored Cache Consistency for Wide-Area File Systems", Proceedings of IEEE International Conference on Distributed Computing Systems (ICDCS), Lisbon, Portugal, 2006. (Acceptance rate: 14%).

82. A. Ganguly, A. Agrawal, P. Boykin and R. Figueiredo, 'IP over P2P: Enabling Self-configuring Virtual IP Networks for Grid Computing', Proceedings of 20th IEEE International Parallel & Distributed Processing Symposium., Rhodes Island, Greece, 2006. (Acceptance rate: 23%)

83. J. Zhang, R. Figueiredo, 'Application Classification Through Monitoring and Learning of Resource Consumption Patterns', Proceedings of 20th IEEE International Parallel & Distributed Processing Symposium., Rhodes Island, Greece, 2006. (Acceptance rate: 23%).

84. J. R. Davis, V. A. Paramygin, A. Ganguly, R. J. Figueiredo, and Y. P. Sheng, "Simulation of Storm Surge Using Grid Computing", Proceedings of Estuarine and Coastal Modeling, American Society of Civil Engineers, 2006, pp 357-374

85. A. Matsunaga, M. Tsugawa, S. Adabala, R. Figueiredo, H. Lam and J. Fortes, "Science gateways made easy: the In-VIGO approach", Global Grid Forum workshop on Science Gateways, Chicago, IL, June 2005.

86. A. Matsunaga, M. Tsugawa, M. Zhao, L. Zhu, V. Sanjeepan, S. Adabala, R. Figueiredo, H. Lam, and J. Fortes "On the Use of Virtualization and Service Technologies to Enable Grid-Computing", Proceedings of Europar, Lecture Notes on Computer Science 3648, 2005, pp 1-12.

87. M. Zhao, V. Chadha, R. Figueiredo , "Supporting Application-Tailored Grid File System Sessions with WSRF-Based Services", Proc. of the IEEE International Symposium on High Performance Distributed Computing (HPDC), July 2005. Acceptance rate: 21%.

88. Abhishek Agrawal, Arijit Ganguly, P. Oscar Boykin, and Renato J. Figueiredo, "Towards P2P-routed IP Overlay Networks for Grid Virtual Machines", Poster, extended abstract published on 14th International Symposium on High Performance Distributed Computing, July 2005

89. V. Ravinuthula, J. Harris, C. Jeffery, R. Figueiredo and J. Fortes "Using Time and Redundancy for Nanocomputation", GOMACTech (Government Microcircuit Applications and Critical Technology Conference), April 2005

90. Davis, J. R., Sheng, Y.P, and Figueiredo, R. J. "Grid-based particle tracking in Florida Bay". Proceedings of 8th Estuarine and Coastal Modeling Conference, American Society of Civil Engineers, pp. 900-913, Nov. 2004.

91. Krsul, A. Ganguly, J. Zhang, J. Fortes, R. Figueiredo, "VMPlants: Providing and Managing Virtual Machine Execution Environments for Grid Computing", In Proc. of Supercomputing Conference, Pittsburgh, PA, November 2004. Acceptance rate: 30%.

92. Ninad Ghodke, Renato J. Figueiredo "On the Implications of Machine Virtualization for DRM and Fair Use: A Case Study of a Virtual Audio Device Driver". In Proceedings of 4th ACM DRM Workshop, Washington, DC, August 2004. (Acceptance rate: 37%).

93. Casey Jeffery, Ahmet Basagalar, Renato Figueiredo, "Dynamic Sparing and Error Correction Techniques for Fault Tolerance in Nanoscale Memory Structures", Proceedings of IEEE Conference on Nanotechnology (IEEE-Nano), Munich, Germany, August 2004

94. Ming Zhao, Jian Zhang, Renato Figueiredo , "Distributed File System Support for Virtual Machines in Grid Computing", Proceedings of the 13th IEEE High Performance and Distributed Computing (HPDC), June 2004 (Acceptance rate: 16%)

95. Jithendar Paladugula, Ming Zhao, Renato Figueiredo, "Support for Data-Intensive, Variable-Granularity Grid Applications via Distributed File System Virtualization – A Case Study of Light Scattering Spectroscopy", Proceedings of the 4th IEEE Workshop on Challenges of Large-Scale Applications in Distributed Environments (CLADE), June 2004 (Acceptance rate: 40%)

96. Sumalatha Adabala, Andréa Matsunaga, Maurício Tsugawa, Renato Figueiredo, José A. B. Fortes, "Single Sign-On in In-VIGO: Role-based Access via Delegation Mechanisms Using Short-lived User Identities", Proceedings of the 18th IEEE/ACM Intl. Parallel and Distributed Processing Symposium (IPDPS), April 2004 (Acceptance rate: 31%).

97. Renato J. Figueiredo, Peter A. Dinda, Jose A. B. Fortes, "A Case for Grid Computing on Virtual Machines", Proc. 23rd IEEE International Conf. on Distributed Computing Systems (ICDCS), May 2003. (Acceptance: 18%)

98. "Nanoelectronic Adaptive Systems", J. Fortes, M. Davis, J. Harris, R. Figueiredo, in GOMACtech (Government Microcircuit Applications and Critical Technology Conference), Tampa, FL, March 2003

99. Ali R. Butt, Sumalatha Adabala, Nirav H. Kapadia, Renato J. Figueiredo and José A. B. Fortes. "Fine-Grain Access Control for Securing Shared Resources in Computational Grids", Proceedings, 16th IEEE/ACM International Parallel and Distributed Processing Symposium (IPDPS), April 2002.

100. Renato J. Figueiredo, Nirav H. Kapadia and José A. B. Fortes. "Towards Coordinated Work on the Grid: Data Sharing Through Virtual File Systems", Process Coordination and Ubiquitous Computing, pp 151-160, CRC Press, Dan Marinescu and Craig Lee, Editors, 2003.

101. Renato J. Figueiredo and José A. B. Fortes. "Hardware Support for Extracting Coarse-grain Speculative Parallelism in Distributed Shared-Memory Multiprocessors", Proceedings, International Conference on Parallel Processing (ICPP), September 2001.

102. Renato J. Figueiredo, Nirav H. Kapadia and José A. B. Fortes. "The PUNCH Virtual File System: Seamless Access to Decentralized Storage Services in a Computational Grid", Proceedings, IEEE International Symposium on High Performance Distributed Computing (HPDC), August 2001. (Leading conference in distributed computing. Acceptance rate: 41%)

103. Nirav H. Kapadia, Renato J. Figueiredo and José A. B. Fortes. "Enhancing the Scalability and Usability of Computational Grids via Logical User Accounts and Virtual File Systems", Proceedings, IEEE Heterogeneous Computing Workshop (HCW) 2001.

104. Insung Park, Nirav H. Kapadia, Renato Figueiredo, Rudolf Eigenmann and José A. B. Fortes. "Towards an Integrated, Web-Executable Parallel Programming Tool Environment", Proceedings, IEEE/ACM High Performance Networking and Computing Conference (SC-2000), November 2000.

105. Renato J. Figueiredo, Jeffrey P. Bradford and José A. B. Fortes. "Improving the Performance of Heterogeneous DSMs via Multithreading", Proceedings, 4th International Meeting on Vector and Parallel Processing (VECPAR), June 2000, pp 621-632 (paper selected for publication on Lecture Notes in Computer Science Vol 1981, Springer-Verlag, 2001, pp 168-180).

106. Renato J. Figueiredo, José A. B. Fortes, Rudolf Eigenmann, Nirav H. Kapadia, Sumalatha Adabala, Jose Miguel-Alonso, Valerie Taylor, Miron Livny, Luis Vidal and Jan-Jo Chen. "A Network-Computing Infrastructure for Tool Experimentation Applied to Computer Architecture Education". Workshop on Computer Architecture Education (WCAE), June 2000. (also appears in the IEEE TCCA Newsletter, September 2000).

107. Renato J. Figueiredo and José A. B. Fortes. "Impact of Heterogeneity on DSM Performance", Proceedings of the 6th International Symposium on High-Performance Computer Architecture (HPCA), January 2000, pp 26-35 (Leading conference in computer architecture. Acceptance rate: 21%)

108. José A. B. Fortes, Nirav H. Kapadia, Rudolf Eigenmann, Renato J. Figueiredo, Valerie Taylor, Alok Choudhary, Luis Vidal and Jan-Jo Chen. "On the Integration of Computer Architecture and Parallel Programming Tools Into Computer Curricula", Proceedings of the 1999 Annual Society for Engineering Education (ASEE) Conference.
109. Renato J. Figueiredo, José A. B. Fortes and Zina Ben-Miled. "Spatial Data Locality With Respect to Degree of Parallelism in Processor-and-Memory Hierarchies", Proceedings of the 1998 VECPAR conference, also selected for publication in Lecture Notes in Computer Science Vol 1573, Springer-Verlag, 1999, pp 396-410.
110. Renato J. Figueiredo, José A. B. Fortes, Zina Ben-Miled, Valerie Taylor and Rudolf Eigenmann. "Impact of Computing-in-Memory on the Performance of Processor-and-Memory Hierarchies". Proceedings, 11th International Conference on Parallel and Distributed Computing Systems (PDCS), September 1998, pp 43-50.
111. Ivanil S. Bonatti and Renato J. Figueiredo. "Stoht: an SDL-to-Hardware Translator", Proceedings of the Asia and South Pacific Design Automation Conference (ASP-DAC), August 1995.
112. Ivanil Bonatti and Renato J. Figueiredo, "An Algorithm for the Translation of SDL to Synthesizable VHDL", Current Issues in Electronic Modeling, Vol. 3, 1995.

Publications – Technical Reports (total: 6)

1. Ninad Ghodke, Renato J. Figueiredo "Towards Virtual Remote Devices for Mobile Computing - A Case Study of a Virtual CD-ROM". Tech. Rep. TR-04-002, ACIS Laboratory, University of Florida, 08/2004
2. Renato J. Figueiredo, "VP/GFS: An Architecture for Virtual Private Grid File Systems". In TR-ACIS-03-001, ACIS Laboratory, University of Florida, 05/2003
3. Renato J. Figueiredo, Peter A. Dinda and José A. B. Fortes. "A Case for Grid Computing on Virtual Machines", TR-ACIS-02-001, ECE, University of Florida, .
4. Renato J. Figueiredo and José A. B. Fortes. "Hardware Support for Data Dependence Speculation in Distributed Shared-Memory Multiprocessors via Cache-Block Reconciliation", TR-ECE-00-6, School of ECE, Purdue University, May 2000.
5. Renato J. Figueiredo and José A. B. Fortes. "Impact of Heterogeneity on DSM Performance", TR-ECE-99-13, School of ECE, Purdue University, Oct 1999.
6. Renato J. Figueiredo, José A. B. Fortes, Zina Ben-Miled, Valerie Taylor, Rudolf Eigenmann. "Impact of Computing-in-Memory on the Performance of Processor-and-Memory Hierarchies", TR-ECE-98-1, School of ECE, Purdue University, January 1998.

Presentations (total: 74)

1. "Edge-to-cloud cyberinfrastructure for near real-time ecological forecasting in aquatic ecosystems", Association for the Society of Limnology and Oceanography (ASLO) 2022 Joint Aquatic Sciences Meeting, May 2022 (virtual)
2. "Demo: Software-defined Virtual Networking Across Multiple Edge and Cloud Providers with EdgeVPN.io", 41st IEEE International Conference on Distributed Computing Systems (ICDCS), July 2021 (virtual due to COVID)
3. "EdgeVPN.io: Seamless Software-defined Virtual Networking Across Multiple Edge and Cloud Providers", invited talk, Trends in High Performance and Distributed Computing Workshop, March 2021 (virtual due to COVID)
4. "EdgeVPN.io: Software-Defined Overlay Virtual Private Networks for Edge Computing", PRAGMA Invited Seminar, May 2021 (virtual due to COVID)

5. "EdgeVPN.io: Software-Defined Overlay Virtual Private Networks for Edge Computing", AIST/Japan Invited Seminar, July 2021 (virtual due to COVID)
6. "EdgeVPN.io: Software-Defined Overlay Virtual Private Networks for Edge Computing", CENTRA Webinar, Dec. 2020
7. "Demo: EdgeVPN.io: Open-source Virtual Private Network for Seamless Edge Computing with Kubernetes", The Fifth ACM/IEEE Symposium on Edge Computing, Nov. 2020
8. "PRAGMA perspective on AI, Data Cyberinfrastructure, and Training", panel presentation, PRAGMA-37, San Diego, CA, Sept. 2019
9. "Dynamically Aggregating Smart Community Sensors, Edge and Cloud Resources with Overlay VPNs", CENTRA-4, Jeju, South Korea, May 2019
10. "End-to-end ecological forecasting: Cyber-infrastructure challenges and frontiers from sensors to clouds", Annual Meeting for the Ecological Society of America, Louisville, KY, Aug 2019
11. "On Lakes and Clouds: A Retrospective on the PRAGMA/GLEON Lake Expedition" keynote at PRAGMA-35, Penang, Malaysia, October 2018
12. "Interconnecting the Edge with Software-defined Overlay Virtual Private Networks" keynote at IDCS-2018, Tokyo, Japan, October 2018
13. "GRAPLEr: An R-accessible Web Service for Lake Modeling", Lake Modeling Workshop. Griffith University, Brisbane, Australia, Oct. 2017
14. "Prevention and Detection of Disallowed Connections in Mobile and Pervasive Systems", Harris Corp., Melbourne, FL, Aug 2015.
15. "Kangaroo: A Tenant-Centric Software-Defined Cloud Infrastructure", IEEE International Conference on Cloud Engineering (IC2E), Tempe, AZ, March 2015.
16. "Forecast – cloudy and foggy", Paneliist, 2nd IEEE Workshop on Cloud Analytics, Tempe, AZ, March 2015.
17. "MALMOS: Machine Learning-based Mobile Offloading Scheduler with Online Training", IEEE MobileCloud, San Francisco, CA, April 2015.
18. "Seamless Networking Among Edge Devices and Clouds with Fog Social Virtual Networks", Sensors to Cloud Architectures Workshop (SCAW), San Francisco, CA, Feb. 2015.
19. "GLEON-PRAGMA Science Expedition", GLEON-16, Orford, Canada, October 2014
20. "Seamless Aggregation of Computing Resources for Lake Modeling with Overlay Virtual Networks", PRAGMA-26, Tainan, Taiwan, April 2014
21. "Interposed Scheduling for Performance Management in Parallel File Systems", Workshop on Recent Advances in High-Performance Parallel and Distributed Computing, Evanston, IL, March 2014
22. "IP-over-P2P Virtual Private Networks and Applications", VMWare Academic Program Guest Speaker, Palo Alto, CA, August 2014
23. "Virtual Networking in ConPaaS", invited talk, 1st ConPaaS Workshop, Amsterdam, the Netherlands, June 2013
24. "Self-organizing Virtual Private Networks and Applications', invited talk, University of Amsterdam, May 2013, Amsterdam, the Netherlands
25. "Panel on Clouds", Invited panel presentation, IEEE/ACM Intl. Symposium on Cluster, Cloud and Grid Computing, May 2013, Delft, the Netherlands
26. "Self-organizing Virtual Private Networks and Applications', invited keynote speech, DAS Workshop, Feb. 2013, Delft, the Netherlands
27. "Self-organizing Virtual Private Networks and Applications", Invited Keynote Presentation, Grid'5000 Summer School, Nantes, France, December 2012

28. "SNARF: a social networking-inspired accelerator remoting framework", Technical Presentation, Proceedings of the first edition of the MCC workshop on Mobile cloud computing, Helsinki, Finland, August 2012.
29. "Network Virtualization for Cloud Computing", Invited Keynote Presentation, Contrail Summer School on Cloud Computing Systems and Applications, Almere, the Netherlands, July 2012
30. "The Value of HPDC", Invited Panel Presentation, HPDC 2012, Delft, the Netherlands, June 2012
31. "Self-organizing Virtual Private Networks and Applications", Invited Technical Seminar, Vrije Universiteit, the Netherlands, October 2012
32. "Self-organizing Virtual Private Networks and Applications", Invited Technical Seminar, TU Delft, the Netherlands, September 2012
33. "Self-configuring Wide-area Virtual Networks and Applications: SocialVPN and Grid Appliances", poster, NSF/NSFC China/US Software Workshop, Beijing, China, September 2011
34. "Educational Virtual Clusters for On-demand MPI/Hadoop/Condor in Future Grid", presentation, TeraGrid Conference, Salt Lake City, UT, July 2011.
35. "An Introduction to the TG Track 2D Systems: FutureGrid, Gordon, & Keeneland", presentation during a tutorial,, TeraGrid Conference, Salt Lake City, UT, July 2011.
36. "On the Performance of Tagged Translation Lookaside Buffers: A Simulation-Driven Analysis", Paper presented at 19th International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), Singapore, July 2011..
37. "Virtual Appliances for Training and Education in FutureGrid", TeraGrid Conference, Aug. 2010.
38. "Cloud versus Cloud: how will cloud computing shape our world?", Panelist, IEEE International Symposium on High Performance Distributed Computing (HPDC), June 2010.
39. "Archer: Deploying Zero-configuration Virtual Appliances for Architecture Simulation", Tutorial at IEEE Micro Conference, Dec. 2009.
40. "On the Design of Scalable, Self-Configuring Virtual Networks", IEEE/ACM SuperComputing Conference, Nov. 2009.
41. "Self-configuring VPNs: Enabling Cloud Applications to Span Across Multiple IaaS Providers", invited talk, Workshop on Designing for the Clouds (with OOPSLA-09), Orlando, FL, Oct 2009.
42. "Self-configuring P2P Virtual Networks and Applications in Cloud Computing and Social VPNs", Distinguished speaker invited talk, Florida International University, Miami, FL, Sept. 2009.
43. "Green Clouds: Power Consumption as a First Order Criterion?", Panel moderator's introduction, IEEE International Conference on Autonomic Computing, Barcelona, Spain, June 2009.
44. "Self-configuring Virtual Networks and Applications in High-throughput Computing", invited talk, HPDC Program Committee Workshop, Munich, Germany, March 2009.
45. "Archer: A Community Distributed Computing Infrastructure for Computer Architecture Research and Education", invited talk, The 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom), Orlando, FL, Nov 2008.
46. "Self-organizing Virtual Networks for Zero-configuration Virtual Machine Clusters and Social VPNs", invited talk, IBM Corporation, White Plains, NY, Oct. 2008.
47. "Self-organizing Virtual Networks for Zero-configuration Virtual Machine Clusters and Social VPNs", invited talk, Intel Corporation, Portland, OR, Oct. 2008.
48. "Facilitating the Deployment of Ad-hoc Virtual Organizations with Integrated Social and Overlay Networks", Hot Topics session, Intl. Symp. on High Performance Distributed Computing (HPDC), Boston, MA, June 2008.

49. "Provisioning of Virtual Environments for Wide Area Desktop Grids through Redirect-on-write Distributed File System", 2nd PCGrid Workshop, with IPDPS, Miami, FL, April 2008.
50. Invited talk, "Wide-area Overlays of Virtual Workstations (WOW): Simplifying Deployment of Distributed Systems Through Virtualization and Self-organization", Louisiana State University, Dec. 2007.
51. Invited talk, "Analysis of I/O performance and application phase behavior in virtualized platforms", Second Intel Virtualization Summit, Portland, OR, Nov. 2007
52. Panel presentation, "Challenges and strategies for successfully applying CI", NSF CI-TEAM Workshop, Washington, DC, July 2007.
53. Tutorial, "Using nanoHUB.org as a Science Gateway", TeraGrid 2007, Madison, WI, June 2007.
54. Invited talk, "Self-configuring Condor Virtual Machine Appliances for Ad-Hoc Grids", Condor Week, Madison, WI, April 2007.
55. Invited talk, "Decentralized Dynamic Host Configuration in Wide-Area Overlays of Virtual Workstations", First Workshop on Large-Scale and Volatile Desktop Grids, Long Beach, CA, March 2007.
56. Invited talk, "Grid Virtual Appliances for Self-Configuring High-Throughput Computing", Workshop on High Performance Distributed Computing, Chicago, IL, March 2007.
57. Invited talk, "Towards autonomics and networking in virtualized data centers", presented at Intel Innovation Center, Folsom, CA, Nov. 7th 2006
58. "In-VIGO: Making the nanoHUB Virtually Yours", Online seminar, CI-Channel, June 6th 2006.
59. Invited talk, "Self-configuring IP-over-P2P Overlays: Interconnecting Virtual Machines for Wide-area Computing", Trends in High-Performance Distributed Computing Workshop, Vrije University, March 2006.
60. "Using Resource Virtualization Techniques to Grid-Enable Coupled Coastal Ocean Models", SURA Grid Application Planning Workshop, Atlanta, GA, January 2005.
61. "On the Implications of Machine Virtualization for DRM and Fair Use: A Case Study of a Virtual Audio Device Driver", ACM Digital Rights Management Workshop, Washington, DC, October 2004
62. "A Case for Grid Computing on Virtual Machines", International Conference on Distributed Computing Systems (ICDCS), Providence, RI, May 2003.
63. "Resource and Data Management for Virtualized End-resources in Computational Grids", NSF NMI PI workshop, Chicago, IL, July 2002
64. "Memory-centric Architectures", INAC/nCn PI kickoff meeting, West Lafayette, IN, Feb. 2003
65. "Towards Coordinated Work on the Grid: Data Sharing Through Virtual File Systems", Mini-Workshop on Internet Process Coordination and Ubiquitous Computing, Orlando, FL, Dec 2001.
66. "Hardware Support for Extracting Coarse-grain Speculative Parallelism in Distributed Shared-Memory Multiprocessors", ICPP-2001, Valencia, Spain, September 2001.
67. "The PUNCH Virtual File System: Seamless Access to Decentralized Storage Services in a Computational Grid", HPDC-2001, San Francisco, CA, August 2001.
68. "Virtual Machines and PUNCH", invited talk, VMware, Inc, Palo Alto, CA, August 2001.
69. Exhibitor, PUNCH research exhibit booth, SC2000, Dallas, TX, November 2000.
70. "NETCARE: A Network Computing Infrastructure for Tool Experimentation Applied to Computer Architecture Education", WCAE-2000 (held in conjunction with 27th ISCA), Vancouver, Canada, June 2000.
71. "Improving the Performance of Heterogeneous DSMs via Multithreading", 4th VECPAR, Porto, Portugal, June 2000.
72. "A File-System for PUNCH", invited talk, Center for Information Technology Integration (CITI), University of Michigan, Ann Arbor, MI, June 2000.
73. "Impact of Heterogeneity on DSM Performance", 6th HPCA, Toulouse, France, January 2000.

74. "Impact of Computing-in-Memory on the Performance of Processor-and-Memory Hierarchies", 11th PDCS, Chicago, IL, September 1998.

Teaching – Undergraduate Classes (total: 13)

1. Instructor, EEL-4736, Principles of Computer Systems Design – University of Florida, Fall 2022 (enrollment: 17; overall instructor evaluation: 4.81/5.0)
2. Instructor, EEL-4736, Principles of Computer Systems Design – University of Florida, Fall 2021 (enrollment: 12; overall instructor evaluation: 4.93/5.0)
3. Instructor, EEL-4736, Principles of Computer Systems Design – University of Florida, Fall 2020 (enrollment: 5; overall instructor evaluation: 4.58/5.0)
4. Instructor, EEL-4736, Principles of Computer Systems Design – University of Florida, Fall 2019 (enrollment: 15; overall instructor evaluation: 4.11/5.0)
5. Instructor, EEL-4736, Principles of Computer Systems Design – University of Florida, Fall 2018 (enrollment: 10; overall instructor evaluation: 4.43/5.0)
6. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2010 (enrollment: 12; overall instructor evaluation: 4.29/5.0).
7. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2009 (enrollment: 11; overall instructor evaluation: 4.14/5.0).
8. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2008 (enrollment: 10; overall instructor evaluation: 4.29/5.0).
9. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2007 (enrollment: 16; overall instructor evaluation: 4.00/5.0).
10. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2006 (enrollment: 15; overall instructor evaluation: 4.13/5.0).
11. Instructor, EEL-4713C, Computer Architecture – University of Florida, Spring 2005 (enrollment: 19; overall instructor evaluation: 4.33/5.0)
12. Instructor, ECE-361, Computer Architecture-I – Northwestern University, Winter 2002 (undergraduate; enrollment: 13; student evaluation: 5.0/6.0)
13. Instructor, ECE-203, Introduction to Logic Design – Northwestern Univ., Fall 2001 (undergraduate; enrollment: 58; student evaluation: 5.2/6.0)

Teaching – Graduate Classes (total: 34)

1. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2023 (enrollment: 22; overall instructor evaluation: 4.78/5.0)
2. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2022 (enrollment: 50; overall instructor evaluation: 4.39/5.0)
3. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2022 (enrollment: 14; overall instructor evaluation: 4.90/5.0)
4. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2021 (enrollment: 36; overall instructor evaluation: 4.71/5.0)
5. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2021 (enrollment: 9; overall instructor evaluation: 5.0/5.0)
6. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2020 (enrollment: 22; overall instructor evaluation: 4.74/5.0)

7. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2020 (enrollment: 12; overall instructor evaluation: 4.68/5.0)
8. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2019 (enrollment: 29; overall instructor evaluation: 4.29/5.0)
9. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2019 (enrollment: 12; overall instructor evaluation: 4.56/5.0)
10. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2018 (enrollment: 32; overall instructor evaluation: 4.67/5.0)
11. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2018 (enrollment: 16; overall instructor evaluation: 4.79/5.0)
12. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2017 (enrollment: 44; overall instructor evaluation: 4.5/5.0)
13. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2017 (enrollment: 15; overall instructor evaluation: 4.6/5.0)
14. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2016 (enrollment: 54; overall instructor evaluation: 4.5/5.0)
15. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2016 (enrollment: 24; overall instructor evaluation: 4.7/5.0)
16. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2015 (enrollment: 91; overall instructor evaluation: 4.4/5.0)
17. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2015 (enrollment: 23; overall instructor evaluation: 4.5/5.0)
18. Instructor, EEL-5737, Principles of Computer Systems Design – University of Florida, Fall 2014 (enrollment: 42; overall instructor evaluation: 4.5/5.0)
19. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2014 (enrollment: 26; overall instructor evaluation: 4.4/5.0)
20. Instructor, EEL-5934, Principles of Computer Systems Design – University of Florida, Fall 2013 (enrollment: 35; overall instructor evaluation: 4.2/5.0)
21. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2012 (enrollment: 31; overall instructor evaluation: 4.6/5.0)
22. Instructor, EEL-5934, Principles of Computer Systems Design – University of Florida, Fall 2011 (enrollment: 34; overall instructor evaluation: 4.64/5.0)
23. Instructor, EEL-6892, Virtual Computers – University of Florida, Spring 2011 (enrollment: 51; overall instructor evaluation: 4.32/5.0)
24. Instructor, EEL-5934, Principles of Computer Systems Design – University of Florida, Fall 2010 (enrollment: 36; overall instructor evaluation: 3.96/5.0)
25. Instructor, EEL-6892, Virtual Computers – University of Florida, Fall 2009 (enrollment: 42; overall instructor evaluation: 3.96/5.0)
26. Instructor, EEL-6892, Virtual Computers – University of Florida, Fall 2008 (enrollment: 38; overall instructor evaluation: 4.11/5.0)
27. Instructor, EEL-6892, Virtual Computers – University of Florida, Fall 2007 (enrollment: 21; overall instructor evaluation: 4.71/5.0)
28. Instructor, EEL-6892, Virtual Computers – University of Florida, Fall 2006 (enrollment: 19; overall instructor evaluation: 4.25/5.0)

29. Instructor, EEL-6892, Virtual Computers – University of Florida, Fall 2005 (enrollment: 9; overall instructor evaluation: 4.89/5.0)
30. Instructor, EEL-6935, Virtual Computers – University of Florida, Fall 2004 (enrollment: 6; overall instructor evaluation: 5.0/5.0)
31. Instructor, EEL-6935, Virtual Computers – University of Florida, Spring 2004 (enrollment: 20; overall instructor evaluation: 4.27/5.0)
32. Instructor, EEL-5764, Computer Architecture – University of Florida, Fall 2003 (enrollment: 37; overall instructor evaluation: 4.27/5.0)
33. Instructor, EEL-6935, Virtual Computers – University of Florida, Spring 2003 (enrollment: 20; overall instructor evaluation: 4.65/5.0)
34. Instructor, EEL-5764, Computer Architecture – University of Florida, Fall 2002 (enrollment: 38; overall instructor evaluation: 4.03/5.0)
35. Instructor, ECE-453, Advanced Computer Architecture – Northwestern University, Spring 2002 (graduate; enrollment: 7)

Graduated Ph.D. Students (total: 14)

1. Saumitra Aditya (2020). First position: software engineer, Akamai
2. Kensworth Subratie (2019). First position: post-doctoral associate, University of Florida
3. Kyuho Jeong (2017). First position: software engineer, Google
4. Heungsik Eom (2015). First position: Hyundai
5. Kyungyong Lee (2014). First position: systems software development engineer, Amazon Web Services
6. Pierre St. Juste (2014). First position: visiting assistant professor, Miami University
7. Yonggang Liu (2014). First position: software engineer, Google
8. Girish Venkatasubramanian (2011). First position: engineer at Intel Corp.
9. David Wolinsky (2011). First position: post-doctoral associate at Yale University.
10. Vineet Chadha (2008). First position: engineer at Intel Corp.
11. Arijit Ganguly (2008). First position: engineer at Amazon Web Services
12. Ming Zhao (2008). First position: Assistant Professor at Florida International University
13. Casey Jeffery (2009). First position: engineer at Intel Corp.
14. Jian Zhang (2007). First position: engineer at Microsoft Corp.

Service - Editorial

1. Associate Editor, IEEE Transactions on Computers, 2010-2014
2. Associate Editor, Cluster Computing Journal, 2009-2013.
3. IEEE Computer, Guest Editor, Special Issue on Virtualization, May 2005.

Service – Conference and Workshop Organization

Technical Program chair/co-chair (total: 6)

1. Program Chair, PRAGMA-32 Workshop, Gainesville, FL, April 2017
2. Program Co-chair, SHAW 2014, 5th Workshop on SoCs, Heterogeneous Architectures and Workloads
3. Program Co-chair, HPDC 2013, 22nd ACM International Symposium on High Performance Parallel and Distributed Computing
4. Program Co-chair, ICAC 2010, 7th International Conference on Autonomic Computing

5. Program Chair, VTDC-2009, Third International Virtualization Technologies in Distributed Computing Workshop
6. Program Co-chair, The Seventh International Workshop on System Management Techniques, Processes, and Services (SMTPS), 2012

General Chair (total: 2)

1. General Chair, PRAGMA-32 Workshop, Gainesville, FL, April 2017
2. General Chair, Workshop on Virtualization Technologies in Distributed Computing (VTDC), 2010

Technical Program Committee Member (total: 85 conferences/workshops)

1. Member, Technical Program Committee, IEEE International Conference on Cloud Computing (CLOUD 2023)
2. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2023)
3. Member, Technical Program Committee, International Conference on Distributed Computing Systems (ICDCS 2023)
4. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2022)
5. Member, Technical Program Committee, International Conference on Distributed Computing Systems (ICDCS 2022)
6. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2021)
7. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2020)
8. Member, Technical Program Committee, International Conference on Distributed Computing Systems (ICDCS 2020)
9. Member, Member, Technical Program Committee, International Conference on Distributed Computing Systems (Cloudcom 2020)
10. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2019)
11. Member, Technical Program Committee, International Conference on Cluster, Cloud Computing and the Grid (CCGrid), 2019
12. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2018)
13. Member, Technical Program Committee, IEEE International Conference on Cloud Computing Technology and Science (CloudCom'2018)
14. Member, Technical Program Committee, 1st IEEE International Conference on Fog and Edge Computing (ICFEC 2017)
15. Member, Technical Program Committee, IEEE International Conference on Cloud Computing Technology and Science (CloudCom'2017)
16. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2017)
17. Member, Technical Program Committee, International Conference on Distributed Computing Systems (ICDCS 2017)

18. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2016)
19. Member, Technical Program Committee, International Conference on Distributed Computing Systems (ICDCS 2016)
20. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2015)
21. Technical Program Committee, Cluster-2015, IEEE International Conference on Cluster Computing
22. Member, Technical Program Committee, Virtualization Technologies in Distributed Computing Workshop (VTDC'2015)
23. Member, Technical Program Committee, International Workshop on Quality of Service Assurance in the Cloud, 2015
24. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2014)
25. Member, Technical Program Committee, International Conference on Autonomic Computing (ICAC'2014)
26. Member, Technical Program Committee, International Conference on Cluster, Cloud Computing and the Grid (CCGrid), 2014
27. Member, Technical Program Committee, International Workshop on Software-Defined Ecosystem (BigSystems), with HPDC'14
28. Member, Technical Program Committee, Workshop on Parallel and Distributed Computing for Big Data Applications - WPBA 2014
29. Member, Technical Program Committee, NDM 2014 : Network-aware Data Management Workshop
30. Member, Technical Program Committee, International Conference on Cluster, Cloud Computing and the Grid (CCGrid), 2013
31. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2012)
32. Member, Technical Program Committee, International Conference on Cluster, Cloud Computing and the Grid (CCGrid), 2012
33. Member, Technical Program Committee, 1st International Workshop on Cloud Computing Platforms (CLOUDCP 2012)
34. Member, Technical Program Committee, International Conference on Autonomic Computing (ICAC'2012)
35. Member, Technical Program Committee, ASE International Conference on Social Computing (SocialCom'2012)
36. Member, Technical Program Committee, International Conference on Computer Communication Networks (ICCCN'2012)
37. Member, Technical Program Committee, International Workshop on Data Intensive Computing in the Clouds (DataCloud'2012)
38. Member, Technical Program Committee, Virtualization Technologies in Distributed Computing Workshop (VTDC'2012)
39. Member, Technical Program Committee, Extreme Science and Engineering Discovery Environment Conference (XSEDE'2012)
40. Member, Technical Program Committee, International Symposium on High Performance Parallel and Distributed Computing (HPDC 2011)

41. Member, Technical Program Committee, The Seventh International Workshop on System Management Techniques, Processes, and Services (SMTPS), 2011
42. Member, Technical Program Committee, International Conference on Cluster Computing and the Grid (CCGrid), 2011
43. Member, Technical Program Committee, 1st International Workshop on Cloud Computing Platforms (CLOUDCP 2011)
44. Member, Technical Program Committee, The Seventh International Conference on Collaborative Computing, 2010
45. Member, Technical Program Committee, The Sixth International Workshop on System Management Techniques, Processes, and Services (SMTPS), 2010, 2012
46. Member, Technical Program Committee, International Conference on Cluster Computing and the Grid (CCGrid), 2010, 2011, 2012, 2013
47. Member, Technical Program Committee, 2nd International ICST Conference on Cloud Computing (CloudComp), 2010
48. Technical Program Committee, SBAC-PAD 2009, 21st International Symposium on Computer Architecture and High Performance Computing.
49. Technical Program Committee, Cluster-2009, IEEE International Conference on Cluster Computing
50. Technical Program Committee, ACDC 2009, Automatic Control in Data Centers Workshop
51. Technical Program Committee, VPACT 2009, Virtualization Performance Analysis, Characterization and Tools Workshop
52. Technical Program Committee, MMCS 2009, Workshop on Managed Multi-core Systems
53. Technical Program Committee, CCGrid 2009, International Conference on Cluster Computing and the Grid.
54. Technical Program Committee, ICAC-2009, International Conference on Autonomic Computing
55. Session Chair, ICAC 2009 Panel Session
56. Technical Program Committee, HPDC-2009, The 18th IEEE International Symposium on High Performance Distributed Computing
57. Technical Program Committee, SMTPS 2009, 5th International Workshop on System Management Technologies, Processes, and Services
58. Technical Program Committee, PCGrid 2009, Workshop on Large-Scale and Volatile Desktop Grids
59. Technical Program Committee, MMCS 2008, Workshop on Managed Multi-core Systems
60. Panelist, Workshop on Managed Multi-core Systems (MMCS), 2008
61. Technical Program Committee, CollaborateCom 2008, 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing
62. Session Chair, CollaborateCom 2008, 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing
63. Technical Program Committee, VECPAR-2008, Eighth International Meeting on High Performance Computing for Computational Science
64. Technical Program Committee, Virtualization Performance Analysis, Characterization and Tools Workshop, 2008
65. Technical Program Committee, Workshop on Large-Scale and Volatile Desktop Grids (PCGrid 2008)
66. Technical Program Committee, IEEE Cluster 2008
67. Technical Program Committee, IEEE/ACM Supercomputing 2008
68. Technical Program Committee, HPDC-2008, The 17th IEEE International Symposium on High Performance Distributed Computing

69. Workshops Chair, HPDC-2008, The 17th IEEE International Symposium on High Performance Distributed Computing
70. Session Chair, HPDC-2008, The 17th IEEE International Symposium on High Performance Distributed Computing
71. Technical Program Committeee, Workshop on the Interaction between Operating Systems and Computer Architecture (WIOSCA 2007).
72. Technical Program Committee, VTDC-2007, Second International Virtualization Technologies in Distributed Computing Workshop
73. Technical Program Committeee, IFIP International Conference on Network and Parallel Computing (NPC 2007)
74. Local Arrangements Chair, ICAC-2007, IEEE International Conference on Autonomic Computing
75. Technical Program Committee, Workshop on Large-Scale and Volatile Desktop Grids (PCGrid 2007)
76. Technical Program Committee, HCW-2007, The 16th Heterogeneous Computing Workshop.
77. Technical Program Committee, HPDC-2007, The 16th IEEE International Symposium on High Performance Distributed Computing.
78. Session Chair, VTDC-2006, First International Virtualization Technologies in Distributed Computing Workshop.
79. Technical Program Committee, VTDC-2006, First International Virtualization Technologies in Distributed Computing Workshop.
80. Technical Program Committee, GCC-2006, Fifth International Conference on Grid and Cooperative Computing.
81. Technical Program Committee, VECPAR-2006, Seventh International Meeting on High Performance Computing for Computational Science.
82. Technical Program Committee, HPDC-2006, The 15th IEEE International Symposium on High Performance Distributed Computing.
83. Technical Program Committee, HCW-2006, The 15th Heterogeneous Computing Workshop.
84. Program Committee, International Parallel and Distributed Processing Symposium (2003)
85. Participant, steering committee of the ACM/Sigmicro online resources

Service – Journal Reviews and Non-TPC Conference Reviews

1. IEEE Transactions on Cloud Computing (2019)
2. IEEE Transactions on Computers (1999, 2001, 2006, 2008, 2012, 2014).
3. IEEE Transactions on Parallel and Distributed Systems (2003, 2004, 2007, 2008, 2014, 2018)
4. Journal of the Brazilian Computer Society (2010)
5. Mobile Networks and Applications Journal (2010)
6. Computer Networks Journal (2010)
7. Future Generation Computer Systems (2010)
8. Journal of Parallel and Distributed Computing (2006)
9. Journal of Grid Computing (2006, 2009, 2010)
10. ACM Journal of Emerging Technologies in Computing (2005).
11. International Journal of Parallel Programming (2000)
12. International Conference on Supercomputing (1999)
13. International Conference on Parallel Computing (2001)
14. Cluster Computing Journal (2002)
15. International Parallel and Distributed Processing Symposium (2001, 2002, 2005, 2006)

16. Supercomputing Conference (2003)
17. Europar (2004, 2009)

Service – Panels and Task Forces

1. Co-Chair, NSF Task Force on Cyberlearning and Workforce Development (2010)
2. Panelist, research proposal reviews, DOE (2015, 2022)
3. Panelist, research proposal reviews, NSF (2003, 2005, 2009, 2010, 2014, 2017, 2022)
4. Research proposal reviewer, Qatar National Research Fund (2010, 2011, 2012)
5. Research proposal reviewer, Estonian science foundation (2009, 2010)
6. Research proposal reviewer, NSERC, Canada (2017)
7. Research proposal reviewer, Foundation for Science and Technology (FCT, Portugal), 2003, 2004
8. Panelist, NSF Graduate Research Fellowship, March 2003

Service – Steering Committees

1. Steering Committee Member, iDigBio (Integrated Bio-collections), 2015-2023
2. Steering Committee Member, Biodiversity RCN, 2018-2023
3. Steering Committee Member, PRAGMA (Pacific Rim Applications and Grid Middleware Assembly), 2017-2023
4. Steering Committee Member, NSF Grassroots Networks Macroscale Biology RCN, 2018-2020

Service – University of Florida

1. Faculty Honors and Awards Committee Chair (2017-2020), ECE, University of Florida
2. Faculty Honors and Awards Committee Chair (2019-2020), College of Engineering, University of Florida
3. Computer Engineering Division chair (2009-2012), ECE, University of Florida
4. Chair, Intel Search Committee (2011, 2012), ECE, University of Florida
5. Member of the following committees at the University of Florida:
   a. College of Engineering Honors and Awards (2017-2019)
   b. IT Security and Compliance Advisory Committee (2011-2012)
   c. Faculty Search Committee (Spring'05, Spring'10, Fall'13, Spring'22)
   d. Computer Engineering Search Comiittee (Fall'04)
   e. Curriculum Committee (Fall'03)
   f. Graduate Aid Committee (Spring'04, Fall'05, Spring'06, Spring'07, Spring'08, Fall'13)
   g. Ph.D. Exam Committee (2005-2010)
   h. ECE Curriculum Committee (2015, 2016, 2017, 2018)
   i. ECE Honors and Awards Committee (2016, 2021, 2022)

Professional Societies

1. Senior Member, Institute of Electrical and Electronics Engineers
2. Member, Association for Computing Machinery (S.I.G. in Computer Architecture)