

Jean Gourd

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Brief Biography

Dr. Gourd is Program Chair of Computer Science and Associate Professor of Computer Science and Cyber Engineering at Louisiana Tech University. His research interests are in the areas of cyber security (including cyber security education) and project-based learning. He is involved in numerous research projects with various government and industry partners. His current topics of interest include:

- Cyber security education through competitions and hands-on, project driven activities
- Modular and scalable cyber security activities and challenges

Dr. Gourd has varied personal interests that include tinkering with electronics, French pastry and artisan bread baking, homebrewing a variety of styles of beer (IPAs and Belgian sour beers being the current favorites), woodworking, performing magic tricks and illusions, reading novels and fascinating non-fiction (current favorite authors are Robert Ludlum and Richard Feynman), playing the guitar, sampling wines from around the world with a focus on those from the Bordeaux, Burgundy, and Rhone regions of France, and indulging in the occasional cigar (current favorites include Romeo y Julieta, Montecristo, Ashton, and El Rey de Mundo).

Originally born in Montreal, Canada, he emigrated to the U.S. in 1983 and became a naturalized U.S. citizen in 2005.

Education

- 2007: Ph.D., Computational Science, University of Southern Mississippi, Hattiesburg, MS, Thesis: *API-S Calculus: Formal Modeling for Secure Mobile Intelligent Agent Systems*
- 2004, B.S., Computer Science (*Summa Cum Laude*), University of Southern Mississippi, Hattiesburg, MS, Thesis: *Smart Server: Concepts and Applications*
- 1995: A.A., Business Administration and Management, Santa Fe Community College, Gainesville, FL

Academic Experience

- 2014–present: Associate Professor, Computer Science and Cyber Engineering, Louisiana Tech University, Ruston, LA
- 2013–present: Program Chair, Computer Science, Louisiana Tech University, Ruston, LA
- 2012–2014: Assistant Professor, Computer Science and Cyber Engineering, Louisiana Tech University, Ruston, LA
- 2012–2013: Interim Program Chair, Cyber Engineering, Louisiana Tech University, Ruston, LA
- 2008–2012: Assistant Professor, Computer Science, Louisiana Tech University, Ruston, LA
- 2008–present: Member, Center for Secure Cyberspace, Louisiana Tech University, Ruston, LA
- 2007–2008: Visiting Assistant Professor, Computer Science, University of Southern Mississippi, Hattiesburg, MS
- 2004–2007: Research Assistant, Database Research Lab for Intelligent Agents, University of Southern Mississippi, Hattiesburg, MS
- 2004–2007: Research Assistant, Computational Research Facility for Defense Data Integration, University of Southern Mississippi, Hattiesburg, MS
- 2002–2004: Teaching Assistant, Computer Science, University of Southern Mississippi, Hattiesburg, MS

Courses taught

- The Science of Computing
- Introduction to Cyber Security
- Computer Network Security
- Reverse Engineering (software)
- Access Control Logic and Covert Channels
- Artificial Intelligence
- Compiler Design
- Systems Programming
- Data Structures
- Advanced Data Structures and Algorithms

- Computer Programming with Android
- Theory of Programming Languages
- Object Oriented Programming
- Overview of Computer Science
- Introduction to Computer Programming
- Intermediate Computer Programming
- Software Design and Engineering
- Programming Languages
- Senior Capstone
- Foundations of Software Development
- Programming and Software Development
- Computer Architecture
- Advanced Computer Architecture
- Embedded Microcomputer Design

Invited talks

- 04/2017: *Cyberspace*, Louisiana Tech University Engineering and Science Day (Keynote), Ruston, LA
- 11/2013: *Cyber Storm: The Culmination of an Undergraduate Cyber Security Course*, BSideJackson 2013 Cyber Security Conference, Jackson, MS
- 11/2012: *Cyber Storm: The Culmination of an Undergraduate Course in Cyber Security*, Shaping the Future of Cybersecurity Education Workshop, Gaithersburg, MD
- 11/2011: *A Competitive Approach to Raising Future Cyber Citizens*, Cyber Engineering Research Conference, Shreveport, LA
- 08/2011: *Cyber Storm*, FBI Infragard, Baton Rouge, LA
- 12/2010: *Cyberspace?*, Ruston Kiwanis, Ruston, LA
- 10/2010: *On the State of Cyber Security*, Northwestern State University, Natchitoches, LA
- 04/2010: *On Raising Awareness of and Addressing Cyber Security Issues*, Seminar in Computational Sciences, University of Southern Mississippi, Hattiesburg, MS
- 03/2010: *In Preparation for the Ostensible “Cyber Storm”*, Cyber Innovation Center Member Luncheon, Shreveport, LA

- 01/2009: *API-S Calculus: Formal Modeling for Secure Mobile Intelligent Agent Systems*, Center for Secure Cyberspace, Louisiana Tech University, Ruston, LA
- 11/2008: *Cyber Security: Is it Attainable?*, Seminar in Computational Sciences, University of Southern Mississippi, Hattiesburg, MS
- 09/2008: *Mobile Intelligent Agents: A Primer*, Center for Secure Cyberspace, Louisiana Tech University, Ruston, LA
- 02/2007: *Towards the Modeling and Analysis of the Security of Mobile Intelligent Agents*, Seminar in Computational Sciences, University of Southern Mississippi, Hattiesburg, MS
- 02/2007: *Intelligent Machines: On Motivating Soft Computing Concepts*, Seminar in Computational Sciences, University of Southern Mississippi, Hattiesburg, MS
- 01/2007: *Intelligent Machines: Magic or Trick?* The Mississippi Space Grant Consortium Teacher Conference, School of Computing, University of Southern Mississippi, Hattiesburg, MS

Research

Funded grants

- 09/2016–08/2017: “High School A.P. Computer Science Curriculum (extension of grant),” Cyber Innovation Center, \$32,130; PI
- 09/2015–08/2016: “High School A.P. Computer Science Curriculum (extension of grant),” Cyber Innovation Center, \$151,692; PI
- 02/2015–08/2015: “High School A.P. Computer Science Curriculum,” Cyber Innovation Center, \$37,443; PI
- 04/2014–09/2014: “Research-Intensive Internship in Cyber Engineering,” CIC, \$240,000; Co-PI
- 11/2013–12/2014: “NCWIT Extension Services Mini-Grant,” NSF, \$8,000; Co-PI
- 09/2013–09/2018: “Extraction of Social Context via Synthetic Pollination for Information Tracking and Control,” AFRL, \$175,000; PI
- 11/2012–11/2013: “A Cryptologic Method for Preventing Unauthorized Outbound Network Traffic via Authenticating Network Devices,” AFRL, \$75,000; PI
- 12/2011: “Computer Networking Lab with Cisco Routers and Switches,” Louisiana Tech CoES Lab Fee Team, \$20,000; PI
- 12/2011: “Android-based Cell Phones for Introductory CS and Cyber Engineering,” Louisiana Tech CoES Lab Fee Team, \$7,500; PI
- 12/2011: “cyber_{LAB}: Applied Cyber Security, Digital Forensics and Networking Lab,” Louisiana Tech Student Technology Fee Board, \$80,000; PI

- 06/2010–06/2014: “Genetically Engineered Tamper-Resistant Intelligent Agents,” Air Force Office of Scientific Research, \$48,607; PI
- 06/2010–06/2014: “FPGA-Based Net Framework with Embedded Agents as Cyber Attack Detectors,” Air Force Office of Scientific Research, \$64,030; PI
- 06/2010–06/2014: “LA Tech Proposal for the Cybersecurity Research Program at the Cyberspace Research Laboratory,” Air Force Office of Scientific Research, \$1,189,458; Co-PI
- 06/2009: “Cyberspace Research Laboratory,” Air Force Office of Scientific Research, \$2,840,000; *Note: participated in proposal preparation in a non-PI capacity*
- 04/2009: “DINER: Distributed Information Discovery Laboratory,” Louisiana Board of Regents, \$50,156; Co-PI
- 01/2005–05/2009: “Data Conflation and Integration with Intelligent Agents Support,” US Army Space Missile Defense Command, \$140,000; Co-PI

Other proposals

- 01/2018–12/2022: “SFS@LaTech: Cyber Engineers for our Future,” NSF, \$2,816,112; Co-PI
- 09/2016–08/2017: “Scalable Cyber Security Challenges for STEM Education,” CIC, \$96,400; PI
- 08/2016–08/2018: “U-Discovery – Computing Across the Curriculum,” NSF, \$1,249,422; Co-PI
- 01/2015: “Louisiana Tech’s Center of Academic Excellence, Cyber Operations,” NSA, \$0; Co-PI
- 09/2015–09/2020: “SFS@LaTech: Louisiana Tech Universitys Scholarship for Service Program,” NSF, \$2,096,891; Co-PI
- 09/2014–09/2019: “Cyber-ICE: Louisiana Tech Universitys IC Center for Academic Excellence in National Security Studies” ODNI, \$1,652,985; Co-PI
- 09/2014–09/2019: “SFS@LaTech: Louisiana Tech Universitys Scholarship for Service Program,” NSF, \$2,762,414; Co-PI
- 06/2014–04/2015: “Biologically Inspired Threat Identification and Mitigation in MANETs,” Army (SBIR), \$45,000; PI
- 01/2014: “LA Tech’s Center of Academic Excellence, Cyber Operations,” NSA, \$0; PI
- 11/2012: “CITEST: Louisiana Tech’s Cyber ITEST Program,” NSF Innovative Technology Experiences for Students and Teachers (ITEST), \$1,198,377; Co-PI.

- 11/2012: “General Purpose Solution Optimization via Distributed Artificial Life of Agents,” Louisiana Board of Regents, \$149,818; PI
- 10/2012: “SFS@LaTech: Louisiana Tech University’s Scholarship for Service Program,” NSF Federal Cyber Service: Scholarship for Service, \$4,155,363; Co-PI
- 09/2012: “FAST-VM: Detecting Complex High Order State Changes Over Time for APT Management,” OSD (SBIR), \$45,000; PI
- 06/2012: “Secure Mobile Interfaces for Business systems,” Navy (SBIR), \$36,611; PI
- 05/2012: “An Immersive, Projects-Based Introductory Curriculum for the First Cyber Engineering Program in the Nation,” NSF Transforming Undergraduate Education in STEM (TUES), \$185,043; PI
- 04/2012: “Cyber-CaB: Louisiana Tech University’s Federal Cyber Capacity Building Program,” NSF Federal Cyber Service: Scholarship for Service (SFS), \$895,503; Co-PI
- 12/2011: “Agent-Based Cyber Security in SCADA Systems,” DHS, \$286,209; PI.
- 12/2011: “A Cryptologic Method for Preventing Unauthorized Outbound Network Traffic via Authenticating Network Devices,” DARPA Cyber Fast Track, \$123,686; PI
- 11/2011: “Sensitive Information Accountability among Physically Segregated Data Networks,” DARPA Cyber Fast Track, \$59,906; PI
- 03/2011: “The Spicule Model: A Visual Malware Identification and Classification Method,” Army, \$31,612; PI
- 03/2011: “BANDIT: Biology-inspired Agent-based Network Detection of Insider Threats,” DHS, \$561,293; PI
- 01/2011: “ABSCoND: Agent-Based extraction of Social Context from Network Data,” DARPA, \$41,801; PI
- 03/2010: “Exposing the Netprint,” DARPA (Cyber Genome Program), \$1,565,738; Co-PI
- 02/2010: “Virtual Organization for Collaboration and Advancement of Learning Institutes (VOCAL),” NSF (Cyber Enabled Discovery and Innovation), \$431,470; PI
- 01/2010: “Mobile Agent Framework for Intelligent Attack Response,” US Army Research, Development, and Engineering Command, \$36,000; PI
- 01/2010: “CYEN: A Roadmap to Creating and Deploying Cyber Engineering at Louisiana Tech University,” US Department of Homeland Security, \$69,484; PI
- 11/2009: “Identifying Vulnerabilities from Binary Executable Code Characteristics,” Intelligence Advanced Research Projects Activity, \$904,712; PI
- 11/2009: “Contained Automated Software Environment,” Intelligence Advanced Research Projects Activity, \$1,280,618; PI

- 09/2008: “DECIDE: Decision Engine for Cyber Infrastructure of Distributed Agents,” NSF, \$685,648; Co-PI
- 10/2006: “Applying Fuzzy Logic to the Modeling and Prediction of the Effect of Global Pollution on the Gulf Coast,” JSU/MRC/NASA, \$264,924; *Note: participated in proposal preparation in a non-PI capacity*
- 06/2006: “Geospatial Web Services Portal for Integration of GIS and Enhancement of Emergency Response,” Homeland Security Dept., \$750,000; *Note: participated in proposal preparation in a non-PI capacity*
- 04/2006: “Net-Centric Web Services Brokering System for Geospatial Information Discovery, Analysis and Reporting utilizing Intelligent Mobile Agents,” NGA, \$449,926; *Note: participated in proposal preparation in a non-PI capacity*
- 10/2005: “Rapid Prototyping Support and Operational Transition Assessment Utilizing a Grid Computing Environment,” NASA Applied Sciences, \$773,044; *Note: participated in proposal preparation in a non-PI capacity*

Publications

Currently in preparation

- J. Gourd and Z. Wentzell. Shapeshifter: Dynamic network polymorphism.
- J. Gourd, R. Carver, L. Gourrier, S. McLean, R. Tiedeman. A Cryptologic Method for Preventing Unauthorized Outbound Network Traffic via Authenticating Network Devices.
- J. Gourd. ReTiNA: Real Time Network Analysis for Louisiana Tech’s “Cyber Storm” Cyber Security Competition.
- J. Gourd. XScore: Scoring for Louisiana Tech’s “Cyber Storm” Cyber Security Competition.
- J. Gourd. VIZ: Situational Awareness Visualization for Louisiana Tech’s “Cyber Storm” Cyber Security Competition.

Articles in peer-reviewed journals

- V. Strimbu, V. Strimbu, W. Palmer, and J. Gourd. Comparison of nine image classification methods on landsat 7 imagery. *Analele Universitatii din Oradea – Seria Geografie*, 24(2):143–157, 2014.
- J. Gourd, N. Killeen, D. Stonecypher, N. Lapp, M. Sop, and J. Kackley. Fpga-based multi-agent system for network security. *The Journal of Management and Engineering Integration*, 4(1):xx–xx, 2011.
- J. Gourd and D. Ali. A calculus for modeling security and mobility in multi-agent systems. *The Journal of Management and Engineering Integration*, 3(2):39–47, 2010.

- J. Kackley and J. Gourd. A flow direction algorithm for geometry-based networks utilizing a prioritized bfs method. *The Journal of Management and Engineering Integration*, 1(1):115–119, 2008.
- J. Kackley, M. Gambrell, and J. Gourd. I3P: A protocol for increasing reliability and responsiveness in massively multiplayer games. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, 12(2):142–149, 2008.
- J. Gourd, M. Cobb, P. Wahjudi, and D. Ali. Smart server: Concepts and applications. *International Journal of Intelligent Systems*, 22(10):1139–1154, 2007.

Book chapters

- J. Gourd and G. Vert. Hyper distribution of contextual information. In *Introduction to Contextual Processing: Theory and Applications*, pages 115–184. Taylor and Francis, 2011.

Peer-reviewed papers presented at conferences

- G. Vert, J. Gourd, and S.S. Iyengar. Application of context to fast contextually based spatial authentication utilizing the spicule and spatial autocorrelation. In *CRW10: 3rd Cyberspace Research Workshop*, Shreveport, LA, November 2010.
- J. Kackley, J. Jacobs, P. Wahjudi, and J. Gourd. Pollination in maids: Detecting and combating passive intrusions in a multi-agent system. In *CRW10: 3rd Cyberspace Research Workshop*, Shreveport, LA, November 2010.
- J. Gourd and G. Vert. Hyper distribution of contextual information: Solving the unknown producer-unknown consumer (up-uc) problem. In *IKE*, pages 336–342, Las Vegas, NV, July 2010.
- J. Kackley, J. Gourd, and M. Gambrell. Increasing p2p gameplay performance utilizing i3p. In *GameOn-NA'09: 5th International North American Conference on Intelligent Games and Simulation*, Atlanta, GA, August 2009.
- G. Vert, J. Gourd, and S.S. Iyengar. Integration of the visual authentication of spatial data with spatial-temporal class taxonomies for advanced spatial authentication modeling to create pretty good security. In *Proceedings of the 2nd Cyberspace Research Workshop*, Shreveport, LA, June 2009.
- J. Kackley, M. Gambrell, and J. Gourd. I3P: A protocol for increasing reliability and responsiveness in massively multiplayer games. In *International Symposium on Intelligence Techniques in Computer Games and Simulations*, Shiga, Japan, March 2007.

Invited papers presented at conferences

- J. Gourd. Cyber Storm: The culmination of an undergraduate course in cyber security. In *Security and Management*, pages 300–306, Las Vegas, NV, July 2010.

Non-reviewed papers presented at conferences

- J. Gourd and D. Ali. A calculus for modeling security and mobility in multi-agent systems. In *Proceedings of the 2010 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2010.
- J. Gourd. A web services based approach to mobile agent migration and security. In *Proceedings of the 2009 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2009.
- J. Gourd and D. Ali. A weighted relative contribution algorithm for grid-based analysis of heterogeneous geospatial data. In *Proceedings of the 2008 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2008.
- J. Kackley and J. Gourd. A flow direction algorithm for geometry-based networks utilizing a prioritized bfs method. In *Proceedings of the 2008 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2008.
- P. Wahjudi, J. Gourd, J. Kackley, and D. Ali. Applying fuzzy logic to the modeling and prediction of the effect of global pollution on the gulf coast. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- D. Butler, P. Wahjudi, J. Gourd, and D. Ali. Multilevel computational teaching techniques utilizing the parallax boe-bot. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- G. Coburn, J. Gourd, and D. Ali. Multi-agent confidence framework for heterogeneous data fusion. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- J. Kackley, M. Johnson, K. Yang, P. Wahjudi, J. Gourd, and D. Ali. Nationally organized distributed database system for evacuation planning management. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- I. Gang, D. Dobson, J. Gourd, and D. Ali. Parallel implementation and analysis of mandelbrot set construction. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- J. Kackley, G. Coburn, J. Gourd, and D. Ali. Parallel implementation of concurrently executing petri nets. In *Proceedings of the 2007 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2007.
- J. Gourd, P. Wahjudi, and L. Guo. Development, testing, and simulation of a smart phone card prototype. In *Proceedings of the 2006 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2006.
- J. Gourd, J. Stone, M. Bennett, and D. Ali. Examining contraflow in evacuating a major city. In *Proceedings of the 2006 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2006.

- J. Gourd and C. Burgess. Development and analysis of the parallelization of a sequential integration-by-parts algorithm using petri nets. In *Proceedings of the 2006 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2006.
- J. Gourd, J. Heath, P. Wahjudi, D. Ali, and M. Cobb. Smart server: Integrating intelligence into a web server. In *Proceedings of the 2004 International Conference on Industry, Engineering, and Management Systems*, Cocoa Beach, FL, March 2004.

Mentoring Experience

Committees chaired

- M.S. Advisory Committee Chair: Victor Strimbu, *Individual tree detection and delineation in LiDAR point clouds*, Louisiana Tech University, 2013–2014
- M.S. Advisory Committee Chair: Delvin Jackson, *Searching for Targets Using Wireless Sensor Networks: Algorithms and Simulator Development*, Louisiana Tech University, 2013–present
- Ph.D. Advisory Committee Chair: Zachary Wentzell, *TBD*, Louisiana Tech University, 2012–2014
- M.S. Advisory Committee Chair: Nathan Killeen, *Artificial Life for Modeling City Development*, Louisiana Tech University, 2011–2013
- M.S. Advisory Committee Chair: Justin Poole, *Visualizing Network Infrastructures to Provide Next Generation Real Time Defense*, Louisiana Tech University, 2009–2010
- Ph.D. Advisory Committee Chair: Teri Williams, *Sub Pixel Analysis And Processing of Sensor Data for Mobile Target Intelligence Information and Verification*, Louisiana Tech University, 2008–2010

Committees served

- Ph.D. Advisory Committee: Stanislav Ponomarev, *TBD*, Louisiana Tech University, 2012–present
- Ph.D. Advisory Committee: Nathan Wallace, *The Detection of Malicious Cyber Activity in the Power Grid*, Louisiana Tech University, 2011–2014
- Ph.D. Advisory Committee: Miguel Gates, *Position-Adaptive Localization of an Electromagnetic Source Using Static and Mobile Sensor Networks*, Louisiana Tech University, 2011–2013
- M.S. Advisory Committee: Jan Durand, *Evaluation of Random Projection for Malware Classification*, 2010–2012
- M.S. Advisory Committee: Juan Flores, *Evolution of Traditional Digital Forensics in Virtualization by Using Virtual Machine Introspection*, 2010–2012

- Ph.D. Advisory Committee: Isaac Gang, *BEMDEC: An Adaptive and Robust Approach to Digital Image Features Extraction*, University of Southern Mississippi, 2009–2010
- Ph.D. Advisory Committee: Jeremy Kackley, *DNAgents: Genetically Engineered Intelligent Mobile Agents*, University of Southern Mississippi, 2008–2010
- Ph.D. Advisory Committee: Shrijit S. Joshi, *Naïve Bayes and Similarity Based Methods for Identifying Computer Users Using Keystroke Patterns*, Louisiana Tech University, 2008

Supervised research

- Justin Poole, *Cyber Security Research*, Louisiana Tech University, 2009

Service

Service to profession

- 2013–present: Technical Program Committee Member/Reviewer, The Florida Artificial Intelligence Research Society, AI and Cyber Security, Pensacola Beach, FL
- 2012–present: Reviewer, Multiagent Systems and Applications: Practice and Experience
- 2011–present: Technical Program Committee Member/Reviewer, Federated Computer Science and Information Systems Conference, Joint Agent-oriented Workshops in Synergy, Szczecin, Poland
- 2010–present: Reviewer, Journal of Management and Engineering Integration
- 2010–present: Technical Program Committee Member/Reviewer, International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, FL
- 2010: Proceedings Editor, CRW'10: 3rd Cyberspace Research Workshop, Shreveport, LA
- 2010: Publication and Proceedings Chair, CRW'10: 3rd Cyberspace Research Workshop, Shreveport, LA
- 2010: Publicity Chair for Announcement & Web, CRW'10: 3rd Cyberspace Research Workshop, Shreveport, LA
- 2010: Local Arrangement Chair, CRW'10: 3rd Cyberspace Research Workshop, Shreveport, LA
- 2010: Technical Program Committee Member/Reviewer, CRW'10: 3rd Cyberspace Research Workshop, Shreveport, LA
- 2009: Technical Program Committee Member/Reviewer, International Conference on Contemporary Computing, Noida, India

- 2009: Proceedings Editor, 2nd Cyberspace Research Workshop (2009), Shreveport, LA
- 2009: Publication and Proceedings Chair, 2nd Cyberspace Research Workshop (2009), Shreveport, LA
- 2009: Technical Program Committee Member/Reviewer, 2nd Cyberspace Research Workshop (2009), Shreveport, LA
- 2007–2010: Session Chair, Decision Support Systems, International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, FL
- 2007–present: Member, Institute of Electrical and Electronics Engineers (IEEE)
- 2006–present: Member, Association for Computing Machinery (ACM)

Service to academic program

- 2012–present: Student Advisor, Cyber Engineering Program, Louisiana Tech University
- 2012–present: Chair, CS, EE, and EET Website Development Advisory Committee, Louisiana Tech University
- 2012–present: Faculty Sponsor, ACM Local Chapter, Louisiana Tech University
- 2011–present: Coordinator of Student Engagement, Computer Science Program, Louisiana Tech University
- 2008–present: Member, Ph.D. Advisory Committees of over 10 students, Louisiana Tech University
- 2008–present: Member, M.S. Advisory Committees of over 10 students, Louisiana Tech University
- 2008–present: Student Advisor, Computer Science Program, Louisiana Tech University
- 2008–2013: Coach, Deloitte (formerly BearingPoint) Intercollegiate Programming Competition, Hattiesburg, MS

Service to college

- 2014–present: Member,
- 2013–present: Program Chair, Computer Science Program, Louisiana Tech University
- 2012–2013: Interim Program Chair, Cyber Engineering Program, Louisiana Tech University
- 2011–present: Judge, Freshman Design Expo, Louisiana Tech University
- 2011–2014: Member, COES Research & Economic Development Travel Grant Program, Louisiana Tech University

- 2011–2014: Member, COES Research Strategic Committee, Louisiana Tech University
- 2008: Chair, Danny R. Carter Scholarship Committee, School of Computing, University of Southern Mississippi
- 2008: Chair, Bob Cold Award Committee, School of Computing, University of Southern Mississippi
- 2008: Judge, Sixth Innovative Design for Computing Competition, University of Southern Mississippi

Service to university

- 2012–2014: Chair, Technology Subcommittee, University Senate, Louisiana Tech University
- 2011–2014: Member, University Senate, Louisiana Tech University
- 2011–2012: Chair, Policies and Procedures Subcommittee, University Senate, Louisiana Tech University

Service to community

- 2013–present: National Subject Matter Expert, Content Developer, and Presenter, Cyber Discovery, National Integrated Cyber Education Research Center
- 2013–present: Subject Matter Expert, Content Developer, and Presenter, Educational Discovery Forum, National Integrated Cyber Education Research Center
- 2013–present: Course Development and Instructor, IT Certificate, Louisiana Tech University
- 2013–present: Thread Lead, Content Developer, and Presenter, Cyber Discovery, COES, Louisiana Tech University
- 2012–present: Co-Lead of Computer Science, Content Development and Presenter, Cyber Discovery 2.0, COES, Louisiana Tech University
- 2011–2012: Course Development and Instructor, Advanced Certification Technical Training (ACTT) Program, Louisiana Tech University
- 2010–present: Curriculum Development and Implementation, Cyber Science, COES, Louisiana Tech University
- 2010–2012: Facilitator, Cyber Discovery, COES, Louisiana Tech University
- 2010–present: Judge, Louisiana Regional Science Fair, Louisiana Tech University
- 2008: Event Supervisor, Mississippi Science Olympiad, University of Southern Mississippi

Honors and Awards

- 2012: EWARDS Educator of the Year in Technology, Nominee
- 2010–2011: Louisiana Tech University, College of Engineering & Science, Outstanding Faculty Award
- 2004–2007: National Dean’s List
- 2002–2007: President’s List
- 2003–2005: Danny R. Carter Scholarship
- 1992: Key Club Scholarship
- 1992: Presidential Academic Fitness Award
- 1991: Harvard Alumni Association Prize Book