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Major Research Areas: Signal and Image Processing, Wireless (4G/5G/6G) Communications and Networks, Intelligent Systems, Big Data Analytics, Artificial Intelligent Systems, Machine Learning, Source Localization, Graph Theory, High-Dimensional Data Analysis, Topological Data Analysis, Smart-Device Technologies, Sensors and Sensor Networks.

Research Interests

Wireless Communications, Signal Processing, Sensors and Sensor Technology, Machine Learning, Artificial Intelligence, Smart Grids, Remote Sensing for Environmental Survey, Intelligent Transportation System, Smart Biomedical Metric Technology, Automatic-Mapping-Charting-Navigation-and-Localization, Robotics, Graph Analysis and Algorithms, Filter Design and System Identification, Detection, Estimation, Classification, and Regression, Indoor Object Identification and Tracking.

Professional Experience

- **Professor**, tenured (August 2014 to date), School of Electrical Engineering and Computer Science, Louisiana State University.
- **Visiting Professor**, (August 2020 to date), International College of Semiconductor Technology, National Chiao Tung University, Taiwan.
- **Associate Professor**, tenured (August 2007 to August 2014), Department of Electrical and Computer Engineering, Louisiana State University.
- **Visiting Associate Professor** (August to December 2008), Department of Electrical Engineering, Stanford University.

- **Assistant Professor**, tenure-track (January 2001 to August 2007), Department of Electrical and Computer Engineering, Louisiana State University.
- **Visiting Assistant Professor**, (June 2007 to July 2007), Television and Networks Transmission Group, Communications Research Centre, Ottawa, Canada.
- **Senior Electrical Engineer** (March 1999 to January 2001), Speech Research Laboratory, Research and Advanced Technology, Cellular and Subscriber Group, Personal Communication Sector, Motorola Inc.

Education

- **Ph. D. in Electrical and Computer Engineering, University of Florida**, Gainesville, February 1999.
Dissertation: "Blind Source Separation using Information Measures in the Time and Frequency Domains".
Adviser: Dr. Jose C. Principe
- **M. S. in Electrical and Computer Engineering, University of Florida**, Gainesville, May 1993. Concentration on Communication Engineering, Digital Signal Processing, Control Systems.
- **B. S. in Electrical Engineering, National Cheng Kung University**, Tainan, Taiwan, June 1990, Concentration on Automatic Control, Communication systems.

Professional Recognitions, Memberships and Activities

1. Honor and Awards

- IEEE Fellow since 2015.
- IEEE Distinguished Lecturer since 2009.
- Best Paper Award, IEEE International Symposium on Broadband Multimedia Systems and Broadcasting, 2021.
- Best Paper Award, IEEE Global Communications Conference, 2018.
- Best Paper Award, IEEE International Conference on Communications, 2015.
- Outstanding Service Award, IEEE Communications Society-Signal Processing for Communications Electronics, 2014.
- Michael B. Voorhies Distinguished Professor, since 2013.

2. Membership in Professional Organizations

1. Fellow, Institute of Electrical and Electronics Engineers (IEEE) since 2015.
2. Senior Member, Institute of Electrical and Electronics Engineers (IEEE), 2005-2014.

3. Chair, Interest Group on Acoustic and Speech Communications, IEEE Multimedia Communications Technical Committee, 2010-2012.
4. Member of Multimedia Technical Committee (MMTC) of IEEE, 2009-2011.
5. Member, IEEE Signal Processing for Communications Electronics Technical Committee, 2009-present.
6. Member, IEEE Communications Theory Technical Committee, 2012-present.
7. Member, Institute of Electrical and Electronics Engineers (IEEE) since 1998.

3. Technical Journal Editorial Board

1. Academic Editor for *Sensors* since 2021.
2. Associate Editor for *IEEE Transactions on Mobile Computing* since 2019.
3. Associate Editor for *IEEE Transactions on Signal Processing* since 2019.
4. Associate Editor for *IEEE Transactions on Broadcasting* since 2004.
5. Editor for *IEEE Transactions on Wireless Communications*, 2014-2019.
6. Editor for *IEEE Communications Letters*, 2013-2014.
7. Technical Editor for *IEEE Communications Magazine* since 2013.
8. Associate Editor for *IEEE Signal Processing Letters*, 2009-2012.
9. Associate Editor for *IEEE Transactions on Vehicular Technology*, 2007-2009.
10. Associate Editor for *IEEE Communications Magazine*, 2010-2013.
11. Associate Editor for *Computers and Electrical Engineering* since 2007.
12. Associate Editor for *Physical Communication* since 2010.
13. Editorial Board Member for *Journal of the Franklin Institute* since 2007.
14. Editorial Board Member for *Journal of Information Processing Systems* since 2008.
15. Lead Guest Editor for a Special Issue in *IEEE Journal of Selected Topics in Signal Processing*, 2012.
16. Lead Guest Editor for a Special Issue in *IEEE Journal of Selected Topics in Signal Processing*, 2010.
17. Lead Guest Editor for a Special Issue in *IEEE Systems Journal*, 2012.
18. Lead Guest Editor for a special issue of *Journal of Communications*, 2010.
19. Guest Editor for *IEEE Communications Magazine*, 2014.
20. Guest Editor for *EURASIP Journal on Advances in Signal Processing*, 2012.
21. Guest Editor for *International Journal of Antennas and Propagation*, 2013.
22. Guest Editor for *International Journal of Antennas and Propagation*, 2012.

4. Conference Technical Program Committee, Symposium or Track Chair

1. The 20th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM), Technical Program Committee Co-Chair, 2017.
2. IEEE International Conference on Communications, Signal Processing for Communications Symposium Chair, 2016.
3. IEEE Global Conference on Signal and Information Processing (GlobalSIP), Technical Program Committee Co-Chair, 2015.
4. IEEE International Conference on Computing, Networking and Communications (ICNC), Multimedia Computing and Communications Symposium Chair, 2015.

5. IEEE Wireless Communications and Networking Conference (WCNC), MAC and Cross-Layer Design Track Chair, 2015.
6. IEEE International Conference on Computing, Networking and Communications (ICNC), Signal Processing for Communications Symposium Co-Chair, 2013.
7. The 12th International Conference on Telecommunications for Intelligent Transport Systems (ITST), Technical Program Committee Chair, 2012.
8. IEEE Global Telecommunications Conference, Signal Processing for Communications Symposium Chair, 2012.
9. IEEE International Conference on Communications and Mobile Computing, Wireless Communications Symposium Chair, 2012.
10. IEEE Global Telecommunications Conference, Communications Software and Services Symposium Co-Chair, 2011.
11. IEEE Green Technologies Conference, Technical Program Committee Co-Chair, 2011.
12. IEEE Vehicular Technology Conference, Tutorials Chair, Fall 2011.
13. ACM Wireless Multimedia Workshop Co-Chair, 2011.
14. IEEE International Conference on Communications and Mobile Computing, Wireless Communications Symposium Chair, 2011.
15. IEEE International Conference on Communications and Mobile Computing, Wireless Communications Symposium Chair, 2010.
16. Fifth International Conference on Communications and Networking in China, Signal Processing for Communications Symposium Chair, 2010.
17. IEEE Vehicular Technology Conference, Track Chair, Spring 2010.
18. IEEE Global Telecommunications Conference, Student Travel Grant Committee Chair, 2010.
19. IEEE Global Telecommunications Conference, Signal Processing for Communications Symposium Co-Chair, 2009.
20. IEEE Vehicular Technology Conference, Tutorials Chair, Fall 2009.
21. IEEE Telecommunications Symposium, Track Chair, 2009.

5. Conference Technical Program Committee

1. Advanced Research on Applied Mathematics and Applied Science in Engineering (ARAMSE), 2020.
2. IEEE International Conference on Ubiquitous and Future Networks (ICUFN), 2019.
3. IEEE International Conference on Recent Advances in Signal Processing, Telecommunications and Computing (SigTelCom), 2019.
4. International Conference on Electrical Engineering and Informatics (ICon EEI), 2018.
5. International Conference on Applied Mathematics and Applied Science in Engineering (APPEMSE), 2018.
6. Symposium on Islamic Sciences and Technology (SISTECH), 2018.
7. International Symposium of Information and Internet Technology (SYMINTTECH), 2018.
8. World of Multidisciplinary Research and Application Conference (WOMRAC), 2018.

9. IEEE International Conference on Computing and Network Communications (CoCoNet), 2018.
10. IEEE International Conference on Advanced Technologies for Communications (ATC), 2018.
11. IEEE International Conference on Communications, Networks, and Satellite (COMNETSAT), 2018, 2019.
12. IEEE 5G World Forum (WF-5G), 2018, 2019.
13. International Conference on Advanced Research in Electrical and Electronic Engineering Technology (ARIEET), 2017.
14. IEEE International Conference on Control, Electronics, Renewable Energy, and Communications (ICCEREC), 2017, 2018.
15. IEEE Region 10 Conference (TENCON), 2017.
16. IEEE International Conference on Computer, Communication, and Control Technology, 2015.
17. IEEE Online Conference on Green Communications, 2013.
18. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2012, 2013, 2015, 2016, 2017, 2018, 2019.
19. IEEE International Conference on Computing, Networking and Communications (ICNC), 2012, 2013, 2014, 2015, 2016, 2018.
20. IEEE Military Communications Conference (MILCOM), 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018.
21. IEEE Workshop on Mobile Computing and Emerging Communication Networks (MCECN), 2010, 2011.
22. IEEE International Conference on Wireless Communications and Signal Processing (WCSP), 2010, 2011, 2013, 2017.
23. IEEE International Conference on Wireless Communications, Networking and Information Security (WCNIS), 2010.
24. IEEE International Conference on Communications in China (ICCC), 2012.
25. IEEE International Conference on Computer Communications (INFOCOM), 2012, 2013, 2014.
26. IEEE International Conference on High Performance Computing and Communications, 2008, 2009, 2010, 2011, 2012.
27. IEEE/ACM International Wireless Communications and Mobile Computing Conference (IWCMC), 2008, 2009, 2010, 2011, 2012, 2017, 2018, 2019.
28. International Conference on Communications and Mobile Computing (CMC), 2009.
29. IEEE Global Communications Conference (Globecom) 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
30. IEEE International Conference on Communications (ICC) 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019.
31. IEEE International Conference on Communication Technology (ICCT), 2011.
32. IEEE Vehicular Technology Conference, Spring 2008, Fall 2008, Fall 2009, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017.

33. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting 2006, 2007, 2008.
34. IEEE International Conference on High Performance Computing and Communications (HPCC) 2008, 2009, 2010, 2011, 2012.
35. IEEE International Workshop on Heterogeneous Wireless Networks (HWISE) 2008, 2009.
36. IEEE Wireless Communications and Networking Conference (WCNC) 2006, 2008 (PHY/MAC), 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2019.
37. IEEE Wireless Telecommunications Symposium (WTS), 2006, 2007, 2008, 2009, 2010, 2011, 2012.
38. IEEE International Workshop on Heterogeneous Wireless Sensor Networks, 2006.
39. IEEE International Conference on Advanced Information Networking and Applications (AINA), 2006, 2008, 2009.
40. IEEE Workshop on Mobile Computing and Networking Technologies (WMCNT) 2009, 2010, 2011, 2012.
41. International Conference on Computer Communications and Networks (ICCCN) 2009, 2010, 2011.
42. International Conference on Network-Based Information Systems (NBIS) 2009.
43. The 22nd Asia-Pacific Conference on Communications (APCC) 2016.

6. Conference Session Chair and Co-Chair

1. IEEE Radio and Wireless Symposium 2010.
2. IEEE Global Telecommunications Conference (Globecom), 2003, 2006, 2007, 2008, 2009.
3. IEEE Wireless Communications and Networking Conference, 2006.
4. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting 2006, 2007, 2008.
5. IEEE Vehicular Technology Conference, 2004, 2005.
6. IEEE AP-S International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting, July 2005.
7. IEEE Wireless Telecommunications Symposium, 2006.

7. Archival Journal Referee

Reviewed a total of more than 1000 manuscripts for the following journals:

1. IEEE Transactions on Information Theory,
2. IEEE Transactions on Parallel and Distributed Systems,
3. IEEE Journal on Selected Areas in Communications,
4. IEEE Journal of Selected Topics in Signal Processing,
5. IEEE Transactions on Communications,
6. IEEE Transactions on Signal Processing,
7. IEEE Transactions on Broadcasting,
8. IEEE Transactions on Wireless Communications,
9. IEEE Transactions on Vehicular Technology,
10. IEEE Transactions on Biomedical Engineering,
11. IEEE Transactions on Computers,

12. IEEE Transactions on Aerospace and Electronic Systems,
13. IEEE Transactions on Neural Networks,
14. IEEE Transactions on Control Systems Technology,
15. IEEE Transactions on Circuits and Systems I,
16. IEEE Systems Journal,
17. IEEE Sensors Journal,
18. IEEE Communications Letters,
19. IEEE Signal Processing Letters,
20. IEEE Wireless Communications Letters,
21. IEEE Antennas and Wireless Propagation Letters,
22. IEE Proceedings Communications,
23. IET Proceedings Signal Processing,
24. Circuits, Systems and Signal Processing,
25. EURASIP Journal on Wireless Communications and Networking,
26. EURASIP Journal on Applied Signal Processing,
27. Signal Processing,
28. Wiley Wireless Communications and Mobile Computing Journal,
29. Digital Signal Processing,
30. Journal of the Brazilian Telecommunication Society.
31. International Journal of Aerospace Engineering.
32. International Journal of Numerical Analysis and Modeling.

8. Conference Manuscript Referee

Reviewed a total of more than 1500 manuscripts for the following professional conferences:

1. IEEE International Conference on Communications, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.
2. IEEE Global Telecommunications Conference, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.
3. IEEE Wireless Communications and Networking Conference, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012.
4. IEEE International Symposium on Broadband Multimedia Systems and Broadcasting 2006, 2007, 2008.
5. IEEE Wireless Telecommunications Symposium 2006, 2007, 2008, 2009.
6. IEEE International Conference on Advanced Information Networking and Applications 2005.
7. International Conference on Independent Component Analysis 1999, 2005.
8. IEEE International Conference on Acoustics, Speech and Signal Processing 1998, 1999.
9. IEEE International Joint Conference on Neural Networks 1997, 1998, 1999.
10. IEEE International Workshop on Neural Networks for Signal Processing 1997, 1998.

9. Research Proposal Referee

1. Served on National Science Foundation Panel—Information and Intelligent Systems Directorate, 2021.

2. Served as a Proposal Reviewer for Natural Sciences and Engineering Research Council of Canada, 2020.
3. Served on National Science Foundation Panel—Electrical, Communications and Cyber Systems Directorate, 2020.
4. Served on National Science Foundation Panel—Computing and Communication Foundations Directorate, 2020.
5. Served as an External Research Proposal Reviewer for Swiss National Science Foundation, 2019.
6. Served on National Science Foundation Panel—Computing and Communication Foundations Directorate, 2018.
7. Served on National Science Foundation Panel—Information Integration and Informatics Directorate, 2014.
8. Served on National Science Foundation Panel—Computer and Network Systems Directorate, 2011.
9. Served as an External Research Proposal Referee for City University of Hong Kong, 2010.
10. Served as an External Research Proposal Referee for City University of Hong Kong, 2009.
11. Served on National Science Foundation Panel—Integrated, Hybrid and Complex Systems for Electronics and Communications Systems Directorate, 2007.
12. Served on National Science Foundation Panel—Integrated, Hybrid and Complex Systems for Electronics and Communications Systems Directorate, 2006.
13. Served on National Science Foundation Panel—Sensor and Sensor Technology for Electronics and Communications Systems Directorate, 2005.
14. Served on National Science Foundation Panel—Unsolicited Proposals for Electronics and Communications Systems Directorate, 2004.

10. Textbook Review

1. Book Review for “Cooperative Communications for Improved Wireless Network Transmission: Framework for Virtual Antenna Array Applications”, IGI Global, 2008.
2. Book Review for “Digital Signal Processing: Signals, Systems & Filters” by Andreas Antoniou, McGraw-Hill, May 2004.
3. Book Review for “A Course on Digital Signal Processing” by A. Farag, McGraw-Hill, June 2004.
4. Book Review for “Signals and Systems” by M.J. Roberts, McGraw-Hill, May 2004.
5. Book Review for “Elements of Digital, Adaptive and Nonlinear Filtering” by Alexander D. Poularikas, Oxford University Press, October 2002.

11. LSU University Service

1. LSU Faculty Senator, elected, term 2015-2018.
2. LSU Faculty Senator, elected, term 2011-2013.
3. LSU Faculty Research Grant Proposals Review Committee, 2015, 2016, 2017.
4. Research Advisory Panel for LSU Master Planning since 2015.
5. LSU Committee on Authorship, 2015.

12. LSU College of Engineering (COE) Service

1. COE College Policy Committee Chair, elected, term 2016-2017.
2. COE College Policy Committee Member, elected, term 2016-2018, 2018-2020.
3. College Promotion and Tenure Committee Member, 2016-2017, 2018-2019.
4. COE Grade Appeal Committee, 2014, 2015, 2017.
5. COE Board of Regents Fellowship Selection Committee, 2014, 2015, 2016.
6. COE Outstanding Dissertation Award Selection Committee, 2014, 2015.
7. COE Donald W. Clayton Ph.D. Graduate Assistantship Selection Committee, 2016.

13. LSU ECE Departmental Committees

1. ECE Seminar Series Committee (2017-2018).
2. ECE Promotion and Tenure Committee Member (2017-2018).
3. ECE Promotion and Tenure Committee Chair (2016-2017).
4. ECE Title Professorship Selection Committee Member, 2015, 2016.
5. Graduate Adviser, Division of Electrical and Computer Engineering, School of Electrical Engineering and Computer Science, Louisiana State University (2014-2016).
6. Graduate Studies Committee, Division of Electrical and Computer Engineering, School of Electrical Engineering and Computer Science, Louisiana State University (2012-2016).
7. Internal Advisory Committee, elected, Department of Electrical and Computer Engineering, Louisiana State University, terms 2011-2013, 2014-2016.
8. Ad Hoc Digital Signal Processing Curriculum Committee, Department of Electrical and Computer Engineering, Louisiana State University, Spring of 2009.
9. Curriculum Committee, Department of Electrical and Computer Engineering, Louisiana State University (08/2007 – 08/2008).
10. Graduate Admissions Committee, Department of Electrical and Computer Engineering, Louisiana State University (08/2005 – 08/2006, 2011-2012, 2018-2019).

14. Science Fair Judged

- Judge of Science Fair, Mentorship Academy, Baton Rouge, Louisiana, May 2, 2013.

Research Grants

Funded Research Proposals (Total Amount \$2,118,238)

1. **PI H.-C. Wu**, “Novel Real-Time Road Mapping Technology Using Vehicle-to-Vehicle Communications,” to Louisiana Board of Regents Research Competitiveness Subprogram (RCS), \$19,000 (**Active**, one year, 2021-2022).
2. **PI H.-C. Wu**, “Visible-Light Communications for Health-Related Data Transmission,” to LSU Economic Development Assistantship (EDA) Program, \$100,000, (**Active**, four years, 2019-2023).

3. **PI H.-C. Wu**, "Novel Wireless Health Monitoring Technology," to LSU Faculty Research Grant, \$10,000, (one year, 2017-2018).
4. **PI H.-C. Wu**, "Digital Pre-Distortion and 3D Imaging," Alcatel-Lucent/Nokia, \$15,000, (four years, 2014-2018).
5. **PI H.-C. Wu**, "Scientific and Algorithmic Exploration in Innovative Signal Embedding and Blind Extraction for Communication Applications," Louisiana Board of Regents OPT-IN Fund \$37,500 plus a matching fund \$15,000 from Alcatel-Lucent, for a total of \$52,500, (three years, 2013-2016).
6. **PI H.-C. Wu**, "Novel Spectrum Shaping Technology for Wireless Cognitive Networks," Louisiana Board of Regents OPT-IN Fund \$25,000 plus a matching fund \$10,000 from Alcatel-Lucent, for a total of \$35,000, (five years 2011-2016).
7. **PI H.-C. Wu**, "Innovative Blind and Semi-Blind Signal Processing for Future Wireless Transceiver Technologies," Louisiana Board of Regents-NSF Pilot Fund, \$10,000, (two years, 2014-2015).
8. **PI S. S. Iyengar and Co-PIs S. Mukhopadhyay, S. S. Pang, H.-C. Wu**, "Multi University Research and Training in Protection of Critical Information Infrastructures," to NSF SFS, (originally funded \$299,998 to LSU, PI transferred the grant to FIU after the proposal was funded and subcontracted \$85,786 back to LSU in 2012, LSU PI: S. Mukhopadhyay and Co-PIs: **H.-C. Wu** and S. S. Pang), (two years, 2012-2014).
9. **PI S. S. Iyengar, Co-PIs H.-C. Wu and J. Zhang**, "Collaborative Research: Building an Intelligent, Uncertainty-Resilient Detection and Tracking Sensor Network," NSF-NeTS, (originally funded \$349,997 to LSU, PI transferred the remaining grant after the first year's completion to FIU and subcontracted \$149,806 back to LSU for the rest of the budget of 2012 and years after, LSU PI: J. Zhang and Co-PI: **H.-C. Wu**), (four years, 2010-2014).
10. **PI H.-C. Wu**, "Novel Spectrum Shaping Technology for Wireless Cognitive Networks," Louisiana Board of Regents-NSF Pilot Fund, \$10,000, (two years, 2011-2013).
11. **PI S. S. Iyengar, Co-PIs S. J. Park and H.-C. Wu**, "Secure and Survivable Cyber-Centric Sensor Networks: Algorithms and Architecture Research," DoD-ONR DEPSCoR Program, \$761,368, (four years, 2008-2012).
12. **PI A. Okeil and Co-PI H.-C. Wu**, "Nondestructive Imaging of Highly Stressed Zones using Phased Array Ultrasonic Signals," Research Innovation Fund, College of Engineering, Louisiana State University, \$20,000, (one year, 2008-2009).
13. **PI H.-C. Wu**, "Novel Signal Processing Techniques for Cognitive Communications," to NSF-EPSCOR Pilot Fund, \$10,000, (one year, 2008-2009).
14. **PI H.-C. Wu**, "Real-time Responsive and Self-organizing Cognitive Radio," NSF-Louisiana EPSCOR Pilot Fund, \$12,000, (one year, 2005-2006).
15. **PI H.-C. Wu and Co-PI A. Srivastava**, "Novel Efficient OFDM Systems for Space Communications," NASA-Louisiana SPACE Consortium, \$42,500, (one year, 2005-2006).
16. **PI H.-C. Wu and Co-PI A. Srivastava**, "Novel Wireless Broad-band Communications and Robust Time Synchronization Devices," NSF Information

- Technology Research Award for National Priorities, \$300,000, (NSF-ECS-0426644, five years, 2004-2009).
17. **PI H.-C. Wu** and Co-PI S. Gupta, "Nondestructive Quality Analysis of Porous Materials Based on the Enhanced Ultrasonic Imaging Techniques," NASA-Louisiana Space Consortium, \$33,375, (one year, 2004-2005).
 18. **PI H.-C. Wu**, "Signal Processing Analyses and Techniques for Mobile Orthogonal Frequency Division Multiplexing Systems," LSU Faculty Research Grant, \$10,000, (one year, 2004-2005).
 19. **PI H.-C. Wu**, "Adaptive-Modulation Orthogonal Frequency Division Multiplexing and Its Indoor Geometric Quality-of-service Analysis," Faculty Research Initiation Award, Southeastern Center for Electrical Engineering Education, \$22,500, (one year, 2003-2004).
 20. **PI H.-C. Wu**, "Statistical Learning Systems for Blind Source Separation and Blind Channel Equalization," Summer Research Stipend Award, \$5,000, Louisiana State University, 2002.

Articles in Referred Journals

- **Published or Accepted Journal Papers**

1. S. Y. Chang, **H.-C. Wu**, and Y. Wang, "New efficient approach to solve big data systems using parallel Gauss-Seidel algorithms," accepted by *Big Data and Cognitive Computing*, 2022.
2. X. Yan, **H.-C. Wu**, Q. Wang, C. Yin, and P. Li, "Computationally-efficient multiwavelets construction method with new signal-dependent-multiplicity determination scheme," accepted by *Circuits, Systems, and Signal Processing*, 2022.
3. X. Yan, Y. Zhang, X. Rao, Q. Wang, **H.-C. Wu**, and Y. Wu, "Novel cooperative automatic modulation classification using vectorized soft-decision-fusion for wireless sensor networks," *Sensors*, vol. 22, no. 5, Paper 1797, February 2022.
4. L. Pu, P. J. Chacon, **H.-C. Wu**, and J. Choi, "Novel robust photoplethysmogram-based authentication," *IEEE Sensors Journal*, vol. 22, no. 5, pp. 4675–4686, March 2022.
5. S. Y. Chang and **H.-C. Wu**, "Tensor quantization: high-dimensional data compression," accepted by *IEEE Transactions on Circuits and Systems for Video Technology*, 2022.
6. A. Kumar, S. Majhi 2, G. Gui, **H.-C. Wu**, and C. Yuen, "A survey of blind modulation classification techniques for OFDM signals," *Sensors*, vol. 22, no. 3, Paper 1020, January 2022 (<https://doi.org/10.3390/s22031020>).
7. S. Y. Chang and **H.-C. Wu**, "Tensor Wiener filter," *IEEE Transactions on Signal Processing*, vol. 70, pp. 410-422, January 2022.
8. C. Yu, Z. Xu, K. Yan, Y.-R. Chien, S.-H. Fang, and **H.-C. Wu**, "Non-invasive human-activity recognition using millimeter-wave radar," accepted by *IEEE Systems Journal*, 2021.

9. S. Y. Chang, **H.-C. Wu**, Y. Wu, and X. Chen, "New probabilistic SINR analysis for capacity and reception-quality studies of DTV transmitter identification systems," accepted by *Wireless Networks*, 2021.
10. E. Y.-N. Sun, **H.-C. Wu**, S. C.-H. Huang, and Y.-C. Kuan, "A novel protocol-free bandage-cover cryptographer," accepted by *IEEE Transactions on Cybernetics*, 2021.
11. S. Y. Chang and **H.-C. Wu**, "Multi-relational data characterization by tensors: perturbation analysis," accepted by *IEEE Transactions on Knowledge and Data Engineering*, 2021.
12. S. Y. Chang and **H.-C. Wu**, "Multi-relational data characterization by tensors: tensor inversion," accepted by *IEEE Transactions on Big Data*, 2021.
13. X. Yan, X. Rao, Q. Wang, **H.-C. Wu**, Y. Zhang, and Y. Wu, "Novel cooperative automatic modulation classification using unmanned aerial vehicles," *IEEE Sensors Journal*, vol. 21, no. 24, pp. 28107-28117, December 2021.
14. V. Gadiraju, **H.-C. Wu**, C. Busch, P. Neupane, S. Y. Chang, and S. C.-H. Huang, "Novel sensor/access-point coverage-area maximization for arbitrary indoor polygonal geometries," *IEEE Wireless Communications Letters*, vol. 10, no. 12, pp. 2767-2771, December 2021.
15. S. C.-H. Huang, E. Y.-N. Sun, **H.-C. Wu**, and C. Busch, "The paintbrush coverage problem," *IEEE Transactions on Mobile Computing*, vol. 20, no. 11, pp. 3239–3250, November 2021.
16. P. Neupane, **H.-C. Wu**, G. Liu, W. Xiang, J. Ye, and S. Y. Chang, "Novel cascade classifier using multiresolution progressive learning for device-free indoor localization," *IEEE Sensors Letters*, vol. 5, no. 11, 4 pages, November 2021.
17. P. Neupane, G. Liu, **H.-C. Wu**, S. Y. Chang, and J. Ye, "Novel optimal multisensor placement for indoor rectilinear line-of-sight coverage," *IEEE Sensors Journal*, vol. 21, no. 20, pp. 23435–23451, October 2021.
18. S. Y. Chang, **H.-C. Wu**, and S. C.-H. Huang, "New algebraic studies of pattern attributes in maximum-length shift-register sequences," *Physical Communication*, vol. 48, Paper Number 101435, October 2021.
19. S. Y. Chang and **H.-C. Wu**, "Tensor recursive least squares filters for multichannel interrelational signals," *IEEE Transactions on Signal and Information Processing over Networks*, vol. 7, pp. 562-577, September 2021.
20. G. Liu, M. Singha, L. Pu, P. Neupane, J. Feinstein, **H.-C. Wu**, J. Ramanujam, and Michal Brylinski, "A robust deep learning predictor of drug-target interactions from multiple heterogeneous data," *Journal of Cheminformatics*, vol. 13, no. 1, pp. 1-17, August 2021.
21. X. Yan, Q. Wang, **H.-C. Wu**, and K. Qin, "Spectral-efficiency optimization for NOMA-based amplify-and-forward cooperative relaying systems with beamforming and power allocation," *Wireless Networks*, vol. 27, no. 6, pp. 4123-4132, August 2021.
22. S. Y. Chang and **H.-C. Wu**, "Tensor multivariate trace inequalities and their applications," *Mathematics and Statistics*, vol. 9, no. 3, 394–410, 2021.
23. K. Yan, Z. Li, M. Cheng, and **H.-C. Wu**, "QoS analysis and signal characteristics for short-range visible-light communications," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 7, pp. 6726–6734, July 2021.

24. N. Nandan, S. Majhi, and **H.-C. Wu**, "Beamforming and power optimization for physical layer security of MIMO-NOMA based CRN over imperfect CSI," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 6, pp. 5990–6001, June 2021.
25. Q. Wang, S. Xu, X. Yan, **H.-C. Wu**, and Y. Wu, "Novel efficient multiwavelet-based modulation for downlink NOMA systems," *IEEE Wireless Communications Letters*, vol. 10, no. 6, pp. 1242–1246, June 2021.
26. K. Yan, L. Zhang, and **H.-C. Wu**, "Advanced homological analysis for biometric identification using accelerometer," *IEEE Sensors Journal*, vol. 21, no. 6, pp. 7954–7963, March 2021.
27. E. Y.-N. Sun, **H.-C. Wu**, C. Busch, S. C.-H. Huang, Y.-C. Kuan, and S. Y. Chang, "Efficient recoverable cryptographic mosaic technique by permutations," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 31, no. 1, pp. 112–125, January 2021.
28. Z. Gao, **H.-C. Wu**, S. Cai, and G. Tan, "Tight approximation ratios of two greedy algorithms for optimal RSU deployment in one-dimensional VANETs," *IEEE Transactions on Vehicular Technology*, vol. 70, no. 1, pp. 3-17, January 2021.
29. K. Yang, X. Yan, Q. Wang, **H.-C. Wu**, and K. Qin, "Joint power allocation and relay beamforming optimization for weighted sum-rate maximization in NOMA AF relay system," *IEEE Communications Letters*, vol. 25, no. 1, pp. 219–223, January 2021.
30. S. Y. Chang and **H.-C. Wu**, "Divide-and-iterate approach to big data systems," accepted by *IEEE Transactions on Services Computing*, September 2020.
31. S. Y. Chang and **H.-C. Wu**, "Packetless data transmission through pattern exclusive coding," *Physical Communication* vol. 41, Paper Number 101108, August 2020.
32. K. Yan, **H.-C. Wu**, S.-H. Fang, C. Wang, S. Li, and L. Zhang, "Indoor femtocell interference localization," *IEEE Transactions on Wireless Communications*, vol. 19, no. 8, pp. 5176–5187, August 2020.
33. K. Yan, S. Cheng, **H.-C. Wu**, H. Xiao, and X. Zhang, "Analysis and rectification of the asynchronous sampling effect in the pulse-position modulation systems," *IEEE Sensors Journal*, vol. 20, no. 8, pp. 4189–4199, April 2020.
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 150. **H.-C. Wu** and J. Principe, "Simultaneous diagonalization algorithm for blind source separation based on subband filtered features," *Proceedings of SPIE*, Orlando, FL, vol. 3374, April 1998, pp. 466–474.
 151. **H.-C. Wu**, "The temporal minimum entropy and minimum mutual information criteria of non-stationary signals for blind source separation," *Proceeding of the SPIE*, Orlando, FL, vol. 3389, April 1998, pp. 57–65.

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Patent Activities

1. Limeng Pu, Pedro J. Chacon, **Hsiao-Chun Wu**, and Jin-Woo Choi, "New portable authentication device using photoplethysmogram signals" invention disclosed to the Intellectual Property Office at Louisiana State University on June 12, 2018, provisional patent filed in October 2018.
2. Brett Joseph Chessher and **Hsiao-Chun Wu**, "A robust noise spectral estimation algorithm for speech enhancement in voice devices" invention disclosed to the Intellectual Property Office at Louisiana State University on October 24, 2005, provisional patent filed in February 2008.
3. Songnan Xi and **Hsiao-Chun Wu**, "Robust automatic modulation classification using cumulant features in the presence of fading channels," invention disclosed to the Intellectual Property Office at Louisiana State University on October 25, 2005.

Electronic Dissemination of Research

1. **H.-C. Wu** and X. Huang, "Robust ICI self-cancellation OFDM receiver with dynamic phase and amplitude estimations," *International Journal for Wireless Information Networks*, electronic version posted at <http://dx.doi.org/10.1007/s10776-005-0001-2>), in November 2005.
2. **Hsiao-Chun Wu**, "Orthogonal frequency division multiplexing and digital video broadcasting," two-hour internet presentation to *Motorola Wireless System Group*, December 12, 2003.

Courses Taught at ECE Department, LSU

1. EE 3120: Linear System Analysis
2. EE 3150: Probability for Electrical and Computer Engineering

3. EE 3160: Introduction to Digital Signal Processing
4. EE 3610: Signals and Systems
5. EE 4150: Digital Signal Processing
6. EE 4160: Algorithms and Implementation of Digital Signal Processing
7. EE 4625: Digital Communication and Networking
8. EE 7000: Advanced Digital Signal Processing for Wireless Communications
9. EE 7000: Adaptive Filter Theory
10. EE 7100/EE7160: Multirate Signal Processing and Filter Banks
11. EE 7150: Theory and Applications of Digital Signal Processing
12. EE 7630: Detection and Estimation Theory
13. EE 7670: Communication Networking

Supervisor or Committee for Thesis/Dissertation

Supervised Ph.D. Students (Already Graduated)

1. Limeng Pu (LSU, ECE, Major Professor) (Completed in May 2019), Dissertation Title: “Graph information processing for artificial intelligence.”
2. Tian Xia (LSU, ECE, Major Professor) (Completed in May 2015), Dissertation Title: “New identification and decoding techniques for low-density parity-check codes.”
3. Hongting Zhang (LSU, ECE, Major Professor) (Completed in December 2014), Dissertation Title: “Advanced statistical signal processing methods in sensing, detection, and estimation for communication applications.”
4. Charisma D. Edwards (LSU, ECE, Major Professor) (Completed in December 2013), Dissertation Title: “Psychological behavior analysis using advanced signal processing techniques for fMRI data.”
5. Yonas Gebregziabher Debessu (LSU, ECE, Major Professor) (Completed in August 2012), Dissertation Title: “New coding/decoding techniques for wireless communication systems.”
6. Xiaoyu Feng (LSU, ECE, Major Professor) (Completed in December 2011), Dissertation Title: “Advanced linear identification techniques for signal processing and digital video broadcasting.”
7. Lu Lu (LSU, ECE, Major Professor), (Completed in August 2011), Dissertation Title: “Efficient and robust signal detection algorithms for the communication applications.”
8. Kun Yan (LSU, Engineering Science, Major Professor), (Completed in May 2011), Dissertation Title: “Exploring statistic features for computationally-efficient maximum-likelihood algorithms in signal processing and communications applications.”
9. Xiaozhou Huang (LSU, ECE, Major Professor), (Completed in August 2006), Dissertation Title: “Inter-carrier interference suppression for OFDM systems in time-varying multipath fading channels.”
10. Sameer R. Herlekar (LSU, ECE, Major Professor), (Completed in August 2006), Dissertation Title: “Synchronization error analysis and carrier recovery algorithm design for a Phase-locked loop (PLL) built on short-channel MOSFET devices.”

Supervised Ph.D. Students in Progress

1. Prasanga Neupane (LSU, ECE, Major Professor), (Joined LSU in January 2020).
2. Guannan Liu (LSU, ECE, Major Professor), (Joined LSU in August 2019).
3. Rui Tian (LSU, ECE, Major Professor), starting in Fall 2015.

Supervised M.S. Students (Already Graduated)

1. Sayani Sarkar (LSU, ECE, Major Professor), (Passed defense in May 2017, Graduated in August 2017), Thesis Title: “New efficient and robust multimedia archiving technique using quick-response codes.”
2. Rui Tian (LSU, ECE, Major Professor), (Passed defense in May 2017, Graduated in December 2017), Thesis Title: “New multi-resolution shortest-path navigation techniques using the NDVI imagery.”
3. Ting-Chen Hsu (LSU, ECE, Major Professor), (Passed defense in November 2016, Graduated in December 2016), Thesis Title: “New archiving, fingering, and assessing techniques for sheet music using advanced signal processing approaches.”
4. Tian Xia (LSU, ECE, Major Professor), (Passed defense in November 2013, Graduated in December 2013), Thesis Title: “Blind LDPC Encoder Identification.”
5. Bharath Thekkedath (LSU, ECE, Major Professor), (Passed defense in March 2013, Graduated in May 2013), Thesis Title: “Yield detection for non-destructive testing using ultrasonic signal processing.”
6. Hongting Zhang (LSU, ECE, Major Professor), (Passed defense in November 2011, Graduated in December 2011), Thesis Title: “Blind yield detection in steel structure for automatic nondestructive testing using ultrasonic sensors.”
7. Xiaoyu Feng (LSU, ECE, Major Professor), (Passed defense in December 2009, Graduated in May 2010), Thesis Title: “Geometric capacity studies for DTV transmitter identification by using Kasami sequences.”
8. Waheeduddin Q. Syed (LSU, ECE, Major Professor), (Passed defense in March 2006, Graduated in December 2006), “Robust speech-noise classification and its application to waveform compression.”
9. Kiran K. Mada (LSU, ECE, Major Professor), (Graduated in August 2006), “EM algorithm for multiple wideband source localization.”
10. Srinath Vepathur Sitaraman (LSU, ECE, Major Professor), (Graduated in August 2006), “Automatic active contour modelling and its potential application for non-destructive testing.”
11. Brett J. Chessher (LSU, ECE, Major Professor), (Graduated in December 2005), Thesis Title: “A robust noise spectral estimation algorithm for speech enhancement in voice devices.”
12. Rekha Katragadda (LSU, ECE, Major Professor), (Graduated in May 2005), Thesis Title: “Blind multiridge detection and reconstruction using ultrasonic signals.”
13. Khaled Z. Matarneh (LSU, ECE, Major Professor), (Graduated in May 2005), Thesis Title: “Comparative analysis of conventional and ICI self-cancellation digital video broadcasting transceivers.”

14. Yao Xiao (LSU, ECE, Major Professor), (Graduated in May 2003), Thesis Title: “OFDM modulation and ICI cancellation.”

Member of Other Ph.D. Committees (Already Graduated)

1. Morteza Dabbaghjamesh (Ph. D. Completed in May 2019, LSU, Electrical and Computer Engineering), Dissertation Title: “Stochastic energy management of reconfigurable power grids in the presence of renewable energy by considering practical limitations.”
2. Feixiang Zhang (Ph. D. Completed in December 2018, LSU, Electrical and Computer Engineering), Dissertation Title: “Economic approaches and market structures for temporal-spatial spectrum sharing.”
3. Boyu Wang (Ph. D. Completed in August 2018, LSU, Electrical and Computer Engineering), Dissertation Title: “Decentralized optimal control with application in power system.”
4. Pooria Mohammadi (Ph. D. Completed in August 2017, LSU, Electrical and Computer Engineering), Dissertation Title: “Protection challenges of distributed energy resources integration in power systems.”
5. Manohar Karki (Ph. D. Completed in May 2017, LSU, Computer Science), Dissertation Title: “Symbolic and deep learning based data representation methods for activity recognition and image understanding at pixel level.”
6. Hui Sun (Ph. D. Completed in August 2016, LSU, Electrical and Computer Engineering), Dissertation Title: “Relay selection strategies for multi-hop cooperative networks.”
7. Charles Malveaux (Ph. D. Completed in May 2016, LSU, Engineering Science), Dissertation Title: “Environmental remote sensing and control.”
8. Tracy N. Toups (Ph. D. Completed in May 2015, LSU, Electrical and Computer Engineering), Dissertation Title: “Measurement of working, reflected, and detrimental active power in a three phase system.”
9. Justin Erdman (Ph. D. Completed in May 2015, LSU, Computer Science), Dissertation Title: “Computer vision and inertial position reference sensor system for dynamic positioning.”
10. Shaghayegh Kazemlou (Ph. D. Completed in May 2015, LSU, Electrical and Computer Engineering), Dissertation Title: “Advanced control of small-scale power systems with penetration of renewable energy sources.”
11. Yang Liu (Ph. D. Completed in December 2011, LSU, Electrical and Computer Engineering), Dissertation Title: “Phase noise in CMOS phase-locked loop circuits.”
12. Pavani Gottipati (Ph. D. Completed in March 2011, LSU, Electrical and Computer Engineering), Dissertation Title: “In-wheel motors: express comparative method for PMBL motors.”
13. Yilmaz Bingol (Ph. D. Completed in August 2008, LSU, Civil & Environmental Engineering), Dissertation Title: “Development of an ultrasonic NDE&T tool for yield detection in steel structures.”
14. Stefan Alexandru Pascu (Ph. D. Completed in August 2006, LSU, ECE), Dissertation Title: “Optical control plane: theory and algorithms.”

15. Kirk V. N. Spence (Ph.D. Completed in May 2005, LSU, CS), Dissertation Title: "Automatic segmentation of magnetic resonance images of the brain."
16. Lijuan Li (Ph.D. Completed in August 2003, LSU, ECE), Dissertation Title: "Design of optimal equalizers and precoders for MIMO channels."

Member of Other M.S. Committees (Already Graduated)

1. Nikilesh Urella, (MS Completed in August 2017, LSU, ECE), Thesis Title: "A VR scene modeling platform for PTSD treatment."
2. Aniruddha Joshi, (MS Completed in December 2014, LSU, IE), Thesis Title: "Analyses of Online Monitoring Signals for A GMAW Process Before and After Improvement."
3. Matthew Anakwue, (MS Completed in December 2012, LSU, ECE), Thesis Title: "Performance of Multifrequency UWB-OFDM SAR in Deception Jamming."
4. Shenghua Wan, (MS Completed in December 2011, LSU, ECE), Thesis Title: "Surface Parameterization over Regular Domains."
5. Lohit Penubaku (MS Completed in August 2011, LSU, ECE), Thesis Title: "Smart Access Control System with Behavioral Profiling and Dynamic PIN Concept."
6. Lu De Yang, (MS Completed in August 2011, LSU, ECE), Thesis Title: "Implementation of a Wireless Sensor Network with EZ430-RF2500 Development Tools and MSP430FG4618/F2013 Experimenter Boards from Texas Instruments."
7. Rajkiran Ravula (MS Completed in December 2010, LSU, ECE), Thesis Title: "Audio Watermarking using Transformation Techniques."
8. Samudrala Vamshi Krishna (MS Completed in December 2010, LSU, ECE), Thesis Title: "Integrating Lattice Space-Time Codes of Highest Rank and Multiplexing over Rayleigh Fading Channels."
9. Kiran Kumar Gunda (MS Completed in August 2008, LSU, ECE), Thesis Title: "Adjustable Speed Drives Laboratory Based on Dspace Controller."
10. Partha Basuchowdhuri (MS Completed in May 2008, LSU, ECE), Thesis Title: "Enhancing Security In Quantum Cryptography."
11. Abhishek Parakh (MS Completed in December 2007, LSU, ECE), Thesis Title: "Oblivious Transfer for Secure Communication."
12. Maruti Venkat Kartik Satti (MS Completed in December 2007, LSU, ECE), Thesis Title: "Quasi Group Based Crypto-System."
13. Claudio Jose Iombo (MS Completed in August 2007, LSU, ECE), Thesis Title: "Predictive Data Compression Using Adaptive Arithmetic Coding."
14. Jui-Ching Hsu (MS Completed in May 2007, LSU, ECE), Thesis Title: "Fabrication of Single Walled Carbon Nanotube (SW-CNT) Cantilevers for Chemical Sensing."
15. Pavani Gottipati (MS Completed in May 2007, LSU, ECE), Thesis Title: "Comparative Study on Double-Rotor PM Brushless Motors with Cylindrical and Disc Type Slot-Less Stator."
16. Chetan Neginhal Chitnis (MS Completed in December 2006, LSU, ECE), Thesis Title: "Differential Space Time Modulation and Demodulation for Time Varying Multiple Input Multiple Output Channels."

17. Mohammed Riyazuddin (MS Completed in December 2006, LSU, ECE), Thesis Title: "Information Analysis of DNA Sequences."
18. Abhishek Satyedranath (MS Completed in August 2006, LSU, ECE), Thesis Title: "Resilient optical multicasting utilizing cycles in WDM optical networks."
19. Adityan V. Rishiyur (MS Completed in August 2006, LSU, ECE), Thesis Title: "Instantaneously trained neural networks with complex and quaternion inputs."
20. Arvind Kumar Parthasarathy (MS Completed in August 2006, LSU, ECE), Thesis Title: "Improved content based watermarking for images."
21. Dinakar Choppa (MS Completed in May 2006, LSU, ECE), Thesis Title: "Performance of torus-type brushless DC motor with winding connected in two and three-phase system."
22. Sunil K. Challa (MS Completed in May 2006, LSU, ECE), Thesis Title: "Comparative study of AFPM BLDC motor operating with the winding connected in single-phase and two-phase system."
23. Kishori Nanduri (MS Completed in August 2005, LSU, ECE), Thesis Title: "Scalable schemes against distributed denial of service attacks."
24. Saikiran Sri Thunuguntla (MS Completed in August 2005, LSU, ECE), Thesis Title: "Object tracking using log-polar transformation."
25. Pallavi Bomma (MS Completed in May 2005, LSU, ECE), Thesis Title: "Computer-aided diagnosis tool for the detection of cancerous nodules in X-ray images."
26. Kishore Reddy Koduru (MS Completed in May 2005, LSU, ECE), Thesis Title: "New contention resolution techniques for optical burst switching."
27. Sowmya Subramanian (MS Completed in May 2005, LSU, ECE), Thesis Title: "Binary bit conversion using multiple input floating gate MOSFETS in 0.5 micron n-well CMOS technology."
28. Sateesh Chandra Shekhar (MS Completed in August 2004, LSU, ECE), Thesis Title: "Survivable multicasting in WDM optical networks."
29. Mohamad Nouilati (MS Completed in May 2004, LSU, IMSE), Thesis Title: "Performance assessment of coated cemented carbide tools in turning AISI 1018 steel."
30. Kavitha Devi Buddharaju (MS Completed in December 2003, LSU, ECE), Thesis Title: "Design of power efficient multicast algorithms for sparse split WDM networks."
31. Guru Prasad P. Kithlanagamangala (MS Completed in December 2003, LSU, ECE), Thesis Title: "Efficient embedding of virtual hypercubes in irregular WDM optical networks."
32. Pritam Rajagopal (MS Completed in May 2003, LSU, ECE), Thesis Title: "Instantaneously trained neural networks with complex inputs."
33. Radhika Vaddiraja (MS Completed in May 2003, LSU, ECE), Thesis Title: "Generalized D-sequences and their application to CDMA systems."
34. Jianqiang He (MS Completed in December 2001, LSU, ECE), Thesis Title: "Multiple-access interference suppression in CDMA wireless systems."

Member as Dean's Representative on Ph.D. Committees

1. Hashim A. Alghafly (Ph.D. Completed in May 2015, Chemistry, LSU), Dissertation Title: “GUMBOS as Matrices for Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry.”
2. Vivian Mankau Ho (Ph.D. Completed in August 2012, Mathematics, LSU), Dissertation Title: “Paley-Wiener theorem for line bundles over compact symmetric spaces.”
3. Maiia Bakhova (Ph.D. Completed in December 2011, Mathematics, LSU), Dissertation Title: “A numerical investigation of Apery-like equations and related Picard-Fuchs equations.”
4. Mehdi Naderi Abadi (Ph. D. Completed in February 2011, Mechanical Engineering), Dissertation Title: “Thermodynamic approach to fatigue failure analysis in metals and composite materials.”
5. Megan Alicia McEwen (Ph. D. Completed in June 2007, LSU, Physics and Astronomy), Dissertation Title: “Using power spectra to look for anisotropies in ultra-high energy cosmic ray distributions.”
6. Vochita Mihai (Ph.D. Completed in May 2004, LSU, Mathematics), Dissertation Title: “The Radon-Gauss transform.”
7. Joshua D Wetuski (Ph.D., Physics General Exam in November 2019).
8. Liz Jee (Ph.D., Chemistry General Exam in March 2013).
9. Alicia O. Duersel (Ph.D., Human Resource Education, General Exam in July 2011).

Supervised Undergraduate Senior Projects

1. Bret A. Chalpin, Michael J. Smith, Ty M. Verret, (Mentor, Senior Capstone Project, Completed in May 2020), Project Title: “Vertical Jump Digital Measuring Device.”
2. Benjamin Stephen Brim, Tyler Fox, David Cannon, and Nicholas Preston Harper, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “Areal Drone Hawk.”
3. Nawaf Nidal Awad, Jacob A. Beard, Alex C. Schott, and Preston Huie Miller, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “University Student Design and Applied Solutions Competition (USDASC).”
4. Gregory G. Suhor, Jared T. Swetnam, Kevin E. Broadbridge, and William J. Fisher, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “PCB Photomask Etcher.”
5. Lius E. Diaz, Scott G. Laiche, Chris Myers, Joshua E. Vrettos, Charles P. Kearney, Vuong T. Huynh, and Brandon P. Clancey, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “Areal Drone Dragon.”
6. Randy Wells, Jay A. Pertuit, and Zachary K. Fontenot, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “TigerRacing FSAE Electrical System.”
7. Christian P. Pilgrim, Jordan M. Holland, Daniel C. Sagona, Julia L. Goodridge, Julie A. Reinecke, Landon A. Weber, and Azam S. Mojoy, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “IEEE Region 5 Robot Competition 2019.”

8. Margi Hareshkuma Desai, Madeline G. Hunt, Cole Daniel Katzenstein, Dillon D. Morris, and Taylor Van Tran, (Mentor, Senior Capstone Project, Completed in May 2019), Project Title: “Neighborhood Surveillance.”
9. Robert Adams, Mark Babin, Cody Braud, Taylor Jackson, and Nicholas Maxey, (Mentor, Senior Capstone Project, Completed in December 2017), Project Title: “Safety Sensor Suite.”
10. Zachary Faircloth, Steven Lindig, Austin Rome, Matthew Torres, and Vonzell Williams, (Mentor, Senior Capstone Project, Completed in December 2016), Project Title: “Automatic Range-Finder Using Multi-view Images (ARFUMI).”
11. Seth Davidson, John DeGeneres, Phillip Marr, John Palermo, and David Wang, (Mentor, Senior Capstone Project, Completed in December 2015), Project Title: “Levitating Globe.”
12. Paul Madere, Andrew Rogers, Colin Maus, and Azer Shikhaliev, (Mentor, Senior Capstone Project, Completed in May 2015), Project Title: “EKG (Electrocardiogram) Vest.”
13. Daniel Carpenter, Xingjian Gao, Alex Grashoff, Marchelle Jones, and Damian Maynard (Mentor, Senior Capstone Project, Completed in May 2014), Project Title: “Proof of a Wireless EKG Monitoring Device.”
14. Javed, Browning, Breaux, and Manuel (Mentor, Senior Capstone Project, Completed in December 2012), Project Title: “Sound Localization II.”
15. DeLatin, Francis, Shaheen, and Waguespack (Mentor, Senior Capstone Project, Completed in May 2011), Project Title: “Digital Stethoscope.”
16. Thompson, Hilliard, Speyrer, and Venkatesan (Mentor, Senior Capstone Project, Completed in December 2011), Project Title: “Sound Localization Using Non-calibrated Microphones.”

Research Partners

- NASA, Jet Propulsion Laboratory.
- NASA Glenn Research Center.
- STAR Lab, Department of Electrical Engineering, Stanford University.
- Communications Research Centre, Canada.
- Mitsubishi Electric Research Labs, Massachusetts.
- Alcatel-Lucent/Nokia Bell Labs, New Jersey.
- Department of Electrical and Computer Engineering, University of Michigan-Dearborn.
- Department of Electrical and Computer Engineering, University of Houston.
- Department of Electrical Engineering, University of Texas at Dallas.
- VLSI Design Group, Department of Electrical and Computer Engineering, Louisiana State University.
- Nano-material Group, Department of Mechanical Engineering, Polytechnic University of New York.
- Material Characterization Group, Department of Mechanical Engineering, Louisiana State University.

- Structural Monitoring Group, Department of Civil and Environmental Engineering, Louisiana State University.
- Department of Construction Management, Louisiana State University.
- Department of Mathematics, Louisiana State University.
- Department of Biological Science, Louisiana State University.
- Sensor Networks Group, Department of Computer Science, Louisiana State University.
- Wireless Networks Group, Department of Computer Science, Louisiana State University.
- Department of Computer Science/Electrical Engineering, National Tsing Hua University, Hsintsu, Taiwan.
- Department of Electronic Engineering, National Chiao Tung University, Hsintsu, Taiwan.
- Department of Electrical Engineering, National Taiwan Normal University, Taipei, Taiwan.
- Department of Electrical Engineering, Yuan Ze University, Taoyuan, Taiwan.
- Department of Electrical Engineering, Indian Institute of Technology, Pitna, India.
- School of Astronautics and Aeronautics, University of Electronic Science and Technology of China, Chengdu, China.
- Department of Computer Science and Technology, Huaqiao University, Xiamen, China.

References

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- Dr. Yiyang Wu, Principal Research Scientist, IEEE Fellow, Communications Research Centre Canada, Adjunct Professor, Carleton University, E-mail: yiyang.wu@crc.ca, Tel: (613) 998-2870.
- Dr. John M. Cioffi, Professor, IEEE Fellow, Member of National Academy of Engineering, Department of Electrical Engineering, Stanford University, Email: cioffi@stanford.edu, Tel: (650) 723-2150.
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- Dr. Lajos Hanzo, Professor, British Royal Academy of Engineering Fellow, IEEE/IEE Fellow, University of Southampton, United Kingdom, E-mail: lh@ecs.soton.ac.uk, Tel: 44 / (0)23 / 80 593125.
- Dr. Tho Le-Ngoc, Professor, IEEE Fellow, Department of Electrical and Computer Engineering, McGill University, Montreal, Québec, Canada H3A-2A7, E-mail: tho@ece.mcgill.ca, Tel: (514) 398-5252.
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- Dr. Su-Seng Pang, Professor and Associate Vice Chancellor of LSU, Fellows of ASME, AAAS, Department of Mechanical Engineering, Louisiana State University, E-mail: mepang@me.lsu.edu, Tel: (225) 578-5892.
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