

Kenle Chen

Assistant Professor, Dept. of Electrical and Computer Engineering, Univ. of Central Florida

• Research Focus

- Energy- and Spectrum-Efficient RF/Mm-Wave Circuits & Systems for Next-G Communications;
- AI-Assisted RF/Mm-Wave Circuits & Systems and Electronic Design Automation (EDA);
- Enabling RF Technologies for New Communication Paradigms;
- Heterogeneous Integration, Advanced Packaging and Co-Design of RF/Mm-Wave Systems.

• Education

Ph.D. in Electrical Engineering, Purdue University, USA	Aug. 2008 – Dec. 2013
M.E. in Electronics and Information Eng., Peking University, China	Sep. 2005 – June 2008
B.S. in Electronics and Communication Eng., Xi'an Jiaotong University, China	Sep. 2001 – June 2005

• Professional Experience

Assistant Professor , University of Central Florida, Orlando, FL	Aug. 2018 – Present
Assistant Professor , University of Rhode Island, Kingston, RI	Aug. 2017 – Aug. 2018
Staff RFIC Engineer , Skyworks Solutions, Inc., San Jose, CA	Sep. 2015 – Aug. 2017
Lead RFIC Engineer , Telink Microdevices LLC., Tustin, CA	Nov. 2014 – Aug. 2015
Principal RFIC Engineer/RFIC Engineer , RFaxis Inc., Irvine, CA	Oct. 2013 – Nov. 2014

• Honors and Awards

- **NSF CAREER Award**, National Science Foundation, 2023.
- **Best Conference Paper Award** in IEEE Wireless and Microwave Technology Conference (WAMICON), Melbourne, Apr. 2023.
- **1st Place Best Student Paper Award** in IEEE Wireless and Microwave Technology Conference (WAMICON), Melbourne, Apr. 2023, as Advisor.
- **Outstanding Service Recognition**, IEEE Microwave Theory and Techniques Society (MTT-S), 2022.
- **2nd Place Award** in IEEE MTT-S “The 18th High Efficiency Power Amplifier Student Design Competition”, June 2022, as Advisor.

- **1st Place Award** in IEEE MTT-S “The 17th High Efficiency Power Amplifier Student Design Competition”, Oct. 2021, as Advisor.
- **1st Place Best Paper Award** in IEEE MTT-S International Microwave Symposium (IMS), Los Angeles, Aug. 2020.
 - Flagship conference of IEEE Microwave Theory and Techniques Society
 - Selected from 333 accepted papers (data from IEEE Xplore)
- **1st Place Award** in IEEE MTT-S “The 16th High Efficiency Power Amplifier Student Design Competition”, Oct. 2020, as Advisor.
- **1st Place Award** in IEEE MTT-S “Carrier Aggregation BAW Quadplexer Module Student Design Competition”, Boston, June 2019, as Advisor.
- **3rd Place Award** in IEEE MTT-S “The 15th High Efficiency Power Amplifier Student Design Competition”, Boston, June 2019, as Advisor.
- **2nd Place Best Student Paper Award** in IEEE WAMICON, Cocoa Beach, Apr. 2019, as Advisor.
- **1st Place Award** in IEEE MTT-S “Carrier Aggregation BAW Quadplexer Module Student Design Competition”, Philadelphia, June 2018, as Advisor.

Prior to Joining UCF

- **Graduate Fellowship** of IEEE Microwave Theory and Techniques Society, 2012.
- **2nd Place Award** in IEEE MTT-S International Microwave Symposium “The 8th High Efficiency Power Amplifier Student Design Competition”, Montreal, June 2012.
- **3rd Place Award** in IEEE MTT-S International Microwave Symposium “The 7th High Efficiency Power Amplifier Student Design Competition”, Baltimore, June 2011.

- **Grants**

External (Total Funding as PI/Co-PI: **\$3.42M**, Chen’s Share: **\$1.65M**)

1. **PI**, “ASCENT: Heterogeneously Integrated and AI-Empowered Millimeter-Wave Wide-Bandgap Transmitter Array towards Energy- and Spectrum-Efficient Next-G Communications”, NSF ECCS Addressing Systems Challenges through Engineering Teams (ASCENT) Program, #2328281, Amount: \$1,500,000 (Chen’s Credit: \$500,000), 2024-2028. (Status: **Active**)
2. **Co-PI**, “FuSe-TG: Open, Multiscale, Application-Agnostic Platform for Heterogeneous System-in-Package Co-Design”, NSF Future of Semiconductors Program (FuSe), CCF #2235414, Amount: \$550,000 (Chen’s Credit: \$100,000), 2023-2025. (Status: **Active**)
3. **PI (Sole)**, “CAREER: Non-Reciprocally-Coupled Load-Modulation Platform for Next-Generation High-Power Magnetic-Less Fully-Directional Radio Front Ends”, NSF Faculty Early Career Development Program, ECCS #2239207, Amount: \$500,000, 2023-2028. (Status: **Active**)
4. **PI**, “CCSS: AI-Assisted Reconfigurable Dual-Input Load-Modulation Transmitter Array for Energy- and Spectrum-Efficient Massive MIMO Communications”, NSF ECCS Core Program #2218808, Amount: \$500,000 (Chen’s Credit: \$180,000), 2022-2025. (Status: **Active**)

5. **PI (Sole)**, “CCSS: Intrinsically-Linear Loadline-Envelope-Tracking (LET) Radio Transmitter Toward Wideband, Energy-Efficient, and Ultra-Fast Wireless Communications”, NSF ECCS Core Program, #1914875, Amount: \$293,000, 2019-2024. (Status: **Active**)
6. **PI**, “Highly Efficient and Linear Millimeter-Wave Power Amplifiers for 5G Communications”, NSF I-UCRC, MIST Center, Amount: \$50,000, 2019-2020. (Status: **Completed**)
7. **PI (Sole)**, “Si-Integrated Doherty-Like Load-Modulated Balanced Amplifier for 5G and Beyond”, NSF I-UCRC, MIST Center, Amount: \$25,000, 2020-2021. (Status: **Completed**)

Internal (Total Funding: **\$161.5k**)

- **PI**, “Acquisition of High-End Probe Station for RF/mm-Wave/THz Chip Characterization”, Infrastructure Fund 2022, ECE Department of UCF, Amount: \$29,500. (Status: **Completed**)
- **Co-PI**, “Acquiring Vector Signal Analyzer to Enhance the Testbed Capabilities for Next-Generation Wireless Communications and Sensing”, Infrastructure Fund 2022, College of Engineering and Computer Science of UCF, Amount: \$75,000. (Status: **Completed**)
- **PI**, “Acquisition of Advanced MIMO Testing Platform”, Infrastructure Fund 2021, College of Engineering and Computer Science of UCF, Amount: \$32,000. (Status: **Completed**)
- **PI**, “Acquisition of RF/Millimeter-Wave High-Speed Signal Generation Instrument”, Infrastructure Fund 2019, ECE Department of UCF, Amount: \$22,000. (Status: **Completed**)

• **Publications**

Journal

- [J1] J. Guo, Y. Cao, and K. Chen, “1-D Reconfigurable Pseudo-Doherty Load Modulated Balanced Amplifier with Intrinsic VSWR Resilience across Wide Bandwidth,” *IEEE Transactions on Microwave Theory and Techniques*, vol. 71, no. 6, pp. 2465-2478, June 2023.
- [J2] H. Lyu, Y. Cao, and K. Chen, “Highly Linear and Efficient Quasi-Balanced Doherty Power Amplifier at 3.5 GHz,” *IEEE Microwave Magazine*, vol. 24, no. 3, pp. 52-58, Mar. 2023. (**1st Place Winner of IEEE MTT-S the 17th High Efficiency Power Amplifier Design Competition**)
- [J3] H. Lyu and K. Chen, “Analysis and Design of Reconfigurable Multi-Band Mismatch-Resilient Quasi-Balanced Doherty Power Amplifier for Massive MIMO Systems,” *IEEE Transactions on Microwave Theory and Techniques*, vol. 70, no. 10, pp. 4410-4421, Oct. 2022.
- [J4] Y. Cao, H. Lyu, and K. Chen, “Continuous-Mode Hybrid Asymmetrical Load-Modulated Balanced Amplifier with Three-Way Modulation and Multi-Band Reconfigurability,” *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 69, no. 3, pp. 1077-1090, Mar. 2022.
- [J5] H. Lyu, Y. Cao, and K. Chen, “Linearity Enhanced and Highly Efficient Doherty Power Amplifier,” *IEEE Microwave Magazine*, vol. 2, no. 10, pp. 62-69, Sep. 2021. (**1st Place Winner of IEEE MTT-S the 16th High Efficiency Power Amplifier Design Competition**)
- [J6] H. Lyu and K. Chen, “Hybrid Load-Modulated Balanced Amplifier with High Linearity and Extended Dynamic Range,” *IEEE Microwave and Wireless Components Letters*, vol. 31, no. 9, pp. 1067-1070, Sep. 2021.

- [J7] Y. Cao and K. Chen, "Hybrid Asymmetrical Load Modulated Balanced Amplifier with Wide Bandwidth and Three-Way-Doherty Efficiency Enhancement," *IEEE Microwave and Wireless Components Letters*, vol. 31, no. 6, pp. 721-724, June 2021. **(Top IMS 2021 Papers)**
- [J8] H. Lyu, Y. Cao, and K. Chen, "Linearity-Enhanced Quasi-Balanced Doherty Power Amplifier with Mismatch Resilience through Series/Parallel Reconfiguration for Massive MIMO," *IEEE Transactions on Microwave Theory and Techniques*, vol. 69, no. 4, pp. 2319-2335, Apr. 2021.
- [J9] Y. Cao, H. Lyu, and K. Chen, "Asymmetrical Load Modulated Balanced Amplifier with Continuum of Modulation Ratio and Dual-Octave Bandwidth," *IEEE Transactions on Microwave Theory and Techniques*, vol. 69, no. 1, pp. 682-696, Jan. 2021.
- [J10] Y. Cao and K. Chen, "Pseudo-Doherty Load-Modulated Balanced Amplifier with Wide Bandwidth and Extended Power Back-Off Range," *IEEE Transactions on Microwave Theory and Techniques*, vol. 68, no. 7, pp. 3172-3183, Jul. 2020.
- [J11] H. Lyu and K. Chen, "Balanced-to-Doherty Mode-Reconfigurable Power Amplifier with High Efficiency and Linearity Against Load Mismatch," *IEEE Transactions on Microwave Theory and Techniques*, vol. 68, no. 5, pp. 1717-1728, May 2020.
- [J12] Y. Cao, H. Lyu, and K. Chen, "Enhancing Carrier Aggregation: Design of BAW Quadplexer with Ultrahigh Cross-Band Isolation," *IEEE Microwave Magazine*, vol. 21, no. 3, pp. 101-110, Mar. 2020. **(1st Place Winner of IEEE MTT-S Carrier Aggregation Design Competition)**
- [J13] Y. Cao, E. Sunde, and K. Chen, "Multiplying Channel Capacity: Aggregation of Fragmented Spectral Resources," *IEEE Microwave Magazine*, vol. 20, no. 1, pp. 70-77, Jan. 2019. **(1st Place Winner of IEEE MTT-S Carrier Aggregation Design Competition)**

Prior to Joining UCF

- [J14] A. Semnani, K. Chen, and D. Peroulis, "Microwave gas breakdown in tunable evanescent-mode cavity resonators," *IEEE Microwave and Wireless Components Letters*, vol. 24, no. 5, pp. 351-353, May 2014.
- [J15] K. Chen, E. J. Naglich, Y. C. Wu, and D. Peroulis, "Highly Linear and Highly Efficient Dual-Carrier Power Amplifier Based on Low-Loss Radio-Frequency Carrier Combiner," *IEEE Transactions on Microwave Theory and Techniques*, vol. 62, no. 3, pp. 590-599, Mar. 2014.
- [J16] K. Chen, T.-C. Lee, and D. Peroulis, "Co-design of Multi-Band High-Efficiency Power Amplifier and Three-Pole High- Q Tunable Filter," *IEEE Microwave and Wireless Components Letters*, vol. 23, no. 12, pp. 647-649, Dec. 2013.
- [J17] K. Chen, J. Lee, W. J. Chappell, and D. Peroulis, "Co-Design of Power Amplifier and High- Q Output Bandpass Filter," *IEEE Transactions on Microwave Theory and Techniques*, vol. 61, no. 12, pp. 3940-3950, Dec. 2013.
- [J18] K. Chen and D. Peroulis, "A 3.1-GHz Class-F Power Amplifier with 82% Power-Added-Efficiency," *IEEE Microwave and Wireless Components Letters*, vol. 23, no. 8, pp. 436-438, Aug. 2013.
- [J19] K. Chen and D. Peroulis, "Design of Broadband Highly Efficient Harmonic-Tuned Power Amplifier Using in-Band Continuous Class-F⁻¹/F Mode-Transferring," *IEEE Transactions on Microwave Theory and Techniques*, vol. 60, no. 12, pp. 4107-4116, Dec. 2012.

- [J20] K. Chen, X. Liu, and D. Peroulis, "Widely-Tunable Highly Efficient Power Amplifier with Ultra-Narrow Instantaneous Bandwidth," *IEEE Transactions on Microwave Theory and Techniques*, vol. 60, no. 12, pp. 3787-3797, Dec. 2012.
- [J21] K. Chen and D. Peroulis, "Design of Adaptive Highly Efficient GaN Power Amplifier for Octave-Bandwidth Applications and Dynamic Load Modulation," *IEEE Transactions on Microwave Theory and Techniques*, vol. 60, no. 6, pp. 1829-1839, June 2012.
- [J22] K. Chen and D. Peroulis, "Design of Highly Efficient Broadband Class-E Power Amplifier Using Synthesized Lowpass Matching Networks," *IEEE Transactions on Microwave Theory and Techniques*, vol. 59, no. 12, pp. 3162-3173, Dec. 2011.
- [J23] K. Chen, X. Liu, A. Kovacs, W. J. Chappell, and D. Peroulis, "Antibiased Electrostatic RF MEMS Varactors and Tunable Filters," *IEEE Transactions on Microwave and Theory Techniques*, vol. 54, no. 2, pp. 3971-3981, Dec. 2010.

Conference

- [C1] J. Guo, Y. Cao, and K. Chen, "Reconfigurable Hybrid Asymmetrical Load Modulated Balanced Amplifier with High Linearity, Wide Bandwidth, and Load Insensitivity," *IEEE MTT-S Int. Microwave Symposium*, San Diego, June 2023.
- [C2] H. Lyu, R. Lovato, S. Gowri, X. Gong, and K. Chen, "Co-Design of Doherty Power Amplifier and Post-Matching Bandpass Filter," *Proc. IEEE Wireless and Microwave Technology Conference*, 4 pages, Melbourne, FL, Apr. 2023. **(Best Conference Paper Award)**
- [C3] N. B. Vangipurapu and K. Chen, "High-Power Magnetic-Less STAR Frontend using GaN-Based Quadrature Balanced Amplifier," *Proc. IEEE Wireless and Microwave Technology Conference*, 4 pages, Melbourne, FL, Apr. 2023. **(1st Place Best Student Paper Award)**
- [C4] J. Guo and K. Chen, "Broadband Double-Balanced Load-Modulation Power Amplifier with Quasi Load Isolation," *Proc. IEEE Wireless and Microwave Technology Conference*, 4 pages, Melbourne, FL, Apr. 2023.
- [C5] N. B. Vangipurapu, H. Lyu, and K. Chen, "Intrinsically Mode-Switchable Load-Modulation Power Amplifier Leveraging Transistor's Digital-Analog Duality," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, Denver, 2022.
- [C6] Y. Cao and K. Chen, "Highly Miniaturized and Wideband 3-dB Quadrature Hybrid Using Slow-Wave Coupled Line," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, Atlanta, 2021.
- [C7] H. Lyu and K. Chen, "Wideband Quasi-Balanced Doherty Power Amplifier with Reciprocal Main/Auxiliary Setting and Mismatch-Resilient Parallel/Series Reconfiguration," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, Atlanta, 2021.
- [C8] Y. Cao and K. Chen, "Pseudo-Doherty Hybrid Load Modulated Balanced Amplifier with Extended Dynamic Power Range and Ultra-Broad RF Bandwidth," in *Proc. the Government Microcircuit Applications and Critical Technology Conference (GOMACTech)*, 2021.
- [C9] Y. Cao and K. Chen, "Dual-Octave-Bandwidth RF-Input Pseudo-Doherty Load Modulated Balanced Amplifier with >10-dB Power Back-Off Range," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, Los Angeles, CA, 4 pages, June 2020. **(1st Place Best Paper Award)**

- [C10] H. Lyu and K. Chen, "Reconfigurable Quasi-Balanced Doherty Power Amplifier with High Efficiency and Linearity Against Load Mismatch for MIMO and Array Applications," in *Proc. the Government Microcircuit Applications and Critical Technology Conference (GOMACTech)*, San Diego, CA, Mar. 2020.
- [C11] Y. Cao, H. Lyu, and K. Chen, "Load-Modulated Balanced Amplifier with Reconfigurable Phase Control for Extended Dynamic Range," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, pp. 1335-1338, Boston, MA, June 2019.
- [C12] H. Lyu, Y. Cao, and K. Chen, "Doherty-to-Balanced Switchable Power Amplifier," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, pp. 1339-1342, Boston, MA, June 2019.
- [C13] Y. Cao, H. Lyu, and K. Chen, "Wideband Doherty Power Amplifier in Quasi-Balanced Configuration," in *Proc. IEEE Wireless and Microwave Technology Conference*, 4 pages, Cocoa Beach, FL, Apr. 2019. **(Best Student Paper Award)**

Prior to Joining UCF

- [C14] K. Chen and D. Peroulis, "Co-design of Power Amplifiers and High- Q Filters," in *Proc. IEEE Topical Symposium on Power Amplifiers for Wireless Communications*, San Diego, CA, Sep. 2013. **(Invited)**
- [C15] Y. C. Wu, K. Chen, and D. Peroulis, "A Wideband 0.7–2.2 GHz Tunable Power Amplifier with Over 64% Efficiency Based on High- Q Second Harmonic Loading," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, 3 Pages, Seattle, WA, June 2013.
- [C16] K. Chen, A. Semnani, and D. Peroulis, "High-Power Microwave Gas Discharge in High- Q Evanescent-Mode Cavity Resonators and Its Instantaneous/Long-Term Effects," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, 3 Pages, Seattle, WA, June 2013.
- [C17] K. Chen, Y. C. Wu, E. J. Naglich, and D. Peroulis, "Highly Efficient and Highly Linear Amplification of Dual-Carrier Signals," in *Proc. IEEE Topical Symposium on Power Amplifiers for Wireless Communications*, San Diego, CA, Sep. 2012. **(Invited)**
- [C18] K. Chen and D. Peroulis, "Design of Broadband High-Efficiency Power Amplifier using in-Band Class F^{-1}/F Mode-Transferring," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, 3 Pages, Montreal, Canada, June 2012.
- [C19] K. Chen, H. H. Sigmarsson, and D. Peroulis, "Power Handling of High- Q Evanescent-Mode Tunable Filter with Integrated Piezoelectric Actuators," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, 3 Pages, Montreal, Canada, June 2012.
- [C20] D. Kim, X. Cui, A. Cherala, K. Chen, and D. Peroulis, "A Two-Dimensional Electronically-Steerable Array Antenna for Target Detection on Ground," in *Proc. IEEE International Symposium on Antennas and Propagation*, pp. 734-737, July 2011.
- [C21] K. Chen, X. Liu, W. J. Chappell, and D. Peroulis, "Co-Design of Power Amplifier and Narrowband Filter using High- Q Evanescent-mode Cavity Resonator as The Output Matching Network," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, 4 Pages, Baltimore, MD, June 2011.
- [C22] X. Liu, K. Chen, L. P. B. Katehi, W. J. Chappell, and D. Peroulis, "System-Level Characterization of Bias Noise Effects on Electrostatic RF MEMS Tunable Filters," in *Proc. IEEE 24th International Conference on Micro Electromechanical Systems*, pp. 1142-1145, May 2010.

[C23] K. Chen, A. Kovacs, and D. Peroulis, "Anti-Biased RF MEMS Varactor Topology for 20–25 dB Linearity Enhancement," in *Proc. IEEE MTT-S Int. Microwave Symposium Digest*, pp. 1142-1145, Anaheim, CA, May 2010.

• Invited Talks

- "Quadrature-Coupled Load Modulation: A 'Grand Unified' Power-Amplification Platform for 5G-and-Beyond Communications," Invited Talk, *Renesas Electronics Corporation*, June 2023.
- "Quadrature-Coupled Load Modulation: A 'Grand Unified' Power-Amplification Platform for 5G-and-Beyond Communications," Invited Talk, *Distinguished Lecture Series of Peregrine Semiconductor Inc.*, May 2023.
- "Quadrature-Coupled Load Modulation: A 'Grand Unified' Power-Amplification Platform for Next-G Wireless Communications," Invited Talk, *Motorola Scientific and Advisory Board Associates (SABA) Conference*, Mar. 2023.
- "Reconfigurable Circuit Design and Load Modulation Techniques for 5G Coexistence with Weather Radiometry," Invited Workshop, *IEEE MTT-S Int. Microwave Symposium*, Denver, CO, June 2022.
- "Quadrature-Coupled Active Load Modulation: A 'Grand Unified' Power-Amplification Platform," Invited Talk, *IEEE MTT-S Int. Wireless Symposium Digest (IWS)*, May 2021.
- "Broadband Highly Efficient and Linear Power Amplifiers for Next-Generation RF Front-Ends," Invited Workshop, *IEEE MTT-S Int. Microwave Symposium*, Philadelphia, PA, June 2018.
- "Demystify RF Frontends: Recent Advances and Future Trends," Invited Talk, *IEEE Wireless and Microwave Technology Conference*, Clearwater, FL, Apr. 2018.
- "Demystify RF Frontends: Recent Advances and Future Trends," Invited Seminar, Purdue University, West Lafayette, IN, Dec. 2017.
- "Co-Design of Power Amplifiers and High- Q Filters," Invited Talk, *IEEE Topical Symposium on Power Amplifiers for Wireless Communications*, San Diego, CA, Sep. 2013.
- "Design of Highly Efficient Switch-Mode Power Amplifiers over Octave Bandwidths," Invited Workshop, *IEEE MTT-S Int. Microwave Symposium*, Seattle, WI, June 2013.
- "Co-Design of High-Efficiency Tunable Power Amplifiers and Tunable Filters," Invited Workshop, *IEEE MTT-S Int. Microwave Symposium*, Seattle, WI, June 2013.

• Patents

- "Reconfigurable Asymmetrical Load-Modulated Balanced Amplifier," pending patent application, US20220255506A1.
- "Load-Modulated Balanced Amplifiers," pending patent application, US20220255507A1.
- "A Balanced to Doherty Mode Switchable Power Amplifier," patent granted, US11362625B2.

Prior to Joining UCF

- "Band-Reconfigurable and Load-Adaptive Power Amplifier," patent granted, US10601380B2.

- **Teaching**

Average Teaching Evaluation Rating: 4.3/5

- EEE5323: RF Integrated Circuits Design (Fall 2019-2023)
 - New course with focus shifted from transceiver to frontend to keep up with the development of RF semiconductor industry
 - Offering students unique trainings including emulation of industry's product design process
- EEL5439: RF/Microwave Active Circuits (Spring 2019, 2020, 2021, 2023)
- EEE3307: Electronics I (Fall 2018)
- EEL3123: Linear Circuits II (Spring 2022)

- **Students Under Supervision**

- Haifeng Lyu, *Ph.D. Student* (now with Qorvo Inc.) Aug. 2018 – Dec. 2022
Dissertation: "Reconfigurable Load-Modulated Power Amplifier for Energy- and Spectrum-Efficient Wireless Communications."
- Yuchen Cao, *Ph.D. Student* (now with Qorvo Inc.) Aug. 2018 – Dec. 2022
Dissertation: "Broadband Power Amplifier Design with High Power, High Efficiency and Large Back-off Range."
- Jiachen Guo, *Ph.D. Student* Aug. 2021 – Present
- Niteesh B. Vangipurapu, *Ph.D. Student* Aug. 2022 – Present
- Shakthi Priya Gowri, *Ph.D. Student* Jan. 2023 – Present
- Pingzhu Gong, *Ph.D. Student* Jan. 2023 – Present
- Mehran Rasheed, *Ph.D. Student* Jan. 2023 – Present
- Alex D. Santiago Vargas, *Ph.D. Student co-advised with Prof. Dimitrios Peroulis at Purdue University* Oct. 2022 – Present
- Shadman Fuad, *Ph.D. Student* Aug. 2023 – Present

- **Professional Services**

- **Associate Editor**, IEEE Transactions on Microwave Theory Techniques, 2019 – Present
 - Flagship journal of IEEE MTT-S
- **AdCom Member and Geographic Activities (MGA) Coordinator** (Region 3, Southeast USA), IEEE MTT-S, Dec. 2022 – Present
- **Chair**, IEEE AP-S and MTT-S Orlando Chapter, July 2019 – Jan. 2022
- **TPC Co-Chair**, IEEE Wireless and Microwave Technology Conference (WAMICON) 2022
- **Steering Committee Member**, IEEE WAMICON 2019-2022
- **Conference TPRC Member**, IMS 2018/2019/2021/2022, WAMICON 2017-2022

- **Journal Reviewer**, IEEE TMTT, IEEE JSSC, IEEE TCAS-I, IEEE MWCL, IEEE TCAS-II, IEEE TBCAS, IEEE TCPMT, IEEE ACCESS, etc.
- **NSF Panelist**