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Education

Ph.D. Electrical and Computer Engineering, University of Texas at Austin	2009 – 2013
M.S. Mechanical/Electro-optical Engineering, National Chiao Tung University	2004 – 2006
B.S. Mechanical Engineering, National Chiao Tung University	2000 – 2004

Employment History and Research Experience

Professor , Electrical and Computer Engineering, University of Illinois Chicago	2024–present
Associate Professor , Electrical and Computer Engineering, University of Illinois Chicago	2018– 2024
Assistant Professor , Electrical and Computer Engineering, Wayne State University	2014– 2018
Research Scientist , Metamaterial Commercialization Center, Intellectual Ventures Inc.	2013– 2014
Research Assistant , Electrical and Computer Engineering, University of Texas at Austin	2010– 2013
Teaching Assistant , Electrical and Computer Engineering, University of Texas at Austin	2009– 2010
Assistant Researcher , Taiwan Semiconductor Research Institute	2006– 2009
Visiting Professor , Department of Information Engineering, University of Pisa	2025

Research Interests:

❖ *Applied Electromagnetics and Quantum Electrodynamics*

- Control of wave propagation and scattering using metamaterials and metasurfaces
- Wireless sensors and integrated systems
- RF/microwave antennas and circuits for 5G/B5G communication systems
- Parity-time symmetry and non-Hermitian electromagnetism
- Circuit- and cavity quantum electrodynamics for quantum bits (qubits)

❖ *Plasmonics, Nanophotonics and Nanoelectromagnetism*

- Optical metamaterials and nanostructures for localization, trapping, emission, and wavelength-conversion of photons at the nanoscale
- Plasmonics and plasmoelectronics
- Light-matter interactions, nonlinear nanophotonics, multiphoton processes, and optical heterodyne

❖ *Low-dimensional Nanomaterials and Applications*

- Nanoelectronics and nanophotonics based on 1D (CNT) and 2D nanomaterials (graphene and TMDs)
- Optical and RF sensing technologies based on nanomaterial-based devices
- Nanomaterials for wireless wearable and bio-implantable devices

Honors and Distinctions

- UIC Proof-of-Concept Award 2025
- UAAT International Young Visiting Scholar Program 2025
- **Fellow of IEEE** 2024
- University of Illinois Scholar 2024
- UIC Researcher of the Year 2024
- IEEE Sensors Council Technical Achievement Award 2024
- IEEE Sensors Council Distinguished Lecturer 2024
- IEEE Chicago Section Distinguished Senior R&D Award 2023
- UIC College of Engineering Faculty Research Award 2021
- Emerging Leader Award, IOP Measurement Science and Technology 2021
- ACES Early Career Award 2019
- PIERS Young Scientist Award 2019
- NSF CAREER Award 2018
- SPIE Rising Researcher Award 2018
- WSU College of Engineering Research Excellence Award 2018
- IEEE AP-S Raj Mittra Travel Grant 2018
- IEEE Sensors Council Young Professional Award 2017
- Short List, Institute of Physics (IOP) Young Researcher Award 2017
- Young Scientist Award, International Union of Radio Science (URSI) 2017
- Young Scientist Award, URSI Commission B: Electromagnetics 2016
- Air Force Research Laboratory Summer Faculty Fellowship 2016
- National Argonne Laboratory Director's Fellowship (declined) 2014
- Professional Development Award, Graduate School of UT Austin 2013
- Donald D. Harrington Fellowship 2012
- USNC-URSI Ernest K. Smith Student Paper Award 2012
- Finalist, Student Paper Contest, IEEE Antennas and Propagation Symposium 2011, 2013
- Honorable Mention, Student Paper Contest, IEEE Antennas and Propagation Symposium 2010
- Travel Fellowship Grant Award, USNC-URSI 2012, 2013
- Best Paper Award, Metamaterials' 2011 2011
- Student Grant of European Physical Society 2010
- Honorary Member of Phi Tau Phi Scholastic Honor Society 2006
- United Microelectronics Corporation Scholarship 2005
- Presidential Award, Nation Chiao Tung University 2005
- Presidential Award, Nation Chiao Tung University 2004

Mentored Student Awards

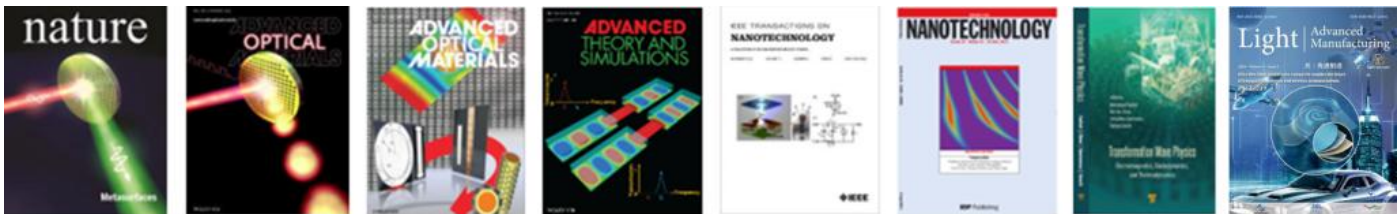
- Bruce Gunter, IEEE AP-S Undergraduate Summer Research Scholarship (2025)

- Nga Vu and Trung Dung Ha, Finalist, Student Design Contest, 2024 IEEE Antennas and Propagation Symposium
- Zhilu Ye, Mingye Yang, Yichong Ren, Second Prize, Student Design Contest, 2022 IEEE Antennas and Propagation Symposium
- Liang Zhu, First Prize, Student Paper Contest, 2021 IEEE Wireless Power Transfer Conference
- Liang Zhu, Young Scientist Award, 2021 URSI General Assembly and Scientific Symposium
- Liang Zhu, Finalist, Student Paper Contest, 2021 IEEE Antennas and Propagation Symposium
- Mehdi Hajizadegan, Honorable Mention, Student Paper Contest, 2018 IEEE Antennas and Propagation Symposium
- Maryam Sakhdari, Thomas C. Rumble Fellowship Award (2017)
- Mehdi Hajizadegan, Olbrot Travel Award (2017)
- Liang Zhu, Finalist, Student Poster Contest, 2017 Wireless Integrated MicroSensing & Systems
- Maryam Sakhdari, Honorable Mention, 2017 Student Paper Contest, IEEE Antennas and Propagation Symposium
- Mehdi Hajizadegan, Honorable Mention, Student Paper Contest, 2017 IEEE Antennas and Propagation Symposium
- Mehdi Hajizadegan, Best Paper Award, 2016 IEEE Sensors Conference
- Maryam Sakhdari, Finalist, Student Paper Contest, 2016 IEEE Antennas and Propagation Symposium
- Mehdi Hajizadegan, Finalist, Student Paper Contest, 2016 IEEE Antennas and Propagation Symposium
- Haiyu Huang (co-advised with Dr. Deji Akinwande), Finalist, Student Paper Contest, 2015 IEEE International Microwave Symposium

Publications

Summary: 140 journal papers, 125 conference papers, 9 book chapters, 1 book, 10 US patents

Statistics (As of October 2024): citations: >9,800, h-index: 50



❖ Editorial Book

1. M. Farhat, **P. Y. Chen**, S. Guennea, S. Enoch “*Transformation Wave Physics: Electromagnetics, Elastodynamics and Thermodynamics*,” Pan Stanford Publishing, 2016.

❖ Book Chapters

1. **P. Y. Chen**, C. Argyropoulos, and A. Alù, “*Optical Antennas and Enhanced Nonlinear Effects*,” in *Rectenna Solar Cells*, G. Model and S. Grover, eds., Springer, 2014.

2. **P. Y. Chen**, F. Monticone, C. Argyropoulos, and A. Alù, “*Optical Nanoantennas*,” in *Modern Plasmonics*, A. Maradudin, ed., Elsevier, 2014.
3. **P. Y. Chen**, M. Farhat, and C. Rockstuhl, “*Graphene Plasmonics: Light-Matter Interactions at the Atomic Scale*” in *Graphene Science Handbook: Nanostructure and Atomic Arrangement*, CRC Press/Taylor & Francis, 2014.
4. M. Wu, **P. Y. Chen**, and T. Itoh, “*Metamaterial and Metasurface for Radio-Frequency Beamforming Technology*,” in “*Transformation Wave Physics: Electromagnetics, Elastodynamics and Thermodynamics*,” M. Farhat et al., eds., Pan Stanford Publishing, 2014.
5. Q. Cui, C. Argyropoulos, and **P. Y. Chen**, “*Plasmonic Antennas*,” in *Encyclopedia of Modern Optics II*, X. Ni, eds., Elsevier, 2017.
6. **P. Y. Chen**, “*Graphene Nanoelectromagnetism: from Radio-Frequency to Mid-Infrared*,” in *Carbon-Based Nanoelectromagnetics*, A. Maffucci, eds., Elsevier, 2019.
7. L. Zhu, M. Farhat, K. Salama, and **P. Y. Chen**, “*2D Materials-Based Radio-Frequency Communication and Sensing Systems for IoTs*,” in “*Emerging 2D Materials and Devices for the Internet of Things*,” L. Tao and D. Akinwande, eds., Elsevier, 2020.
8. **P. Y. Chen** and M. Wu, “*Low-Profile Metamaterial-Based Adaptive Beamforming Techniques*,” in “*Modern Printed Circuit Antennas*,” H. Al-Rizzo eds., Intech, 2020.
9. **P. Y. Chen**, M. Farhat, Z. Ye, A. M. Amin, H. Bağci, D. Erricolo, “*Artificial Surfaces and Media for Electromagnetic Absorption and Interference Shielding*” in “*Electromagnetic Compatibility*,” A. Kishk eds., Intech, 2021.
10. **P. Y. Chen**, “*Fundamental and Emerging Applications of Plasmonic Nanoantennas*,” in “*Photonic Crystal, Plasmonic, and Hybrid interfaces: Fundamentals and Applications of Photo-Plasmonic Modalities*,” S. Bhaktha, M. Ferrari, A. M. Rao, and B. T. Cunningham eds., Elsevier, 2026.

❖ Journals

1. A. Al-Khaibari, N. Wu, H. Bağci, D. Erricolo and **P. Y. Chen**, "Theoretical Modeling of Substrate-Integrated Impedance Surfaces," *IEEE Transactions on Antennas and Propagation*, doi: 10.1109/TAP.2025.3558591 (2025).
2. G. Z. Yiu, C. Y. Hsu, C. H. Sun, **P. Y. Chen**, and Y. C. Chang, “Silicon Photonic Physical Unclonable Function Based on Waveguide Array Embedded with Phase Shifters. *Optics Express*, Vol. 33, 19409-19417 (2025).
3. N. Vu, M. Farhat, C. H. Liu, and **P. Y. Chen**, “Optical Identification and Anti-counterfeiting Based on Plasmonic Core–Shell Nanoparticles with Fano Resonance,” *Applied Physics Letters*, Vol. 126, 191105 (2025).
4. Z. Ye, G. Zhao, M. Yang and **P. Y. Chen**, “Review of Wearable Antennas: Part 1: Materials, Fabrication, and Radiation Characteristics,” *IEEE Antennas and Propagation Magazine*, doi: 10.1109/MAP.2025.3530407 (2025).
5. Z. Ye, G. Zhao, M. Yang and **P. Y. Chen**, “Review of Wearable Antennas: Part 2: Materials, Fabrication, and Radiation Characteristics,” *IEEE Antennas and Propagation Magazine*, doi: 10.1109/MAP.2025.3530407 (2025).
6. Y. Ren, F. Zhang, Z. Yan, and **P. Y. Chen**. “Wearable Bioelectronics Based on Emerging Nanomaterials for Telehealth Applications,” *Device (Cell Press)*, Vol. 3, 100676 (2025).

7. Z. Chen, S. Chen, S. M. Andrabi, G. Zhao, Y. Xu, Q. Ouyang, M. E. Busquets, X. Qian, S. Gautam, **P. Y. Chen**, J. Xie, and Z. Yan, "Multifunctional Porous Soft Composites for Bimodal Wearable Cardiac Monitors," *AICHE Journal*, Vol. 70, e18576 (2025).
8. Y. Ren, C. H. Sun, C. H. Liu, C. -T. M. Wu and **P. Y. Chen**, "Wireless Anti-Counterfeiting Labels Using RF Oscillators with Graphene Quantum Capacitors," *IEEE Journal of Radio Frequency Identification*, Vol. 9, 38-4 (2025).
9. J. Li, F. Zhang, X. Xia, K. Zhang, J. Wu, Y. Liu, C. Zhang, X. Cai, J. Lu, L. Xu, R. Wan, D. Hazarika, W. Xuan, J. Chen, Z. Cao, Y. Li, H. Jin, S. Dong, S. Zhang, Z. Ye, M. Yang, **P. Y. Chen**, and J. Luo, "An Ultrasensitive Multimodal Intracranial Pressure Biotelemetric System Enabled by Exceptional Point and Iontronics," *Nature Communications*, Vol. 15, 9557 (2024).
10. N. Vu, P. Heidarzadeh, and **P. Y. Chen**, "Plasmonic Metagrating-Interlayer-Semiconductor (PMIS) Structure for Enhancing Photodetection via Hot-Electron Injection," *Optics Express*, Vol. 32, 33974-33983 (2024).
11. C. Zhang*, L. Zhu, C. Ji, Z. Ye, N. Alsaab, M. Yang, Y. Hu, **P. Y. Chen***, and L. J. Guo*, "Functional Plastic Films: Nano-engineered Composite Based Flexible Microwave Antennas with Near-Unity Relative Visible Transmittance," *Light: Advanced Manufacturing*, Vol. 5, 249-259 (2024); this paper was selected as the front cover of *Light: Advanced Manufacturing*.
12. T. D. Ha, X. Nie, M. Akinsolu, B. Liu, and **P. Y. Chen**, "An Artificial Intelligence-Assisted Optimization of Imperceptible Multi-Mode Rectenna," *IEEE Antennas and Wireless Propagation Letters*, Vol. 23, 3559-3563 (2024).
13. M. Yang, Q. Zhong, Z. Ye, Ş. K. Özdemir, M. Farhat, R. El-Ganainy, and **P. Y. Chen**, "Experimental Observation of Coherent Perfect Absorber-Laser Points in Anti-PT Symmetry," *Physical Review A*, Vol. 110, 033504 (2024).
14. Y. Ren, M. Yang, H. Pan, M. Farhat, A. E. Cetin, and **P. Y. Chen**, "PT Symmetry-Enabled Physically Unclonable Functions for Anti-Counterfeiting RF Tags," *IEEE Transactions on Antennas and Propagation*, Vol. 72, 5129-5140 (2024).
15. N. Wu, Y. Ren, and **P. Y. Chen**, "Enhancing the Sensitivity of Wireless LC Sensors Using Time Modulation," *IEEE Sensors Letters*, Vol. 8, 1-4 (2024).
16. Y. Ren, N. Wu, K.-C. Chang, Y.-S. Su and **P. Y. Chen**, "A Zero-Power Harmonic Tag for Real-Time Wireless Food Quality Monitoring," *IEEE Sensors Letters*, Vol. 8, 1-4 (2024).
17. D. Ha, X. Nie, H. Bagci, D. Erricolo, and **P. Y. Chen**, "A Low-Profile, Wide-Angle and Bandwidth-Enhanced Rectenna for Radiative Energy Harvesting in the 12 GHz Band," *IEEE Antennas and Wireless Propagation Letters*, Vol. 23, 3807-3811 (2024).
18. K. Katoch, N. Jaglan, B. K. Kanaujia, **P. Y. Chen**, and A. A. Kishk, "Triple Bandstop 2.5D Frequency Selective Surface for Sub-6 GHz 5G Communication," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 66, 1420-1429 (2024).
19. Y. Xu, Z. Ye, G. Zhao, Z. Chen, J. Li, M. Yang, B. Berigan, Y. Ling, I. Ozden, W. Gao*, **P. Y. Chen***, Z. Yan*, "Porous Silver Nanowire Composites with Strain-Insensitive Conductance and Ultralow Percolation Thresholds for Wireless Stretchable Bioelectronics Phase-Separated Porous Nanocomposites for Wireless Stretchable Bioelectronics," *Nature Nanotechnology*, Vol. 19, 1158–1167 (2024).

20. X. Nie, N. Wu, C. -T. M. Wu and **P. Y. Chen**, “A Compact, Batteryless and Chipless Intermodulation Sensor for Wireless Crack Detection,” *IEEE Sensors Journal*, Vol. 24, 9998-10005 (2024).
21. **P. Y. Chen** and L. J. Guo. “Inkjet-Printed Invisible Antenna Facilitates Next-Generation Wireless Communication.” *Device* (Cell Press), Vol. 2, 100289 (2024).
22. Z. Ye, M. Yang, M. Farhat, and **P. Y. Chen**, “Multimodal Wireless Wound Sensors via Higher-Order Parity-Time Symmetry,” *IEEE Sensors Journal*, Vol. 24, 741-749 (2024); *this paper is invited to present at IEEE SENSORS 2024*.
23. N. Khiabani, C. W. Chiang, N. C. Liu, **P. Y. Chen**, Y. C. Kuan, and C. T. M. Wu, “Metamaterial-Enabled Ultrawideband mmWave Antenna-in-Package Using Heterogeneously-Integrated Silicon IPD and HDI-PCB for B5G/6G Applications,” *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, doi: 10.1109/JETCAS.2024.3358222.
24. M. Yang, Z. Ye, H. Pan, M. Farhat, A. E. Cetin, and **P. Y. Chen**, “Electromagnetically Unclonable Functions Generated by Non-Hermitian Absorber-Emitter,” *Science Advances*, Vol. 9, eadg7481 (2023).
25. A. Blackwell, R. Yahiaoui, Y. H. Chen, **P. Y. Chen**, T. Searles, Z. Chase, “Emulating the Deutsch-Josza Algorithm with an Inverse-Designed Terahertz Gradient-Index Lens,” *Optics Express*, Vol. 31, 29515-29522 (2023).
26. Z. Ye, M. Yang, M. Farhat, and **P. Y. Chen**, “Review on Recent Advances and Applications of Passive Harmonic RFIDs,” *IEEE journal of Radio Frequency Identification*, Vol. 7, 118-133 (2023).
27. M. Yang, L. Zhu, Q. Zhong, Ramy El-Ganainy, and **P. Y. Chen**, “Spectral Sensitivity Near Exceptional Points as a Resource for Hardware Encryption,” *Nature Communications*, Vol. 14, 1145 (2023); *this paper is featured in National Science Foundation (NSF) News (<http://new.nsf.gov/news/using-quantum-physics-secure-wireless-devices>)*.
28. M. Farhat, **P. Y. Chen**, Y. Wu, “Sound Waveguiding by Sinning: An Avenue Toward Unidirectional Acoustic Spinning Fibers,” *Physical Review Applied*, Vol. 19, L041002 (2023); *this paper is also the PR Applied Editors’ Suggestion*.
29. H. Dung, C. H. Sun, M. Farhat, and **P. Y. Chen**, “Reconfigurable Superdirective Beamshaping Using PTX-Synthesis Metasurface,” *Optical Materials Express* (invited paper), Vol. 13, 646-655 (2023).
30. W. W. Ahmed, M. Farhat, **P. Y. Chen**, X. Zhang, and Y. Wu, “A Generative Deep Learning Approach for Shape Recognition of Arbitrary Objects From Phaseless Acoustic Scattering Data,” *Advanced Intelligent Systems*, Vol. 5, 2200260 (2023).
31. M. Yang, Z. Ye, Y. Ren, M. Farhat, and **P. Y. Chen**, “Recent Advances in Nanomaterials Used for Wearable Electronics (invited review paper),” *Micromachines*, Vol. 14, 603 (2023).
32. H. Dung, L. Zhu, N. Alsaab, **P. Y. Chen***, and J. L. Guo, “Optically-Transparent Metasurface Radome for RCS-Reduction and Gain-Enhancement of Multifunctional Antennas,” *IEEE Transactions on Antennas and Propagation*, Vol. 71, 67-77 (2023).
33. J. Y. Lee and **P. Y. Chen**, “Wave Propagation, Bi-directional Reflectionless, and Coherent Perfect Absorption-Lasing in Finite Periodic PT-Symmetric Photonic Systems,” *Nanophotonics*, Vol. 12, 3099-3108 (2023).
34. M. Yang, Z. Ye, L. Zhu, C. H. Sun, M. Hajizadegan, and **P. Y. Chen**, “A Lightweight, Zero-Power Intermodulation Sensor Based on the Graphene Oscillator,” *IEEE Sensors Journal*, Vol. 23, 3243-3250 (2023).

35. M. Sakhdari, Z. Ye, M. Farhat, and **P. Y. Chen**, "Generalized Theory of PT-Symmetric Radio-Frequency Systems with Divergent Exceptional Points," *IEEE Transactions on Antennas and Propagation*, Vol. 70, 9396-9405 (2022).
36. F. Andriulli, **P. Y. Chen**, D. Erricolo and J. M. Jin, "Guest Editorial Machine Learning in Antenna Design, Modeling, and Measurements," in *IEEE Transactions on Antennas and Propagation*, Vol. 70, 4948-4952 (2022).
37. E. Torabi, D. Erricolo, **P. Y. Chen**, W. Fuscaldo, and R. Beccherelli, "Reconfigurable Beam-Steerable Leaky-Wave Antenna Loaded with Metamaterial Apertures Using Liquid Crystal-based Delay Lines," *Optics Express*, Vol. 30, 28966-28983 (2022).
38. G. Zhao, Y. Ling, Y. Su, Z. Chen, C. J. Mathai, O. Emeje, A. Brown, D. R. Alla, J. Huang, C. S. Kim, Q. Chen, X. He, D. Stalla, Y. Xu, Z. Chen, **P. Y. Chen**, S. Gangopadhyay, J. Xie, Z. Yan, "Laser-Scribed Conductive, Photoactive Transition Metal Oxide on Soft Elastomers for Janus Skin-Interfaced Wearable Electronics and Light-Driven Soft Actuators," *Science Advances*, Vol. 8, eabp9734 (2022).
39. Z. Ye, Y. Ling, M. Yang, Y. Xu, L. Zhu, Z. Yan, and **P. Y. Chen**, "A Breathable, Reusable and Zero-Power Smart Face Mask for Wireless Cough and Mask-Wearing Monitoring," *ACS Nano*, Vol. 16, 5874-5884 (2022).
40. M. Farhat, **P. Y. Chen**, S. Guenneau, and Y. Wu, "Scattering Properties of Acoustic Vortex Beams Off Spinning Acoustic Objects," *Applied Physics Letters*. Vol. 121, 141702 (2022).
41. X. Tan, M. Yang, L. Zhu, G. Gunathilake, Z. Zhou, **P. Y. Chen**, Y. Zhang, M. M.-C. Cheng, "Ultrasensitive and Selective Bacteria Sensors Based on Functionalized Graphene Transistors," *IEEE Sensors Journal*, Vol. 22, 5514-5520 (2022).
42. J. Y. Lee and **P. Y. Chen**, "Optical forces and directionality in one-dimensional PT -symmetric photonics," *Physical Review B*, Vol. 104, 245426 (2021).
43. M. Yang, Z. Ye, N. Alsaab, M. Farhat, and **P. Y. Chen**, "In-Vitro Demonstration of Ultra-Reliable, Wireless and Batteryless Implanted Intracranial Sensors Operated on Loci of Exceptional Points," *IEEE Transactions on Biomedical Circuits and Systems*, Vol. 16, 287-295, (2022).
44. Z. Ye, M. Yang, and **P. Y. Chen**, "Multi-Band Parity-Time-Symmetric Wireless Power Transfer Systems for ISM-Band Bio-Implantable Applications," *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, Vol. 6, 196-203 (2022).
45. L. Zhu, H. Huang, Y. H. Chen, and **P. Y. Chen**, "A Passive Smart Face for Wireless Cough Monitoring: A Harmonic Detection Scheme with Clutter Rejection," *IEEE Transactions on Biomedical Circuits and Systems*, Vol. 16, 129-137 (2022).
46. M. Yang, Z. Ye, M. Farhat, and **P. Y. Chen**, "Ultra-reliable Wireless Interrogation for Sensors and Transducers: A Non-Hermitian Telemetry Technique," *IEEE Transactions on Instrumentation and Measurement*, Vol. 70, 1-9 (2021).
47. J. Y. Lee, Y. H. Chen, and **P. Y. Chen**, "Degeneracy of Light Scattering, Absorption and Extinction," *Scientific Reports*, Vol. 11, 18657 (2021).
48. M. Yang, Z. Ye, L. Zhu, M. Farhat, and **P. Y. Chen**, "Cascaded PT-Symmetric Metasurfaces for Multimodal Manipulation of Self-Dual Emitter-Absorber Property, and Unidirectional and Bidirectional Reflectionless Transparencies," *Journal of Physics D: Applied Physics*, Vol. 55, 085301 (2021).

49. J. Y. Lee, and **P. Y. Chen**, "Generalized Parametric Space, Parity Symmetry of Reflection, and Systematic Design Approach for Parity-Time Symmetric Photonic Systems," *Physical Review A*, Vol. 104, 033510 (2021).
50. M. Farhat, **P. Y. Chen**, M. Amin, A. Alù, and Y. Wu, "Transverse Acoustic Spin and Torque from Pure Spinning Objects," *Physical Review B*, Vol. 104, L060104 (2021).
51. M. Farhat, S. Guenneau, **P. Y. Chen**, and Y. Wu, "Spacetime Modulation in Floating Thin Elastic Plates," *Physical Review B*, Vol. 104, 014308 (2021).
52. K. Andrews, U. Rijal, A. Bowman, H. J. Chuang, M. Koehler, J. Yan, D. Mandrus, **P. Y. Chen**, and Z. Zhou, "Accumulation-Type van der Waals Ohmic Contacts in WSe₂ Field-Effect Transistors," under review, *ACS Applied Nano Materials*, Vol. 4, 5598–5610 (2021).
53. M. Farhat, S. Guenneau, **P. Y. Chen**, A. Alù, and K. N. Salama, "Reply to "Comment on "Scattering Cancellation-Based Cloaking for the Maxwell-Cattaneo Heat Waves,"" *Physical Review Applied*, Vol. 15, 058002 (2021).
54. L. Zhu, and **P. Y. Chen**, "Low-Noise, Real-Time and Passive Wireless Sensing System Enabled by Harmonic Detection of Resonances and Frequency-Hopping Spread Spectrum," *Measurement Science and Technology* (invited paper), Vol. 32, 095115 (2021); this paper will be included in the 2021 IOP Emerging Leaders Series.
55. M. Hajizadegan, L. Zhu, and **P. Y. Chen**, "Superdirective Leaky Radiation from a PT-Synthetic Metachannel," *Optics Express*, Vol. 29, 12330-12343 (2021).
56. M. Farhat, **P. Y. Chen**, S. Guenneau, and Y. Wu, "Self-Dual Singularity Through Lasing and Antilasing in Thin Elastic Plates," *Physical Review B*, Vol. 103 (13), 134101 (2021).
57. Z. Ye, M. Yang, L. Zhu, and **P. Y. Chen**, "PT-Symmetric Metasurfaces for Sensing Applications," *Frontier in Optoelectronics* (invited paper), Vol. 14, 211–220 (2021).
58. M. Hajizadegan, M. Sakhdari, S. Abbasi, and **P. Y. Chen**, "Machine Learning Assisted Multi-Functional Graphene-Based Harmonic Sensors," *IEEE Sensors Journal*, Vol. 21, 8333–8340 (2021).
59. M. Yang, Z. Ye, M. Farhat, and **P. Y. Chen**, "Experimental Demonstration of Ultrasensitive Radio-Frequency Sensors Based a Self-Dual Emitter-Absorber," *Physical Review Applied*, Vol. 15, 014026 (2021).
60. M. Farhat, S. Guenneau, **P. Y. Chen**, and Y. Wu, "Parity-Time Symmetry and Exceptional Points for Flexural-Gravity Waves in Buoyant Thin-Plates," *Crystals*, Vol. 10, 1039 (2020).
61. Z. Ye, M. Farhat, and **P. Y. Chen**, "Tunability and Switching of Fano and Lorentz Resonances in PTX-Symmetric Electronic Systems," *Applied Physics Letters*, Vol. 117, 031101 (2020).
62. M. Farhat, M. Yang, Z. Ye, and **P. Y. Chen**, "PT-Symmetric Absorber-Laser Enables Electromagnetic Sensors with Unprecedented Sensitivity," *ACS Photonics*, Vol. 7, 2080-2088 (2020).
63. L. Zhu, H. Huang, M. M. C. Cheng, and **P. Y. Chen**, "Compact, Flexible Harmonic Transponder Sensor with Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis," *IEEE Transactions on Microwave Theory and Techniques*, Vol. 68, 4846-4854 (2020).
64. L. Zhu, N. Alsaab, M. M. C. Cheng, and **P. Y. Chen**, "A Zero-Power Ubiquitous Wireless Liquid-Level Sensor Based on Microfluidic-Integrated Microstrip Antenna," *IEEE Journal of Radio Frequency Identification*, Vol. 4, 265-274 (2020).

65. Y. Xu, G. Zhao, L. Zhu, Q. Fei, Z. Zhang, Z. Chen, F. An, Y. Chen, Y. Ling, P. Guo, S. Ding, G. Huang, **P. Y. Chen**, Q. Cao, Z. Yan, "Pencil-Paper On-Skin Electronics," *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, Vol. 17, 18292-1830 (2020).
66. L. Zhu, M. Farhat, Y. C. Chen, K. Salama, and **P. Y. Chen**, "A Compact, Passive Frequency-Hopping Harmonic Sensor Based on a Reconfigurable Dual-Band Microstrip Antenna," *IEEE Sensors Journal*, Vol. 20, 12495-12503 (2020).
67. J. He, Y. Li, L. Zhu, and **P. Y. Chen**, "Miniaturization of Omnidirectional Cavity Antennas Using Substrate-Integrated Impedance" *IEEE Transactions on Antennas and Propagation*. Vol. 69, 1728-1733 (2021).
68. Z. Zhou, Y. Li, Y. He, Z. Zhang, and **P. Y. Chen**, "A Slender Fabry-Perot Antenna for High-Gain Horizontally Polarized Omnidirectional Radiation," *IEEE Transactions on Antennas and Propagation*, Vol. 69, 526-531 (2021).
69. K. Andrews, A. Bowman, U. Rijal, **P. Y. Chen**, and Z. Zhou, "Improved Contacts and Device Performance in MoS₂ Transistors Using a 2D Semiconductor Interlayer," *ACS Nano*, Vol. 14, 6232–6241 (2020).
70. M. Sakhdari, M. Hajizadegan, and P. Y. Chen, "Robust Extended-Range Wireless Power Transfer Using a Higher-Order PT-Symmetric Platform," *Physical Review Research*, Vol. 2, 013152 (2020).
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18. F. Abida, R. Fu, A. Song, **P. Y. Chen**, M. M.-C. Cheng, “Ultrasound Transducer Made of Nanoporous PVDF for Underwater Communications,” *2023 IEEE Sensors Conference*, Vienna, Austria, October 29-November 1, 2023.
19. T. D. Ha, X. Nie, H. Bagci, D. Erricolo, and **P. Y. Chen**, “A Low-Cost Wide-Angle Coverage Rectennas for Energy Harvesting Applications,” *2023 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Venice, Italy, October 9-13, 2023.
20. Z. Ye, M. Yang, M. Farhat, and **P. Y. Chen**, “Multimodal Wearable Sensing Systems based on Higher-Order Parity-Time Symmetry,” *2023 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Venice, Italy, October 9-13, 2023.
21. S. Beyraghi, F. Ghorbani, J. Shabanpour, M. E. Lajevardi, V. Nayyeri, **P. Y. Chen**, O. M. Ramahi, “Microwave Diagnosis of Bone Fractures: an Artificial Intelligence-Based Approach,” *European Microwave Week 2023*, Berlin, Germany, September 17-22, 2023.

22. **P. Y. Chen** and M. Farhat, “Electromagnetically Unclonable Function (EMUF) Based on Non-Hermitian Metamaterials,” *17th International Congress on Engineered Material Platforms for Novel Wave Phenomena*, Crete, Greece, September 11-16, 2023 (invited talk).
23. **P. Y. Chen**, T. Ha, and M. Farhat, “Electromagnetically Unclonable Function Based on Non-Hermitian Systems,” *2023 IEEE International Symposium on Antennas and Propagation*, Portland, Oregon, July 23-28, 2023.
24. H. Pan, X. Zhu, Z. Ye, **P. Y. Chen**, and A. E. Cetin, “Real-Time Wireless ECG-Derived Respiration Rate Estimation using an Autoencoder with a DCT Layer,” *2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Greek Island of Rhodes, Greece, June 4-10, 2023.
25. A. N. Blackwell, R. Yahiaoui, Y. H. Chen, **P. Y. Chen**, T. A. Searles, Z. A. Chase, “Emulating the Deutsch-Josza Algorithm with an Inverse-Designed Terahertz Gradient-Index Lens,” *CLEO 2023*, Charlotte, North Carolina, May 5-10, 2023.
26. J. Lee, and **P. Y. Chen**, “Scattering of Waves in Finite Periodic Parity–Time Symmetric Waveguide Networks (JTU2A.151),” *CLEO 2023*, Charlotte, North Carolina, May 5-10, 2023.
27. M. Farhat, **P. Y. Chen**, and Y. Wu, “Acoustic Spinning Fibers: A New Avenue Towards Airborne Nonreciprocal Waveguiding,” *APS March Meeting 2023 -Bulletin of the American Physical Society*, Las Vegas, Nevada, March 5-10, 2023.
28. **P. Y. Chen** and M. Farhat, “Recent Advances on Coherent Perfect Absorber-laser Systems and Their Applications,” *12th International Photonics and OptoElectronics Meetings (POEM)*, Wuhan, China, November 11-14, 2022 (virtual invited talk).
29. Z. Ye, M. Yang, N. Alsaab, and **P. Y. Chen**, “A Wireless, Zero-Power and Multiplexed Sensor for Wound Monitoring,” *2022 IEEE Sensors Conference*, Dallas, Texas, October 30-November 2, 2022.
30. **P. Y. Chen** and M. Farhat, “Self-Dual Lasing and Antilasing in PT-Symmetric Metasurfaces and Their Applications,” *2022 The IEEE 10th Asia-Pacific Conference on Antennas and Propagation*, Xiamen, China, September 26-29 (virtual invited talk).
31. **P. Y. Chen** and M. Farhat, “Metasurface Laser-Emitter and its Sensing and Cryptographic Application,” *International Congress on Engineered Material Platforms for Novel Wave Phenomena*, Siena, Italy, September 12-15, 2022 (invited talk).
32. **P. Y. Chen**, “Optical Sensing and Cryptography Using Metasurface Laser-Absorber,” *2022 IEEE Research and Applications of Photonics in Defense Conference (RAPID)*, Miramar Beach, Florida, September 12-14, 2022 (invited talk).
33. E. Torabi, D. Erricolo, **P. Y. Chen**, W. Fuscaldo, and R. Beccherelli, “Wide Beam Steering by Leaky Wave Antenna with Liquid Crystal-based Phasing Structure and Metamaterial-based Radiating Apertures in Ku Band,” *2022 IEEE International Symposium on Antennas and Propagation*, Denver, Colorado, July 10-15, 2022.
34. Y. H. Chen, D. Erricolo, and **P. Y. Chen** “Restoration of Antenna Radiation Pattern Using Conditional Generative Adversarial Network,” *2022 IEEE International Symposium on Antennas and Propagation*, Denver, Colorado, July 10-15, 2022.
35. T. D. Ha, L. Zhu, and **P. Y. Chen** “A Low-cost Wide-angle Multi-beam Coverage Bruce Rectennas for Energy Harvesting Applications,” *2022 IEEE International Symposium on Antennas and Propagation*, Denver, Colorado, July 10-15, 2022.

36. H. Wu, Y.C. Chen, G. Xue, Y. Jiang, M. Wang, S. Qian, J. Yu, and **P. Y. Chen**, "OnionCode: Enabling Multi-priority Coding in LED-based Optical Camera Communications." *2022 IEEE Conference on Computer Communications (IEEE INFOCOM)*, May 2-5, 2022.
37. M. Farhat, **P. Y. Chen**, and Y. Wu, "Controlling Sound Propagation and Scattering via Spinning Media," *2022 Bulletin of the American Physical Society (APS March Meeting)*, May 14-18, 2022.
38. M. Farhat, **P. Y. Chen**, S. Guenneau, and Y. Wu, "Recent Advances on Coherent Perfect Absorber-Laser Systems," *2022 Bulletin of the American Physical Society (APS March Meeting)*, May 14-18, 2022.
39. **P. Y. Chen**, "Higher-Order PT-Symmetric Telemetry for Wireless Microsensors," *The 17th International Conference on Nano/Micro Engineered and Molecular Systems (NEMS)*, Kaohsiung, Taiwan, April 14-17, 2022 (invited talk).
40. A. Alkhaibari, H. D. Trung, and **P. Y. Chen**, "Optically Transparent Reflectarray Antenna (RAA) for Future Self-Powered Communication Systems," *2022 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2022.
41. M. Yang, Z. Ye, and **P. Y. Chen**, "Ultra-sensitive Radio-Frequency Sensors Enabled by Coherent Perfect Absorber-Laser," *2022 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2022.
42. **P. Y. Chen**, "Gigantic Amplification and Directional Emission from Photopumped 2D-Material Metasurfaces," *IEEE Research and Applications of Photonics in Defense (IEEE RAPID), Virtual Conference*, August 2-4, 2021 (invited talk).
43. L. Zhu and **P. Y. Chen**, "Multiscale Porous Elastomer Substrate Enabled Harmonic Face Mask for Wireless Cough Monitoring," *URSI General Assembly and Scientific Symposium (URIS-GASS)*, Rome, Italy, August 2021.
44. L. Zhu and **P. Y. Chen**, "Low-RCS and Low-ECC Transparent Meta-Radomes Based on a Conductive Nanocomposite," *2021 IEEE International Symposium on Antennas and Propagation*, Marina Bay Sands, Singapore, December 2021.
45. M. Sakhdari, M. Hajizadegan, and **P. Y. Chen**, "Divergent Exceptional Points: A Promising Tool for Telemetric Sensing," *2021 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2021 (invited talk).
46. E. Torabi, P. Y. Chen, and D. Erricolo, "Reconfigurable Leaky Wave Antenna Based On Embedded Liquid Crystal," *2021 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2021.
47. E. Torabi, A. Rozhkova, **P. Y. Chen**, and D. Erricolo, "Compact and Reconfigurable Leaky Wave Antenna Based on a Tunable Substrate Integrated Embedded Metasurface," *2020 IEEE International Symposium on Antennas and Propagation*, Montreal, Canada, July 2020.
48. L. Zhu, **P. Y. Chen**, and C. Zhang, "High-Performance, Transparent and Flexible Antenna Based on Conductive Nanocomposites," *2020 IEEE International Symposium on Antennas and Propagation*, Montreal, Canada, July 2020.
49. L. Zhu, **P. Y. Chen**, and C. Zhang, "High-Performance Flexible Microwave Antennas with Ultra-high Visible Transparency," *2020 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Honolulu, Hawaii, August 2020.

50. **P. Y. Chen**, “Realization of Low-loss Epsilon-near-zero Properties Using PT-symmetric Metasurfaces,” *Progress In Electromagnetics Research Symposium (PIERS) 2019*, Xiamen, China, December 2019 (invited talk).
51. **P. Y. Chen**, “Superdirective Radiation from Photopumped 2D-material Metasurfaces,” *Progress In Electromagnetics Research Symposium (PIERS) 2019*, Xiamen, China, December 2019.
52. Y. He, Y. Li, and **P. Y. Chen**, “Homogenization Theory for Substrate-Integrated Metasurface and Its Applications in Scaling of Electromagnetic Devices,” *2019 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Granada, Spain, September 2019.
53. M. Hajizadegan, L. Zhu and **P. Y. Chen**, “Highly Directive Leaky-Wave Antennas Based on PT-Symmetric Metasurfaces,” *2019 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Granada, Spain, September 2019.
54. D. Erricolo, **P. Y. Chen**, A. Rozhkova, E. Torabi, H. Bagci, A. Shamim, and X. Zhang, “Machine Learning in Electromagnetics: A Review and Some Perspectives for Future Research,” *2019 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Granada, Spain, September 2019.
55. **P. Y. Chen**, “PT-Symmetric Telemetric Sensor Systems with Divergent Exceptional Points,” *META 2019*, Lisbon, Portugal, July 2019.
56. M. Hajizadegan and **P. Y. Chen**, “A PT-Symmetric Metasurface and Its Exotic Waveguiding and Radiation Properties,” *META 2019*, Lisbon, Portugal, July 2019 (invited talk).
57. L. Zhu and **P. Y. Chen**, “A Compact, Zero-Power and Low-Noise Harmonic-Transponder for Liquid and Moisture Sensing,” *2019 IEEE International Symposium on Antennas and Propagation*, Atlanta, Georgia, July 2019.
58. M. Sakhdari and **P. Y. Chen**, “Efficient and Misalignment-Robust PT-Symmetric Wireless Power Transfer,” *2019 IEEE International Symposium on Antennas and Propagation*, Atlanta, Georgia, July 2019.
59. M. Hajizadegan and **P. Y. Chen**, “Gesture Recognition Based on the Portable and Flexible Silver Ink SRR panel and Machine Learning Technique,” *2019 IEEE International Symposium on Antennas and Propagation*, Atlanta, Georgia, July 2019.
60. L. Zhu and **P. Y. Chen**, “High-Performance Optical Rectennas Using Thermally Oxidized Two-Dimensional Materials,” *63rd International Conference on Electron, Ion, and Photon Beam Technology and Nanofabrication (EIPBN)*, Minneapolis, May 2019 (invited talk).
61. **P. Y. Chen**, “Efficient Hot-Electron Transfer in Metal-Insulator-Semiconductor Hyperbolic Metamaterials,” *International Symposium on Electromagnetic Theory (EMTS 2019)*, San Diego, California, May 2019 (invited talk).
62. M. Farhat and **P. Y. Chen**, “Ultrasensitive Optical Sensing Based on Non-Hermitian Metasurfaces,” *SPIE Defense + Security Conference (SPIE DCS) Proceeding*, April 2019 (invited talk).
63. **P. Y. Chen**, “Singularity-Enhanced Sensitivity in PT-Symmetric Telemetric Sensor Systems,” *2019 IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (IEEE NEMO)*, Cambridge, June 2019.

64. **P. Y. Chen**, "Controlling Leaky-Wave by Parity-Time Symmetric Metasurfaces," *2019 IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (IEEE NEMO)*, Cambridge, June 2019.
65. **P. Y. Chen**, "Ultra-Sensitivity in PT-Symmetric Non-Hermitian Radio-Frequency Biosensors," *KAUST Research Conference on New Trends in Biosensors and Bioelectronics*, February 2019 (invited speaker).
66. **P. Y. Chen**, D. Erricolo, Y. Li, A. Shamin, and H. Bagci, "Dispersion and Field Control in Metasurface-Implanted Waveguides," *2019 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2019.
67. O. Manoochehri, F. Farzami, D. Erricolo, **P. Y. Chen**, A. Darvazehban, A. Shamim, H. Bagci, "Design of a Corrugated Antipodal Vivaldi Antenna with Stable Pattern," *2019 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2019.
68. L. Zhu, N. Alkhaldi, and **P. Y. Chen**, "A Compact Harmonic Sensor Based on a Dual-Resonant Microstrip Antenna Loaded with a Microfluidic Channel," *2019 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2019.
69. **P. Y. Chen**, "Higher-Order, Parity-Time Symmetric Electromagnetic Sensors," *2018 IEEE International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Cartagena, Colombia, September 2018 (invited talk).
70. M. Hajizadegan, M. Sakhdari, and **P. Y. Chen**, "PT-Symmetric Inductive Displacement Sensors," *2018 IEEE International Microwave Workshop Series on Advanced Materials and Processes*, Ann Arbor, July 2018.
71. M. Sakhdari and **P. Y. Chen**, "Scaled PT-Symmetric Coherent Perfect Absorber (CPA)-Laser," *2018 IEEE International Symposium on Antennas and Propagation*, Boston, Massachusetts, July 2018.
72. **P. Y. Chen** and M. Sakhdari, "High-Order PT-Symmetric Telemetric Sensors with Singularity-Enhanced Sensitivity," *2018 IEEE International Symposium on Antennas and Propagation*, Boston, Massachusetts, July 2018.
73. M. Hajizadegan and **P. Y. Chen**, "Harmonics-Based RFID Sensor Based on Graphene Frequency Multiplier and Machine Learning," *2018 IEEE International Symposium on Antennas and Propagation*, Boston, Massachusetts, July 2018.
74. **P. Y. Chen**, "Active graphene plasmonics for sensing and lasing applications in THz and infrared regimes," *Fundamental and Applied NanoElectroMagnetics 2018 (FANEM 2018)*, NATO program SPS, June 2018 (invited talk).
75. **P. Y. Chen**, "Hyperbolic Metamaterial-Based Plasmoelectronic Nanodevices for Infrared Detection and Energy Harvesting," *SPIE Defense + Security Conference (SPIE DCS)*, Orlando, Florida, April 2018 (invited talk).
76. **P. Y. Chen**, "Sensitivity Enhancement by Parity-Time Symmetry in Wireless Telemetry Sensor Systems," *2017 URSI General Assembly and Scientific Symposium*, Montreal, Canada, 2017.
77. **P. Y. Chen**, "Efficient Hot-Electron Harvesting by Hyperbolic Metamaterials," *META' 2017*, Seoul, South Korea, July 2017 (invited talk).
78. M. Hajizadegan and **P. Y. Chen**, "A Self-powered Harmonic Sensor Based on Simple Graphene Circuit and Hybrid-Fed Antenna," *2017 IEEE International Symposium on Antennas and Propagation*, San Diego, California, June 2017 (Honorable Mention in the student paper competition).

79. **P. Y. Chen**, "Semiclassical Modeling of Individual and Arrayed Nanoantennas in Quantum Plasmonic Regime," *IMA-Novel Optical Materials*, Minneapolis, Minnesota, March 2017.
80. M. Sakhdari and **P. Y. Chen**, "Ultrasensitive Telemetric Sensor Based on Adapted Parity-Time Symmetry," *2017 IEEE International Symposium on Antennas and Propagation*, San Diego, California, June 2017 (Honorable Mention in the student paper competition).
81. M. Hajizadegan and **P. Y. Chen**, "Ultrasensitive Parity-Time Symmetric Wireless Microsensors", *2017 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2017.
82. M. Sakhdari and **P. Y. Chen**, "Parity-Time-Reciprocal Symmetry in Radio-Frequency Electronics, *2017 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 2017.
83. A. Shahini, M. Hajizadegan, M. Sakhdari, M. M. C. Cheng, H. Huang, and **P. Y. Chen**, "Self-Powered and Transparent All-Graphene Biosensor," *2016 IEEE Sensors Conference*, Orlando, Florida, October 2016; this paper was selected as one of the 33 best conference papers.
84. **P. Y. Chen**, "Semiclassical Modeling of Individual and Arrayed Nanoantennas in the Quantum Plasmonic Regime," in *2016 URSI International Symposium on Electromagnetic Theory (EMTS)*, Espoo, Finland, August 2016.
85. **P. Y. Chen**, "Nonlinear and Plasco-electronic Metasurfaces Using Plasmonic Nanoantennas," *Progress In Electromagnetics Research Symposium 2016 (PIERS 2016)*, Shanghai, China, August 2016 (invited talk).
86. **P. Y. Chen**, "Parity-Time Symmetric Graphene Metasurfaces," *Progress In Electromagnetics Research Symposium 2016 (PIERS 2016)*, Shanghai, China, August 2016 (invited talk).
87. M. Farhat, **P. Y. Chen** and H. Bagci, "Graphene Acousto-Optics," *Meta' 16*, Malaga, Spain, July 2016 (invited talk).
88. **P. Y. Chen**, "Enhanced Sensing and PT-Symmetry in Photoexcited Graphene Nanostructures," *Meta' 16*, Malaga, Spain, July 2016 (invited talk).
89. M. Farhat and **P. Y. Chen**, "Integrated Hyperbolic Metamaterial Devices for Efficient Rectification of Infrared Radiation," *CLEO 2016*, San Jose, June 2016 (oral presentation).
90. **P. Y. Chen** and M. Farhat, "PT-symmetric Terahertz Sensors Using Optically Pumped Graphene Metasurfaces," *CLEO 2016*, San Jose, June 2016 (oral presentation).
91. M. Hajizadegan and **P. Y. Chen**, "Efficient Rectification of Infrared Radiation Using Nano-Rectennas and Slow-Light Microstructures," *2016 IEEE International Symposium on Antennas and Propagation*, Puerto Rico, June 2016 (finalist in the student paper competition).
92. M. Sakhdari and **P. Y. Chen**, "Transparent and Self-Activated Harmonic Sensor Using Integrated Graphene Antennas and Circuits," *2016 IEEE International Symposium on Antennas and Propagation*, Puerto Rico, June 2016 (Finalist in the student paper competition).
93. M. Farhat, **P. Y. Chen**, S. Guenneau, H. Bagci, K. N. Salama, and A. Alu, "Cloaking in Diffusive Media Using Scattering Cancellation Technique," *2016 IEEE International Symposium on Antennas and Propagation*, Puerto Rico, June 2016.
94. M. Farhat, **P. Y. Chen**, and H. Bagci, "Localized Acoustic Spoof Surface Plasmons," *2016 IEEE International Symposium on Antennas and Propagation*, Puerto Rico, June 2016.

95. M. Farhat, **P. Y. Chen**, and H. Bagci, "Some Aspects of Graphene Plasmonics," *Nanotechnology Discussion Webinar on Photonics*, December 2015.
96. M. Farhat, M. Amin, **P. Y. Chen**, S. Guenneau, and H. Bagci, "Some Applications of Graphene Plasmonics and Metamaterials: Cloaking, Super-Absorption and Acousto-Optic Coupling," *Metamaterials 2015*, Oxford, September 2015 (keynote).
97. **P. Y. Chen** and M. Farhat, "Quantum Effects in Nanoantennas and Their Applications in Tunability, Mixing, and Rectification," *Meta' 15*, New York City, August 2015 (invited talk).
98. M. Farhat and **P. Y. Chen**, "Infrared Beam-steering Using Mechanically Modulated Graphene Monolayer," *Meta' 15*, New York City, August 2015.
99. M. Farhat, **P. Y. Chen**, S. Guenneau, and H. Bagci, "Localized Acoustic Spoof Plasmons," *Meta' 15*, New York City, August 2015 (invited talk).
100. **P. Y. Chen** and M. Farhat, "Quantum Nanoantenna for Tunability, Mixing, Rectification, and Harmonic Sensing," *2015 IEEE International Symposium on Antennas and Propagation*, Vancouver, July 2015.
101. **P. Y. Chen** and M. Farhat, "Generation of Terahertz Radiation with Optical Heterodyne by Nanoantenna-Coupled Tunneling Devices," APS-URSI, Vancouver, July 2015.
102. H. Huang, **P. Y. Chen**, C. H. Hung, R. Gharpurey, and D. Akinwande, "Frequency Hopped Wireless Passive Sensing System with Harmonic Transponder Antenna Sensor," *2015 IEEE MTT-S International Microwave Symposium*, Phoenix, AZ, May 2015 (Finalist in the student paper award).
103. **P. Y. Chen**, M. Farhat, S. Guenneau, and H. Bagci, "Generation of Graphene Surface Plasmons and Their Applications in Beam Steering," *CLEO 2015*, San Jose, May 2015.
104. **P. Y. Chen** and M. Farhat, "Quantum Nanoantennas for Making Nonlinear and Self-Modulatable Metasurface," *CLEO 2015*, San Jose, May 2015.
105. M. Farhat and **P. Y. Chen**, "Infrared Beam-steering Using Mechanically Modulated Graphene Monolayer," *Nanometa 2015*, Seefeld, January 2015.
106. M. Farhat and **P. Y. Chen**, "Infrared Beam-steering Using Mechanically Modulated Graphene Monolayer," *Nanometa 2015*, Seefeld, January 5-8, 2015.
107. D. J. Ironside, R. Salas, **P. Y. Chen**, K. Q. Le, A. Alù, S. R. Bank, "Employing Metamaterials for Enhanced THz Generation in Photomixers," *2014 IEEE Photonics Conference*, San Diego, CA, October 12-16, 2014.
108. J. Lee, C. Argyropoulos, **P. Y. Chen**, M. Tymchenko, F. Lu, F. Demmerle, G. Boehm, M. C. Amann, A. Alù, and M. A. Belkin, "Giant Nonlinear Response from Plasmonic Metasurfaces Coupled to Intersubband Polaritons," *SPIE Optics and Photonics*, San Diego, CA, August 17-21, 2014 (invited talk).
109. J. Lee, C. Argyropoulos, **P. Y. Chen**, M. Tymchenko, F. Lu, F. Demmerle, G. Boehm, M. Amann, A. Alù, and M. A. Belkin, "Giant Nonlinear Response from Plasmonic Metasurfaces Coupled to Intersubband Transitions," *CLEO 2014*, San Jose, CA, June 8-13, 2014.
110. J. Lee, S. Jung, **P. Y. Chen**, F. Lu, F. Demmerle, G. Boehm, M. Amann, A. Alù, and M. A. Belkin, "Ultrafast Voltage-Tunable Plasmonic Metamaterials Based on Intersubband Polaritons," *CLEO 2014*, San Jose, CA, June 8-13, 2014.

111. J. Lee, **P. Y. Chen**, C. Argyropoulos, A. Alù, and M. A. Belkin, “Metamaterials Based on Intersubband Polaritons,” *Metamaterials 2013*, Bordeaux, France, September 16-19, 2013 (invited talk).
112. Y. R. Padooru, **P. Y. Chen**, A. B. Yakovlev, and A. Alù, “Graphene Metasurface Makes the Thinnest Possible Cloak in the Terahertz Spectrum,” *Metamaterials 2013*, Bordeaux, France, September 16-19, 2013.
113. **P. Y. Chen**, and A. Alù, “Nanoantenna-Enhanced Optical Heterodyning and Photoemission Nanodevices,” *2013 IEEE International Symposium on Antennas and Propagation*, Lake Buena Vista, FL, July 7-12 (2013) (Finalist in the student paper award).
114. **P. Y. Chen**, and A. Alù, “All-Graphene Terahertz and Analog Nanodevices and Nanocircuits,” *2013 European Conference on Antennas and Propagation (EuCAP)*, Goteborg, Sweden, April 8-12 (2013) (invited talk).
115. **P. Y. Chen**, and A. Alù, “Adaptable and Bandwidth-Configurable All-Graphene Terahertz Nanocircuits,” *4th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META’ 13)*, Sharjah, United Arab Emirates, March 18-22 (2013) (invited talk).
116. Y. R. Padooru, A. B. Yakovlev, **P. Y. Chen**, and A. Alù, “Analytical Modeling of Realistic Conformal Metasurface Cloaks with a Line-Source Excitation,” *4th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META’ 13)*, Sharjah, United Arab Emirates, March 18-22 (2013) (invited talk).
117. Y. R. Padooru, A. B. Yakovlev, **P. Y. Chen**, and A. Alù, “Analytical Modeling of Conformal Metasurface Mantle Cloaks for Cylindrical Objects,” *Metamaterials 2012*, St. Petersburg, Russia, September 17-22 (2012).
118. H. Huang, **P. Y. Chen**, M. Ferrari, Y. Hu, and D. Akinwande, “Dual Band Electrically Small Non-Uniform Pitch Ellipsoidal Helix Antenna for Cardiac Pacemakers,” *IEEE Radio and Wireless Week (RWW)*, Austin, TX, January 20-23 (2013).
119. **P. Y. Chen**, and A. Alù, “Circuit Modeling of AC Performance of Graphene Nanodevices,” *URSI-USNC National Radio Science Meeting*, Boulder, CO, January 9-12 (2013).
120. **P. Y. Chen**, and A. Alù, “Terahertz Nanocircuits Based on Active Graphene Transmission-Lines,” *URSI-USNC National Radio Science Meeting*, Boulder, CO, January 9-12 (2013).
121. Alù, C. Argyropoulos, **P. Y. Chen**, F. Monticone, N. M. Estakhri, Y. Zhao “Nanoantenna Arrays to Tailor Absorption, Polarization and Nonlinear Effects,” *4th International Topical Meeting on Nanophotonics and Metamaterials (NanoMeta)*, Seefeld, Austria, January 3-6 (2013) (invited talk).
122. **P. Y. Chen**, M. Farhat, and A. Alù, “Tunable and Bistable Negative Optical Index with Square Loops Loaded with Nonlinear Materials,” *Metamaterials 2010*, Karlsruhe, Germany, September 16-19 (2010) (finalist in the student paper competition).
123. **P. Y. Chen**, and A. Alù, “Electrodynamic Modeling of Nanostructured Graphene Metasurfaces and Their Applications,” *USNC/URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14 (2012) (invited talk).
124. **P. Y. Chen**, and A. Alù, “Integrated Infrared Nanodevices Based on Graphene Monolayers,” *2012 IEEE International Symposium on Antennas and Propagation*, Chicago, IL, USA, July 8-14 (2012).

125. A. Alù, Y. Zhao, **P. Y. Chen**, B. Memarzadeh, G. V. Naik, A.V. Kildishev, H. Mosallaei, A. Boltasseva, V. Shalaev, and N. Engheta, "Low-Loss Optical Metamaterials and Metasurfaces," *USNC/URSI National Radio Science Meeting*, Chicago, IL, USA, July 8-14 (2012).
126. **P. Y. Chen**, and A. Alù, "Atomic-Scale Mantle Cloak Using a Graphene Monolayer," *Metamaterials 2011*, Barcelona, Spain, October 10-15 (2011).
127. Y. R. Padooru, A. B. Yakovlev, **P. Y. Chen**, and A. Alù, "Mantle Cloaking Using Sub-Wavelength Conformal Metallic Meshes and Patches," *2012 IEEE International Symposium on Antennas and Propagation*, Chicago, IL, USA, July 8-14 (2012).
128. A. Alù, C. Argyropoulos, and **P. Y. Chen**, "Enhanced Nonlinear Effects in Metamaterials and Plasmonics," *META' 2012*, Paris, France, April 19-22 (2012) (invited talk).
129. A. Alù, **P. Y. Chen**, and X. X. Liu, "Optical Nanotennas for Enhancing Nonlinearities, Sensing, Optical Communications and Energy Harvesting," *2012 IEEE International Workshop on Antenna Technology (iWAT): Small Antennas and Unconventional Applications*, Tucson, AZ, USA, March 5-7 (2012) (invited keynote talk).
130. **P. Y. Chen**, and A. Alù, "Ultra-Broadband Mantle Cloak Using Non-Foster Negative-Impedance Metasurfaces," *USNC-URSI National Radio Science Meeting*, Boulder, CO, USA, January 4-7 (2012) (plenary talk; student paper award).
131. M. Farhat, **P. Y. Chen**, S. Guenneau, S. Enoch, and A. Alù, "Frequency-Selective Surface Cloaking for Acoustic Waves," *Metamaterials 2011*, Barcelona, Spain, October 10-15 (2011).
132. K. H. Hsu, **P. Y. Chen**, C. T. Hung, L. H. Chen, and J. S. Wu, "Development of a Parallel Poisson's Equation Solver with Adaptive Mesh Refinement and its Application in Field Emission Prediction," *Computer Physics Communications*, 174, 948-860 (2006).
133. A. Alù, **P. Y. Chen**, C. Argyropoulos, "Metamaterial Cloaking Using Passive Metamaterials and Metasurfaces," *Applied Inverse Problems Conference*, Minisymposium on Cloaking, College Station, TX, USA, May 23-27 (2011) (invited talk).
134. **P. Y. Chen**, and A. Alù, "Optical Nonlinear Metasurfaces Formed by Plasmonic Nanoantennas," *2011 IEEE International Symposium on Antennas and Propagation*, Spokane, WA, USA, July 3-8 (2011) (finalist in the student paper competition). **P. Y. Chen**, and A. Alù, "Metamaterials and Metasurfaces Formed by Nanoantennas Loaded by Nonlinear Materials," *Metamaterials 2010*, Karlsruhe, Germany, September 16-19 (2010).
135. **P. Y. Chen**, M. Farhat, and A. Alù, "Tunable and Bistable Negative Optical Index with Square Loops Loaded with Nonlinear Materials," *Metamaterials 2010*, Karlsruhe, Germany, September 16-19 (2010) (finalist in the student paper competition).
136. **P. Y. Chen**, and A. Alù, "Patterned Metallic Surfaces to Realize 1-D, 2-D, and 3-D Ultrathin Invisibility Cloaks," *2010 IEEE International Symposium on Antennas and Propagation*, Toronto, Canada, July 11-17 (2010) (honorable Mention in the student paper competition).
137. **P. Y. Chen**, N. Engheta, and S. Maci, "Multi-band Cylindrical Antenna Realized by ϵ -Near-Zero Gap Launchers," *4th European Conference on Antennas and Propagation*, Barcelona, Spain, April 12-16 (2010).

138. **P. Y. Chen**, C. H. Chen, H. Wang, J. H. Tsai, and W. X. Ni, "Optimal Design Synthesis of Miniaturized Metamaterials Using Genetic Algorithms," *Metamaterials 2008*, Pamplona, Spain, September 23-25 (2008).
139. **P. Y. Chen**, C. Chiu, S. C. Wu, and J. H. Tsai, "Simulation Study of Negative Magnetic Response Beyond 200 THz," *2006 International Symposium on Nano Science and Technology*, Tainan, Taiwan, November 9-10 (2006).
140. H. C. Wen, W. P. Wang, **P. Y. Chen**, J. T. Luo, W. F. Wu, and C. P. Chou, "Surface Performance of Carbon Nanotubes Post-treated by Fluorocarbon/Oxygen Plasma," *2006 International Conference on Nanometer-Scale Science and Technology*, Switzerland, July 30-August 4 (2006).
141. H. C. Wen, W. P. Wang, **P. Y. Chen**, H. C. Chen, H. C. Cheng, and W. F. Wu, "Improvement in Field Emission from Needle-Shaped Carbon Nanotubes after Ar Plasma Treatment," *2006 International Conference on Nanometer-Scale Science and Technology*, Switzerland, July 30-August 4 (2006). K. W. Cheng, **P. Y. Chen**, W. P. Wang, H. C. Cheng, C. S. Wu, and C. P. Chou, "Effect of Carbon Nanotubes Treated by Oxygen Plasma Post-Treatment on the Performance of Field-Emission," *2006 International Conference on Nanometer-Scale Science and Technology*, Switzerland, July 30-August 4 (2006).

❖ Patents

1. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "Curved Surface Scattering Antennas," United States Patent 20150318620.
2. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "Sub-Nyquist Holographic Aperture Antenna Configured to Define Selectable, Arbitrary Complex Electromagnetic Fields," United States Patent 20150171512.
3. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "Sub-Nyquist Complex-Holographic Aperture Antenna Configured to Define Selectable, Arbitrary Complex Electromagnetic Fields," United States Patent 20150171516.
4. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "System Wirelessly Transferring Power to A Target Device Over a Tested Transmission Pathway," United States Patent 20150171513.
5. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "System Wirelessly Transferring Power to a Target Device Over a Modeled Transmission Pathway Without Exceeding a Radiation Limit for Human," United States Patent 20150171514.
6. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "Surface Scattering Antennas with Lumped Elements," United States Patent 20150318618.
7. **P. Y. Chen**, T. Driscoll, S. Ebadi, J. D. Hunt, N. I. Landy, M. Machado, J. McCandless, M. Perque, D. R. Smith, and Y. A. Urzhumov, "Modulation Patterns for Surface Scattering Antennas," United States Patent 20150372389.

8. A. Alù, J. C. Soric, and **P. Y. Chen**, “Circuit-Loaded Conformal Metasurface Cloak,” United States Patent 20160087342.
9. A. Alù, J. C. Soric, **P. Y. Chen**, A. Kerkhoff, and D. Rainwater, “Ultrathin, Flexible Mantle Cloak for Camouflaging and Total Scattering”, United States Patent Pending (filed by UT Austin).
10. **P. Y. Chen**, M. Sakhdari, M. Hajizadegan, and M. Cheng, “Parity-Time (PT)-Symmetric Wireless Telemetric Sensors and Systems,” United State Patent 20200012008.
11. **P. Y. Chen**, M. Yang, L. Zhu, and A. E. Cetin, “Parity-Time Symmetric Hardware Security Systems and Methods,” under review (UIC-2023-007-01).

Research Achievement and Milestones:

Important milestones in my research activities are summarized in the following.

- Demonstrated the first electromagnetic unclonable functions for securing RFID, IoT, and NFC devices [Nature Communications’ 2023; IEEE INFOCON’ 2022]
- Invented the parity-time symmetric wireless sensor system [Nature Electronics’ 18; IEEE Sensors’ 18; IEEE TAP’ 19; ACS Photonics 20] and demonstrated the concept with wireless monitoring of intraocular and intracranial pressures with unprecedentedly high sensitivity and resolvability (sub-mmHg resolution).
- Theoretically studied and experimentally implemented the generalized higher-order non-Hermitian RF circuits as a highly-versatile telemetry platform for real-time, energy-efficient and multiplexed wireless sensing; this technique has been applied to several passive wearable and implantable microsensors (including intraocular pressure sensors, intracranial pressure sensors, and smart bandages that simultaneously monitor pH, stress, humidity, and temperature for wound management) [IEEE TIM’ 21; IEEE TBCAS’ 22; IEEE Sensors’ 22; Phys. Rev. Lett.’ 19; IEEE TAP’ 22].
- Proposed the first alignment-free and extended-range wireless power transfer system based on the third-order PT-symmetric electronic circuit [Phys. Rev. Res.’ 20; IEEE JERM’ 22].
- Demonstrated for the first passive harmonic sensor assisted with frequency-hopped spread spectrum (FHSS) method, which provides absolute accuracy wireless sensing against clutters, echoes, crosstalks, and self-jamming [Scientific Report’ 2016; IEEE Sensors Journal’ 20; IEEE JRFID’ 20; IEEE TMTT’ 20, IEEE TBCAS 22;]; developed the first harmonic-based wireless smart facemask for continuous, real-time monitoring of coughs, vital signs, and proper wearing of facemask [ACS Nano 22; IEEE TBCAS 22].
- Designed the first zero-power and spectrum-efficient intermodulation sensor working in noisy indoor and urban environments [IEEE Sensors’ 22].
- Developed RF and mixed signal circuits, as well as a machine learning-assisted sensor interface to wirelessly interrogate wearable sensors and precisely interpret vital sign signals. [IEEE ICASSP’ 23; Science Advances 22].
- Demonstrated the first harmonic nanosensors based on graphene transistors and integrated RF circuits [Nature Microsystem and Nanoengineering 16; IEEE Sensors’ 17; IEEE Sensors’ 20; IEEE Sensors’ 22]; Designed a battery-free transparent and flexible smart contact lens based on the monolithically-integrated graphene antenna and integrated circuits [APL’ 16].

- Invented hardware and beamforming algorithms for active metamaterial-based antenna and radar sensor systems in the X-band, W-band and E-band, with 6 US patents, which led to a startup company in Seattle in December 2014.
- Demonstrated plasmonic meta-mirror with the world-record second-order susceptibility and giant nonlinear effect (greater than 5×10^4 pm/V), which is orders of magnitude larger than existing nonlinear optical media in the mid-infrared region [Nature' 14].
- Demonstrated the “cloaking a sensor” concept as an effective scattering suppression and noise cancellation method to significantly improve the signal-to-noise ratio of non-invasive probing systems and near-field scanning optical microscopy [PRL' 13]; this finding was selected as top 10 scientific invention by CNN in 2013.
- Presented the concept of “graphene plasmonics” as a generalized plasmo-electronic platform for terahertz and long-wavelength infrared applications [ACS Nano' 11; IEEE TAP' 12; IEEE TTST'13].
- Theoretical and experimental demonstration on the concept of “mantle cloak” for scattering reduction in sensing, radar, antenna, and measurement applications [PRB' 11; Adv. Mat.' 12; NJP' 13].

Professional Activities

❖ Invited Seminars & Colloquia (In Chronological Order):

1. **P. Y. Chen**, “Radio Telemetry of Wireless Micro/Nano-Sensors in Teleradiology and Telemedicine,” Chiba University, Japan, January 2025.
2. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine,” Universidad Carlos III de Madrid, Spain, September 2024.
3. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine,” Universidad de Alcalá, Spain, September 2024.
4. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine,” Instituto de Telecomunicações & Instituto Superior Técnico, Lisbon, Portugal, September 2024.
5. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine” (virtual), *Ravindra College of Engineering for Women*, India, September 2024.
6. **P. Y. Chen**, “Non-Hermitian Electronics and Electromagnetics and Their Applications,” *Nagoya Institute of Technology*, Japan, July 2024.1
7. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine,” *Taiwan Instrument Research Institute*, Taiwan, June 2024.
8. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Internet-of-Things and Telemedicine,” *National Yang Ming Chiao Tung University (NYCU)*, Taiwan, May 2024.
9. **P. Y. Chen**, “Micro and Nanotechnology-Driven Antennas, Circuits and Sensors for Telehealth and Telemedicine,” *Graduate institute of Communication Engineering, National Taiwan University*, Taiwan, May 2024.
10. **P. Y. Chen**, “Non-Hermitian Electronics and Electromagnetism,” *Department of Electrical and Computer Engineering, University of California Davis*, October 2023.

11. **P. Y. Chen**, “Nanotechnology-Enabled RF Devices, Circuits and Antennas for Internet-of-Things,” *Department of Electrical Engineering and Computer Science, Missouri University*, September 2023.
12. **P. Y. Chen**, “Recent Advances in Nanotechnology-Enabled RF Devices, Circuits and Antennas for Internet-of-Things,” *Department of Mechanical Engineering, National Taipei University of Technology*, Taiwan, August 2023.
13. **P. Y. Chen**, “Recent Advances in Nanotechnology-Enabled RF Devices, Circuits and Antennas for Internet-of-Things,” *International College of Semiconductor Technology, National Yang Ming Chiao Tung University (NYCU)*, Taiwan, December 2022.
14. **P. Y. Chen**, “Recent Advances in Nanotechnology-Enabled RF Devices, Circuits and Antennas for Internet-of-Things,” *Department of Electrical Engineering, National Cheng Kung University (NCKU)*, Taiwan, December 2022.
15. **P. Y. Chen**, “Metamaterials and Applications Seminar,” *Advanced Materials Research Centre – TII*, United Arab Emirates (virtual), February 2021.
16. **P. Y. Chen**, “Low-Noise and Zero-Power Wireless Microsensors for Internet-of-Things Applications,” *Taiwan Instrument Research Institute*, Taiwan, January 2021.
17. **P. Y. Chen**, “Low-Noise and Zero-Power Wireless Microsensors for Internet-of-Things Applications,” *Illinois Institute of Technology*,” March 2020.
18. **P. Y. Chen**, “Toward Batter-Free and Low-Noise Wireless Micro/Nano-Sensors,” *Nebraska Center for Materials and Nanoscience (NCMN) Seminar Series*, March 2019.
19. **P. Y. Chen**, “All-Plasmonic Manipulation and Harvesting of Light,” *Department of Photonics, National Chiao Tung University*, January 2019.
20. **P. Y. Chen**, “Enhanced Sensitivity in Non-Hermitian RF and Optical Sensors,” *City University of New York (CUNY) Advanced Science Research Center*, November 2018.
21. **P. Y. Chen**, “Zero-Power Wireless Microsensors for Internet-of-Medical-Things,” *Department of Electrical and Computer Engineering, University of Illinois at Chicago*, September 2018.
22. **P. Y. Chen**, “Wireless Microsensors for Healthcare Internet-of-Things,” *Department of Mechanical Engineering, University of Missouri*, August 2018.
23. **P. Y. Chen**, “Short Course: Miniaturize Microstrip Antennas,” *Maxim Integrated Inc.*, April 2018.
24. **P. Y. Chen**, “Loss- and Noise-Immune Wireless Microsensors for Healthcare Internet-of-Things,” *Department of Electrical and Computer Engineering, University of Illinois at Chicago*, April 2018.
25. **P. Y. Chen**, “Loss- and Noise-Immune Wireless Microsensors for Healthcare Internet-of-Things,” *Department of Electrical Engineering, Pennsylvania State University*, April 2018.
26. **P. Y. Chen**, “Loss- and Noise-Immune Wireless Microsensors for Healthcare Internet-of-Things,” *Department of Electrical and Computer Engineering, University of Iowa*, March 2018.
27. **P. Y. Chen**, “Loss- and Noise-Immune Wireless Microsensors for Healthcare Internet-of-Things,” *Department of Electrical and Computer Engineering, Florida International University*, February 2018.
28. **P. Y. Chen**, “Ultrasensitive and Non-Invasive Graphene Nanosensors: From RF to Infrared,” *School of Electronic Information and Electrical Engineering, Shanghai Jiao Tung University*, Shanghai, China, January 2018.
29. **P. Y. Chen**, “Active/Passive Graphene Plasmons for Nanobiosensing,” *Herriot-Watt University*, Scotland, United Kingdom, November 2017.

30. **P. Y. Chen**, “Loss and Noise-Immune Wireless Microsensors,” *Department of Electrical and Computer Engineering, Texas Technological University*, April 2017.
31. **P. Y. Chen**, “Wireless Microsensors,” *Maxim Integrated Inc.*, March 2016.
32. **P. Y. Chen**, “Ultrasensitive and Non-invasive Graphene Nanobiosensors,” *Department of Electrical Engineering, University of Nebraska Lincoln*, February 2017.
33. **P. Y. Chen**, “Ultrasensitive and Non-invasive Graphene Nanosensors: From RF to Infrared,” *State Key Laboratory of Millimeter Waves, Southeast University, Nanjing, China*, December 2016.
34. **P. Y. Chen**, “All-plasmonic Detection and Harvest of Light,” *University of Michigan-Shanghai Jiao Tong University Joint Institute, Shanghai, China*, December 2016.
35. **P. Y. Chen**, “All-Plasmonic MIR Photodetection and Energy Harvesting,” *Nano Seminar, University of Michigan Ann Arbor*, November 2016.
36. **P. Y. Chen**, “Graphene Plasmonics and Nano-electromagnetism for Biosensing Applications,” *Nano Science and Technology Center, University of Central Florida*, October 2016.
37. **P. Y. Chen**, “Graphene Nano-electromagnetism: Plasmonic, Photonic and Biosensing Applications,” *Michigan Technological University*, September 2016.
38. **P. Y. Chen**, “Nano-electromagnetism: Plasmonics, Electromagnetics, and Circuits,” *Wright-Patterson Air Force Base-Air Force Research Laboratory*, July 2016.
39. **P. Y. Chen**, “Graphene Nano-electromagnetism: Plasmonic, Electromagnetic, and Circuit Properties,” *Department of Electrical and Computer Engineering, University of Texas at Austin*, April 2016.
40. **P. Y. Chen**, “Plasmonics and Metamaterials: Novel Architectures to Manipulate and Enhance Light-Matter Interactions,” *Department of Physics, Wayne State University*, November 2015.
41. **P. Y. Chen**, “Nanoantennas, Metasurfaces and Metamaterials to Manipulate and Enhance Light-Matter Interactions,” *Ann Arbor OSA, University of Michigan Ann Arbor*, September 2015.
42. **P. Y. Chen**, “Nanoantenna for Light-Wave Mixing, Rectification, Sensing, and Energy Harvesting,” *IEEE Southeastern Michigan Section Meeting, University of Michigan Dearborn*, April 2015.
43. **P. Y. Chen**, “From Metamaterials to Metadevices: Exploring Invisibility, Micro/Nano Sensing and Communication,” *King Abdullah University of Science and Technology (KAUST), Saudi Arabia*, January 2015.
44. **P. Y. Chen**, “Fascinating Applications of Metamaterials and Plasmonics in RF and Optical Regimes,” *Department of Computer Science, Wayne State University*, October 2014.
45. **P. Y. Chen**, “From Metamaterials to Metadevices: Exploring Invisibility, Micro/Nano Sensing and Communication, and Energy Harvesting,” *Oak Ridge National Laboratory*, May 2014.
46. **P. Y. Chen**, “From Metamaterials to Metadevices: Exploring Invisibility, Micro/Nano Sensing and Communication, and Energy Harvesting,” *Department of Electrical and Computer Engineering, Wayne State University*, April 2014.
47. **P. Y. Chen**, “Fascinating Applications of Metamaterials and Plasmonics: Cloaking, Sensing, Energy Harvesting and Wireless Communication,” *Department of Electrical and Computer Engineering, Polytechnic Institute of New York University (NYU-Poly)*, April 2013.
48. **P. Y. Chen**, “The Fascinating Physics and Applications of Plasmonic Materials and Metamaterials,” *City University of New York (CUNY)*, February 2013.

49. **P. Y. Chen**, “All-Graphene THz Interconnects, Devices and Wireless Circuits,” *Intel Inc.*, Hillsboro, Oregon, November 2012.

❖ **Graduate Advisor**

PhD Advisor: Andrea Alù (Professor, University of Texas at Austin; Director, CUNY ASRC)

❖ **Thesis Advisor and Postgraduate-Scholar Sponsor**

1. Dr. Nassser Alkhalidi (Aug. 2015 – Apr. 2019); Ph.D. Dissertation: “*Design and Practical Implementation of Compact Microstrip Antennas for Harmonic Transponders.*”
2. Dr. Maryam Sakhdari (Aug. 2015 – Dec. 2019); Ph.D. Dissertation: “*Parity-Time Symmetric Telemetry Systems for Wearable and Implantable Sensors.*”
3. Dr. Mehdi Hajizadegan (Aug. 2015 – Dec. 2019); Ph.D. Dissertation: “*Self-Powered Multi-Function Harmonics-Based Wireless Sensing System Using Graphene Bioelectronics.*”
4. Dr. Liang Zhu (Aug. 2016 – May 2021); Ph.D. Dissertation: “*Battery-Free Wireless Sensors for Internet-of-Things and Cyberphysical Systems.*”
5. Dr. Yi-Huan Chen (Aug. 2016 – Dec. 2022); Ph.D. Dissertation: “*Machine Learning-Assisted Design of Metasurface Radomes.*”
6. Zhilu Ye (Aug. 2019 – Jun. 2023); Ph.D. Dissertation: “*Novel Radio-Frequency Devices and Systems for Wearable Electronics and Wireless Power Transfer.*”
7. Mingye Yang (Aug. 2019 – Jun. 2023); Ph.D. Dissertation: “*Spectral Singularities-Based Physically Unclonable Functions.*”
8. Nabeel Alsaab (Aug. 2019 – Feb. 2024); Ph.D. Dissertation: “*Low-Cost Transparent and Flexible Antenna for Next-Generation Communication Networks.*”
9. Asim Alkhaibari (Jan. 2021– Aug. 2024); Ph.D. Dissertation: “*Theoretical Modelling on Substrate Integrated Impedance Surfaces Incorporated with Leaky Wave Antennas.*”
10. Chia-Heng Sun (May 2019 – Oct. 2024); Ph.D. Dissertation: “*Novel Cladding Designs for Engineering Electromagnetic Scattering.*”
11. Trung Dung Ha (Sep. 2020 – Feb. 2025); Ph.D. Dissertation: “*Novel Antenna Designs for Wireless Information and Power Transfer Systems.*”

❖ **Postdoctoral Fellow Currently Being Supervised**

1. Anh Duc Pham (Aug. 2024 – present)

❖ **PhD Thesis Students Currently Being Supervised**

1. Xuecong Nie (Aug. 2019 – present)
2. Yichong Ren (Aug. 2022 – present)
3. Saad Alshahrani (Aug. 2022 – present)
4. Nanshu Wu (Aug. 2023 – present)
5. Nga Vu (Aug. 2023 – present)
6. Parham Heidarzadeh (Jan. 2024 – present)

7. Zong-Ru Lee (Aug. 2024 – present)
8. Saman Sheikh-Ahmadi (Sep. 2024 – present)

❖ **PhD, Postdoc and Visiting Scholar Supervised**

1. Trung Dung Ha (PhD), Skyworks Solutions, USA
2. Chia-Heng Sun (PhD), Micron Technology, USA
3. Prof. Asim Alkhaibari (PhD), Assistant Professor, Umm Al-Qura University, Saud Arabia
4. Prof. Nabeel Alkhalidi (PhD), Assistant Professor, Qassim University, Saud Arabia
5. Prof. Zhilu Ye (PhD), Assistant Professor, Xi'an Jiaotong University, China
6. Prof. Minye Yang (PhD), Assistant Professor, Xi'an Jiaotong University, China
7. Prof. Dieff Vital (UIC B2F Postdoc; 2021 – 2023), Assistant Professor, University of Illinois Chicago
8. Dr. Liang Zhu (PhD), Senior Engineer, Maxtenna Inc., USA
9. Dr. Yi-Huan Chen (PhD), ASUS
10. Dr. Maryam Sakhdari (PhD), Senior Engineer, Amazon Blue Origin, USA
11. Dr. Mehdi Hajizadegan (PhD), Technical Advisor, Seed IP Law Group, USA
12. Prof. Nasser Alkhalidi (Ph.D), Assistant Professor, Jubail Industrial College, Saudi Arabia
13. Prof. Qingsong Cui (Postdoc; 2014 – 2017), Assistant Professor, New Mexico Institute of Mining and Technology (New Mexico Tech), USA
14. Dr. Qiang Bai (Postdoc; 2015 – 2016), Postdoc at the Northwestern University, USA
15. Dr. Mohamed Hussein Ahmed (Visiting Scholar; 2017), Researcher, Karlsruher Institut für Technologie, Germany

❖ **MS and BS Supervised**

1. Bruce Gunter (BS; supported by IEEE AP-S USRS)
2. Tenyu Aikawa (MS)
3. Haysam Kadry (former PhD at WSU; Engineering Director, Molex Inc.)
4. Mohit Manhas (MS)
5. Nahida Akkary (BS; supported by the Richard Barber Interdisciplinary Research Program)
6. Katelynn Farmer (BS; supported by the Richard Barber Interdisciplinary Research Program)
7. Maximiliano Rodallegas (BS)
8. Hamza Waseem (BS)
9. Manuel Aguilar Rodriguez (BS)
10. Miguel Alanis (BS)
11. Diego Navas (BS)
12. Juan Moreno (BS)
13. Erik Lopez (BS)
14. Jesus Correa (BS)
15. David Clancy (BS)
16. Daniel Hodczak (BS)
17. Rafeal Morales (BS)
18. Adriana Olvera Cabral (BS; supported by the NSF ERSP)
19. Tom Nguyen (BS; supported by the NSF ERSP)
20. Shakiba Vahid Moghtada (BS; supported by the NSF ERSP)

21. Ryan Chismark (BS; supported by the NSF ERSP)
22. Farid Kenarangi (BS; supported by the NSF ERSP)
23. Andres Dimas (BS; supported by the NSF ERSP)
24. Eric Bugarin (BS; supported by the NSF ERSP)
25. Adam Mukahhal (BS; supported by the NSF ERSP)
26. Orion Heinosch (BS)
27. Justin Ren (BS)
28. Matthew Fleishman (BS)
29. Ryan Melody (BS)

❖ **Public Services**

Editorship

1. Topical Editor, IEEE Sensors Journal (2025 – present)
2. Associate Editor, Optics Express (2025 – present)
3. Associate Editor, Advanced Photonics Nexus (2025 - present)
4. Senior Editor, IEEE Journal of Selected Areas in Sensors (2024 - present)
5. Associate Editor, IEEE Antennas and Wireless Propagation Letters (2023-present)
6. Associate Editor, IEEE Transactions on Antennas and Propagation (2021- present)
7. Associate Editor, IEEE Journal of Radio Frequency Identification (2018- 2024)
8. Associate Editor, IEEE Sensors Journal (2017- 2025)
9. Associate Editor, IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology (2017-2023)
10. Associate Editor, Frontiers in Optoelectronics (2020-2023)
11. Associate Editor, Advanced Electromagnetics (2016-2018)
12. Lead Guest Editor, IEEE Journal of Selected Areas in Sensors (2023)
13. Guest Editor, IEEE Transactions on Antennas and Propagation (2022)
14. Guest Editor, Frontiers in Nanotechnology
15. Guest Editor, International Journal of Antennas and Propagation
16. Guest Editor, International Journal of Optics
17. Guest Editor, Optical and Quantum Electronics
18. Guest Editor, Sensors
19. Guest Editor, Wireless Communications and Mobile Computing

Proposal Review

1. DoE SBIR Phase I/Phase II
2. DoE NEUP
3. DoE BES
4. NSF ECCS-CCCS
5. NSF ECCS CAREER
6. NSF ECCS-EPMD
7. NSF DMR-EPM
8. Deutsche Forschungsgemeinschaft (German Research Foundation)

9. Natural Sciences and Engineering Research Council of Canada
10. KU Leuven internal grant

IEEE Chapters/Societies

1. Associate Vice President of Membership, *IEEE Council on Radio Frequency Identification (CRFID)*, 2024 – present
2. Chair, *IEEE Antennas & Propagation/Microwave Theory and Techniques Society Chicago Chapter (Central US – Region 4)*, 2023 – present
3. Member, *IEEE MTT-S TC-28 Biological Effects and Medical Applications Committee*, 2023 – present
4. Board of Directors, *Applied Computational Electromagnetics Society (ACES)*, 2021– 2023
5. Founding Chair, *IEEE Sensors Council Chicago Chapter (Central US – Region 4)*, 2019 – present
6. Member, *IEEE Sensors Award Committee*, 2021, 2022
7. Member, *IEEE AP Young Professions Committee*, 2020 – present
8. Vice Chair, *IEEE Southeastern Michigan Section Chapter IV*, 2017–2018

Conferences and Meetings

1. Track Chair: *IEEE Sensors Conference (IEEE SENSORS 2025)*, Vancouver, Canada, October 19-22, 2025.
2. Scientific Committee: *26th International Conference on Electromagnetics in Advanced Applications (ICEAA 2025)*, Palermo, Italy, September 8-12, 2025.
3. Session Chair: *26th International Conference on Electromagnetics in Advanced Applications (ICEAA 2025)*, Palermo, Italy, September 8-12, 2025.
4. Technical Program Committee Co-Chair: *2025 IEEE International Microwave Biomedical Conference (IMBioC 2025)*, Kaohsiung, Taiwan, April 15-17, 2025.
5. Track Chair: *IEEE Sensors Conference (IEEE SENSORS 2024)*, Kobe, Japan, October 20-23, 2024.
6. Scientific Committee: *25th International Conference on Electromagnetics in Advanced Applications (ICEAA 2024)*, Lisbon, Portugal, September 2-6, 2024.
7. Session Chair: *25th International Conference on Electromagnetics in Advanced Applications (ICEAA 2024)*, Lisbon, Portugal, September 2-6, 2024.
8. Technical Program Committee, *2024 IEEE International Symposium on Antennas and Propagation*, Florence, Italy, July 14-19, 2024.
9. Technical Program Committee, “MEMS/NEMS and Heterogeneously Integrated Devices (NEMS) track” in *2024 IEEE Electron Devices Technology and Manufacturing (EDTM)*, Bangalore, India, March 3-6, 2024.
10. Technical Program Committee: *2023 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Genoa, Italy, November 15-17, 2023.
11. Session Chair: *2023 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Genoa, Italy, November 15-17, 2023.
12. Session Chair: *2023 IEEE Sensors Conference (IEEE SENSORS 2023)*, Vienna, Austria, October 29–November 1, 2023.
13. Scientific Committee: *24th International Conference on Electromagnetics in Advanced Applications (ICEAA 2023)*, Venice, Italy, October 9-13, 2023.

14. Session Chair: 17th *International Congress on Engineered Material Platforms for Novel Wave Phenomena*, Crete, Greece, September 11-16, 2023.
15. Session Chair: *URSI General Assembly and Scientific Symposium*, Sapporo, Japan, August 19-26, 2023.
16. Technical Program Committee: *9th International Conference on Antennas and Electromagnetic Systems (AES 2023)*, Torremolinos, Spain, June 5-8, 2023.
17. Session Chair: 16th *International Congress on Engineered Material Platforms for Novel Wave Phenomena*, Siena, Italy, September 12-17, 2022.
18. Scientific Committee: *23th International Conference on Electromagnetics in Advanced Applications (ICEAA 2022)*, Cape Town, South Africa, September 5-9, 2022.
19. Technical Program Committee: *12th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2021)*, Torremolinos, Spain, July 19-22, 2022.
20. Short Courses and Workshops Chair, *2022 IEEE International Symposium on Antennas and Propagation*, Denver, USA, July 10-15, 2022.
21. Technical Program Committee, *2022 IEEE International Symposium on Antennas and Propagation*, Denver, USA, July 10-15, 2022.
22. Technical Program Committee: *8th International Conference on Antennas and Electromagnetic Systems (AES 2022)*, Marrakesh, Morocco, May 24-27, 2022.
23. International Advisory Committee, *2021 IEEE 7th International Conference on Space Science & Communication (IconSpace2021)*, November 23-24, 2021
24. Session Chair: *2021 IEEE Conference on Antenna Measurements & Applications (CAMA)*, Antibes Juan-les-Pins, France, November 15-17, 2021.
25. Technical Program Committee: *11th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2021)*, Warsaw, Poland, July 20-23, 2021.
26. Technical Program Committee Co-Chair: *2021 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2021)*, Nanjing, China, May 23-26, 2021.
27. Session Chair: *2021 USNC-URSI National Radio Science Meeting*, Boulder, Colorado, January 4-9, 2021.
28. Scientific Committee: *21th International Conference on Electromagnetics in Advanced Applications (ICEAA 2020)*, Hawaii, August 10-14, 2020.
29. Session Chair: *SPIE Defense + Commercial Sensing (SPIE DCS)*, Anaheim, California, USA, April 26-30, 2020.
30. Topic Session Committee Chair: the topic session of Materials/Devices for IoT and VR, IEEE 15th Nanotechnology Materials & Devices Conference (NMDC 2020), Nanjing, China, October 18-21, 2020.
31. Technical Program Committee (SC2): *Progress In Electromagnetics Research Symposium (PIERS) 2019*, Xiamen, China, December 17-20, 2019.
32. Session Chair: *Progress In Electromagnetics Research Symposium (PIERS) 2019*, Xiamen, China, 17-20 December, 2019.
33. Technical Program Committee: *10th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2019)*, Lisbon, Portugal, June 23-26, 2019.
34. Session Chair: *10th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2019)*, Lisbon, Portugal, June 23-26, 2019.
35. Session Chair: *2019 IEEE International Symposium on Antennas and Propagation*, Atlanta, Georgia, USA, July 7-12, 2019.

36. Session Chair: *2019 IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (NEMO)*, Cambridge, Massachusetts, USA, May 29-31, 2019.
37. Session Chair: *2019 International Applied Computational Electromagnetics Society (ACES) Symposium*, Miami, Florida, USA, April 14-18, 2019.
38. Session Chair: *SPIE Defense + Commercial Sensing (SPIE DCS)*, Baltimore, USA, April 14-18, 2019.
39. Invited Paper Co-Chairs: *2019 IEEE International Microwave Biomedical Conference (IMBioC)*, Nanjing, China, May 6-8, 2019.
40. Session Chair: *2019 IEEE International Microwave Biomedical Conference (IMBioC)*, Nanjing, China, May 6-8, 2019.
41. Session Chair: *9th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2018)*, Marseille, France, June 24-July 1, 2018.
42. Local Chair: *2018 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP)*, Ann Arbor, July 16-18, 2018.
43. Technical Program Committee: *2018 IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications (IMWS-AMP)*, Ann Arbor, July 16-18, 2018.
44. Session Chair: *2018 IEEE International Symposium on Antennas and Propagation*, Boston, July 8-13, 2018.
45. Registration Chair: *2018 International Microwave Biomedical Conference (IMBioC)*, Philadelphia, June 14-15, 2018.
46. Session Chair: *2018 International Microwave Biomedical Conference (IMBioC)*, Philadelphia, June 14-15, 2018.
47. Technical Program Committee: *9th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2018)*, Marseille, June 24-July 1, 2018.
48. Session Chair: *9th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2018)*, Marseille, June 24-July 1, 2018.
49. Technical Program Committee: *EMN Meeting on Photonics*, Budapest, Hungary, September 4-8, 2017.
50. Technical Program Committee: *8th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2017)*, Seoul, Korea, July 25-28, 2017.
51. Session Chair: *8th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2017)*, Seoul, Korea, July 25-28, 2017.
52. Session Chair: *2017 IEEE International Symposium on Antennas and Propagation*, San Diego, July 9-14, 2017.
53. Session Chair: *2016 IEEE International Symposium on Antennas and Propagation*, Puerto Rico, June 26 - July 1, 2016.
54. Session Chair: *7th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2016)*, Malaga, Spain, July 25-28, 2016.
55. Session Chair: *6th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2015)*, New York, August 4-7, 2015.
56. Session Chair: *5th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2014)*, Singapore, May 20-23, 2014.
57. Session Chair: *4th International Conference on Metamaterials, Photonic Crystals and Plasmonics (META 2013)*, Sharjah, United Arab Emirates, March 18-22, 2013.

Reviewer (more than 50 prestigious international journals)

1. 2D Materials
2. ACS Applied Materials and Interfaces
3. ACS Nano
4. ACS Photonics
5. Advanced Functional Materials
6. Advanced Materials
7. Advanced Optical Materials
8. Advanced Physics Review
9. AIP Advances
10. Applied Optics
11. Applied Physics A: Materials Science & Processing
12. Applied Physics Letters
13. Biosensors
14. Computer Aided Design
15. Device (Cell Press)
16. Electronics
17. EPJ Applied Metamaterials
18. FERMAT
19. IEEE Access
20. IEEE Antennas and Wireless Propagation Letters
21. IEEE Internet of Things Journal
22. IEEE Journal on Multiscale and Multiphysics Computational Techniques
23. IEEE Journal of Quantum Electronics
24. IEEE Photonics Journal
25. IEEE Photonics Technology Letters
26. IEEE Sensors Journal
27. IEEE Sensors Letters
28. IEEE Transactions on Antennas and Propagation
29. IEEE Transactions on Biomedical Circuits and Systems
30. IEEE Transactions on Circuits and Systems
31. IEEE Transactions on Electronic Devices
32. IEEE Transactions on Industrial Electronics
33. IEEE Transactions on Instrument and Measurement
34. IEEE Transactions on Microwave Theory and Techniques
35. IEEE Transactions on Nanotechnology
36. IEEE Antennas and Wireless Propagation Letters
37. Journal of Applied Physics
38. Journal of Electronic Materials
39. Journal of Intelligent and Fuzzy Systems
40. Journal of Microwaves, Optoelectronics and Electromagnetics Applications
41. Journal of Optics

42. Journal of the Optical Society of America A
43. Journal of the Optical Society of America B
44. Journal of Physical Chemistry
45. Journal of Physics: Condensed Matter
46. Journal of Physics A: Materials Science & Processing
47. Journal of Physics D: Applied Physics
48. Light Science and Applications (Nature Publication Group)
49. Materials Research Express
50. Materials Today
51. Measurement Science and Technology
52. Microelectronics Journal
53. MRS Communications
54. Nanomaterials
55. Nanophotonics
56. Nanotechnology
57. Nano Energy
58. **Nature Communications**
59. **Nature Electronics**
60. **Nature: Communication Physics**
61. **Nature: Laser and Photonics Reviews**
62. **Nature Nanotechnology**
63. **Nature Photonics**
64. Nanophotonics
65. New Journal of Physics
66. Optics Communications
67. Optics Express
68. Optics Letters
69. Optical Materials Express
70. Photonics
71. Physics Letters A
72. Physical Review Applied
73. Physical Review B
74. Physical Review Letters
75. **Science**
76. **Science Advances**
77. Semiconductor Science and Technology
78. Sensors
79. Scientific Reports (Nature Publication Group)
80. SPIE: Optical Engineering
81. Symmetry
82. AIP Advances

Reviewer for Conference Proceedings

1. 19th IEEE International Conference on RFID (IEEE RFID 2025)
2. 2025 IEEE Asia-Pacific Symposium on Electromagnetic Compatibility
3. 2025 IEEE International Microwave Biomedical Conference
4. IEEE Sensors Conference 2024
5. IEEE International Symposium on Antennas and Propagation 2024
6. IEEE Asia-Pacific Microwave Conference 2023
7. IEEE Conference on Antenna Measurements & Applications 2023
8. IEEE International Symposium on Antennas and Propagation 2023
9. 17th European Conference on Antennas and Propagation 2023
10. IEEE International Symposium on Antennas and Propagation 2022
11. 16th European Conference on Antennas and Propagation 2022
12. IEEE International Symposium on Antennas and Propagation 2021
13. 15th European Conference on Antennas and Propagation 2021
14. IEEE International Symposium on Antennas and Propagation 2020
15. 14th European Conference on Antennas and Propagation 2020
16. IEEE International Symposium on Antennas and Propagation 2019
17. IEEE International Microwave Biomedical Conference (IMBioC) 2019
18. 13th European Conference on Antennas and Propagation 2019
19. IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes 2019
20. SPIE Defense + Commercial Sensing 2019.
21. 10th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2020)
22. IEEE International Symposium on Antennas and Propagation 2018
23. IEEE MTT-S International Microwave Workshop Series on Advanced Materials and Processes 2018
24. 9th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2018)
25. 8th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2017)
26. IEEE International Symposium on Antennas and Propagation 2017
27. IEEE Sensors Conference 2017
28. IEEE International Symposium on Antennas and Propagation 2016
29. 7th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2016)
30. 6th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2015)
31. 5th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2014)
32. 8th Metamaterials Congress (Metamaterials 2014)
33. 7th Metamaterials Congress (Metamaterials 2013)
34. 4th International Conference on Metamaterials, Photonics Crystals and Plasmonics (META 2013)

Courses Taught

1. ECE 5550 Solid-State Electronics (F14-F17)
2. ECE 4570 Introduction to Microelectronic Devices (F17)
3. ECE 7990 Antenna Practice, Measurement, and Wireless Systems (S18)
4. ECE 9997 ECE Graduate Seminar (F17, S18)
5. ECE 322 Introduction to Electromagnetics and Applications (S19)
6. ECE 421 Introduction to Antennas and Wireless Propagation (F18-F25)

7. ECE 424 Radio-Frequency and Microwave Engineering (S22-S25)
8. ECE 520 Electromagnetic Field Theory (S19, S20)
9. ECE 523 Advanced Antenna Theory (F21, F22, F24)

Graduate Committees

1. Ph.D. Preliminary Exam Committee, Sina Movahedi Aliabadi (advisor: Dr. Kamran Avanaki)
2. Ph.D. Preliminary Exam Committee, Xin Zhu (advisor: Dr. Kamran Avanaki)
3. Ph.D. Preliminary Exam Committee, Md Tarikul Islam (advisor: Dr. Kamran Avanaki)
4. Ph.D. Preliminary Exam Committee, Ravi Prakash (advisor: Dr. Kamran Avanaki)
5. Ph.D. Dissertation Exam Committee, Silvanus Dsilva (advisor: Dr. Mohammad Shadmand)
6. Ph.D. Dissertation Committee, Dong Zhenya at National University of Singapore (advisor: Dr. John Ho)
7. Ph.D. Dissertation Committee, Oyesina Kayode Adedotun at City University of Hong Kong (advisor: Dr. Alex Wong)
8. Ph.D. Dissertation Committee, Hongyi Pan (advisor: Dr. Ahmet Enis Cetin)
9. Ph.D. Dissertation Committee, Amirreza Ghaznavi (advisor: Dr. Jie Xu)
10. Ph.D. Dissertation Committee, Hongyi Pan (advisor: Dr. Ahmet Enis Cetin)
11. Ph.D. Dissertation Committee, Salih Furkan Atici (advisor: Dr. Ahmet Enis Cetin)
12. Ph.D. Dissertation Committee, Alex Stutts (advisor: Dr. Danilo Erricolo)
13. Ph.D. Dissertation Committee, Leila Rahimifard (advisor: Dr. Amit Trivedi)
14. Ph.D. Dissertation Committee, Muhammad Farooq Umar (advisor: Dr. Mohammad Shadmand)
15. Ph.D. Dissertation Committee, Elahehsadat Torabi (advisor: Dr. Danilo Erricolo)
16. Ph.D. Dissertation Committee, Diah Badawi (advisor: Dr. Rashid Ansari)
17. Ph.D. Dissertation Committee, Ouday Hanosh (advisor: Dr. Rashid Ansari)
18. Ph.D. Dissertation Committee, Yangqing Liu (advisor: Dr. Danilo Erricolo)
19. M.S. Dissertation Committee, Patrick Martin (advisor: Dr. Danilo Erricolo)
20. Ph.D. Dissertation Committee, Tejumade Durowade (advisor: Dr. Vitali Metlushko)
21. Ph.D. Dissertation Committee, Ashfaqul Anwar Siraji (advisor: Dr. Yang Zhao)
22. Ph.D. Preliminary Exam Committee, Mohammad Ashraf Ali (advisor: Dr. Michael Wu)
23. Ph.D. Dissertation Committee, Hussein Kairalla (advisor: Dr. Nabil Sarhan)
24. Ph.D. Dissertation Committee, Lingguang Chen (advisor: Dr. Sean Wu)

Committee Service

1. Outstanding Global Scholar, UIC Office of Global Engagement (AY 24-25)
2. Member, ECE Labs & Computers Committee (AY 24-25)
3. Mentor, Mentoring University Faculty – Dr. Zizwe Chase (AY 24-AY 25)
4. Mentor, Mentoring University Faculty – Dr. Thomas Searles (AY 24-AY 25)
5. Mentor, Mentoring University Faculty – Dr. Aritra Banerjee (AY 23-AY 24)
6. Mentor, UIC Bridge-to-Faculty (B2F) Scholar Program (AY 21-AY 23)
7. Member, ECE Search Committee (AY 21-22, AY 22-23)
8. Member, ECE Scholarships & Awards Committee (AY 21-22)
9. Member, ECE Graduate Committee (AY 19-20, AY 20-21)
10. PhD Qualification Exam Committee in Electromagnetics (since AY 18-19)

11. PhD Qualification Exam Committee in QISE (AY 22-23)
12. Member, ECE Seminar Committee (AY 18-19, AY 19-20)
13. Member, Web and Communications Committee (AY 18-19, AY 20-21)
14. Advisory Committee, NIH ReBUILDDetroit Program (AY16-17, AY17-18)
15. Advisory Committee, STEM Days at WSU (AY17-18)
16. Member, ECE Undergraduate Committee (AY14-15)
17. Member, ECE Undergraduate Committee (AY15-16)
18. Member, ECE Undergraduate Committee (AY16-17)
19. Member, ECE Research Committee (AY17-18)
20. PhD Qualification Exam Committee in Photonics (AY15-16, AY16-17)
21. PhD Qualification Exam Committee in Devices (AY15-16, AY16-17, AY17-18)
22. Member, College of Engineering (COE) Research Advisory Committee (AY15-16, AY16-17)
23. Member, COE Assessment and Accreditation (AY15-16, AY16-17)
24. Member, COE Undergraduate Research Opportunity Program (AY15-16, AY16-17)
25. Member, ECE Faculty Search Committee (AY17-18)