

Su Yan, Ph.D.

Department of Electrical Engineering and Computer Science
College of Engineering and Architecture, Howard University

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Education

University of Illinois at Urbana-Champaign

Doctor of Philosophy

August 2016

Electrical and Computer Engineering

Dissertation: "Computational Modeling and Simulation of Nonlinear Electromagnetic and Multi-physics Problems"

GPA: 3.97/4.00

Master of Science

August 2012

Electrical and Computer Engineering

Thesis: "Accuracy Improvement of the Second-Kind Fredholm Integral Equations in Computational Electromagnetics"

GPA: 4.00/4.00

University of Electronic Science and Technology of China

Doctor of Philosophy

December 2011

Electromagnetics and Microwave Technology

Dissertation: "Calderón Technique Based Integral Equation Methods in Computational Electromagnetics"

GPA: 3.86/4.00

Bachelor of Science

July 2005

Electronic Information Engineering

Thesis: "Analysis of the Near Singularity and Singular Currents in the Simulation of Electromagnetic Scattering Problems"

GPA: 3.75/4.00

Experience

Howard University

Washington, DC

Associate Professor

August 2024–present

Department of Electrical Engineering and Computer Science

Director of IBM-HBCU Quantum Center

October 2023–present

Department of Electrical Engineering and Computer Science

Director of Graduate Studies, Electrical and Computer Engineering

June 2020–present

Department of Electrical Engineering and Computer Science

Assistant Professor

August 2018–August 2024

Department of Electrical Engineering and Computer Science

*University of Illinois at Urbana-Champaign**Urbana, IL***Postdoctoral Research Associate**

August 2016–July 2018

*Department of Electrical and Computer Engineering***Instructor**

August 2012–December 2012, August 2016–May 2018

Department of Electrical and Computer Engineering

UIUC List of Teachers Ranked as Excellent by Their Students, Outstanding Rating (top 10%)

Graduate Research Assistant

August 2011–July 2012, January 2013–July 2016

*Department of Electrical and Computer Engineering***Graduate Teaching Assistant**

August 2013–May 2014

*Department of Electrical and Computer Engineering***Visiting Scholar**

September 2008–July 2011

*Department of Electrical and Computer Engineering**Schlumberger**Sugar Land, TX***Modeling & Simulation Engineer Intern**

June 2014–August 2014

*Houston Formation Evaluation Integration Center (HFE)***Teaching***Howard University*EECE 158 – *Math Lab III*

Undergraduate course, 1 hours

EECE 260 – *Engineering Programming and Application*

Undergraduate course, 3 hours

EECE 305 – *Fundamentals of Electromagnetics*

Undergraduate course, 4 hours

EECE 306 – *Fundamentals of Electromagnetics Laboratory*

Undergraduate course, 1 hour

EECE 310 – *Principles of Electronics*

Undergraduate course, 2 hours

EECE 466 – *Advanced Electromagnetic Theory*

Undergraduate course, 3 hours

EECE 501 – *Graduate Seminar*

Graduate course, 0 hour

EECE 520 – *Electromagnetic Theory*

Graduate course, 3 hours

EECE 526 – *Antenna Theory*

Graduate course, 3 hours

EECE 629 – *Numerical Tech for Electromagnetics*

Graduate course, 3 hours

EECE 695 – *Special Topics in Microwaves*

Graduate course, 3 hours

*University of Illinois at Urbana-Champaign*ECE 210 – *Analog Signal Processing*

Undergraduate course, 4 hours

ECE 211 – *Analog Circuits & Systems*

Undergraduate course, 2 hours

ECE 385 – *Digital Systems Laboratory*

Undergraduate course, 2 hours

ECE 520 – *Electromagnetic Waves & Radiating Systems*

Graduate course, 4 hours

UIUC List of Teachers Ranked as Excellent by Their Students, Outstanding Rating (top 10%)

ECE 540 – *Computational Electromagnetics*

Graduate course, 4 hours

Honors, Awards, & Fellowships

1. Up and Coming Researcher Award, Inaugural Excellence in Innovation and Academic Achievement Awards, Howard University, 2025
2. DOE Early Career Award, U.S. Department of Energy, 2024
3. NSF Early Career Award, U.S. National Science Foundation, 2023
4. ACES Early Career Award, "For contributions to linear and nonlinear electromagnetic and multi-physics modeling and simulation methods." Applied Computational Electromagnetics Society, 2020
5. Edward E. Altschuler AP-S Magazine Prize Paper Award, IEEE Antennas and Propagation Society, 2020
6. Faculty Scholar, Junior Faculty Writing and Creative Works Summer Academy, Howard University, 2020
7. Summer Faculty Research Fellowship, Howard University, 2019
8. Outstanding Reviewer, Journal of Computational Physics, November, 2018
9. Best Student Paper Award, The First Place Winner, ACES, Honolulu, HI, 2016
10. USNC/URSI Travel Fellowship Grant Award, The National Academies (NAS), 2015
11. P. D. Coleman Outstanding Research Award, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2015
12. Yuen T. Lo Outstanding Research Award, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2014
13. Outstanding Doctoral Dissertation, Sichuan Provincial People's Government, 2014
14. UIUC List of Teachers Ranked as Excellent by Their Students, Outstanding Rating (top 10%), University of Illinois at Urbana-Champaign, Fall 2012
15. Outstanding Graduate Student (Highest honor from the university, ten recipients annually), UESTC, 2011
16. Best Student Paper Award, The First Place Winner, ACES, Williamsburg, VA, 2011
17. Best Student Paper Award, IEEE Chengdu Section, 2010
18. Distinguished Dissertation Award, UESTC, 2005
19. China Aerospace Science and Technology Corporation (CASC) Scholarship, CASC, 2011
20. Scholarship for Graduates, UESTC, The Top Grade, 2006; The 2nd Grade, 2008 and 2009; and The 3rd Grade, 2010
21. People's Scholarship for Undergraduates, UESTC, The 3rd Grade, 2002; The 2nd Grade, 2003 and 2004; and The 1st Grade, 2005
22. National Mathematical Modeling Competition, The 3rd Award, Sichuan, China, 2003
23. Mathematical Modeling Competition, The 3rd Award, UESTC, 2002

Research Grants

Howard University

1. Consortium for AI-Enhanced Subsurface Sensing and Data Analysis: Advancing Energy and Environmental Safety, Department of Energy, 1/1/2025 – 12/31/2029, PI at Howard, Pending.
2. Randomized Algorithms for Multiscale Electromagnetics and Multiphysics Problems, Department of Energy, 7/1/2024 – 6/30/2029, Sole PI, Awarded.
3. RAISE: CET: Multidisciplinary High-Performance Computing and Artificial Intelligence Enabled Catalyst Design for Micro-Plasma Technologies in Clean Energy Transition, National Science Foundation, 7/1/2024 – 6/30/2029, PI at Howard, Awarded.
4. Incubating Next Generation Clean Energy Scientists and Engineers Through Minority-Scholar Exchange and In-Situ Hydrogen Production Research, Department of Energy, 6/1/2024 – 5/31/2027, PI at Howard, Awarded.
5. Excellence in Research: Microwave-Assisted In-Situ Hydrogen Generation: Experimentation, Simulation, and Optimization, National Science Foundation, 9/15/2023 – 8/31/2026, PI, Awarded.
6. Non-conforming Low Frequency Solver for Electromagnetic Computations, Ansys Inc., 7/1/2023 – 12/31/2025, Sole PI, Awarded.
7. CAREER: Neural Network Enhanced Electromagnetics and Multiphysics Simulation Methods for RF and Microwave Reconfigurable Devices, National Science Foundation, 6/1/2023 – 5/31/2028, Sole PI, Awarded.
8. Establishing a Vertically Integrated Partnership with Howard University through Planetary and Exoplanetary Sciences, NASA JPL, 10/2022 – 9/2024, University Lead, Awarded.
9. Excellence in Research: Artificial Intelligence Aided Metasurface Design and Application in Next Generation of Cellular Communication Systems, National Science Foundation, 9/1/2022 – 8/31/2025, Co-PI, Awarded.
10. Multiphysics and Multiscale Simulation Methods for Electromagnetic Energy Assisted Fossil Fuel to Hydrogen Conversion, Department of Energy, 9/1/2021 – 8/31/2025, PI, Awarded.
11. Research Initiation Awards: Theoretical and Computational Methods for the Robust Retrieval of Effective Electromagnetic Properties of Random Composite Materials, National Science Foundation, 6/1/2021 – 5/31/2025, Sole PI, Awarded.
12. IBM-HBCU Quantum Center, IBM, 1/1/2021 – 12/31/2025, Director and PI, Awarded.
13. A Novel Numerical Method for Electronic Circuit Modeling, Howard University, 5/19/2020 – 9/25/2020, Sole PI, Awarded.
14. A Novel Approach to Coronagraph Design for ExoEarth Observations, NASA JPL, 1/30/2020 – 9/27/2020, Co-PI, Awarded.
15. Advanced Computational Methods for Electromagnetic-Based Multiphysics and Multiscale Problems, Howard University, 5/16/2019 – 8/15/2019, Sole PI, Awarded.

Student Advising

Current Students

Graduate Students

1. Minyechil Mekonnen

Ph.D. student

2. Laila Wise	<i>Ph.D. student</i>
3. Abdullah Noor	<i>Ph.D. student</i>
4. Amzad Hossain	<i>Ph.D. student</i>
5. Meratun Anee	<i>Ph.D. student</i>
6. Jamil Haider	<i>Ph.D. student</i>
7. Noora Salim	<i>Ph.D. student</i>
8. Messan Anato	<i>Ph.D. student</i>
9. Nayem Hosen	<i>Ph.D. student</i>

Undergraduate Students

1. Oluwaseun Noah Adeyeye	<i>Electrical Engineering</i>
2. Kritish Pokharel	<i>Computer Science</i>
3. Chima Nwughala	<i>Computer Engineering</i>
4. Tehya Gaines	<i>Computer Engineering</i>
5. Boluwatife Osanyinb	<i>Electrical Engineering</i>
6. Brady Souma	<i>Electrical Engineering</i>
7. Anthony Berry	<i>Electrical Engineering</i>
8. Antonio Jackson	<i>Computer Engineering</i>
9. Clarice Yekeh	<i>Computer Engineering</i>
10. Jaiven McIntosh	<i>Electrical Engineering</i>
11. Kennedy Mensah	<i>Computer Engineering</i>
12. Michael Agoha	<i>Electrical Engineering</i>

Past Students

Ph.D. Dissertations

1. Abdullah Noor, "Modelling and Simulation of Metasurfaces Using Discontinuous Galerkin Integral Equation and Generalized Sheet Transmission Conditions," Ph.D. Proposal, Howard University, April 2025.
2. Minyechil Mekonnen, "A Novel $A-\phi$ Formulation for Wideband and Multiscale Electromagnetic Simulations in Time and Frequency Domains," Ph.D. Proposal, Howard University, April 2025.
3. Christian O. Díaz-Cáez, "Fast and Efficient Electromagnetic Simulation of Electrically Extra-Large Problems Using Phase Information and Mesh Automation," Howard University, Ph.D. Proposal, Mar. 2022; Ph.D. Dissertation, Nov. 2022. (Now with DoD)
4. Ayobami O. Idubor, "Hysteresis Model Parameter Extraction and Electromagnetic Detection of Buried Objects," Howard University, Ph.D. Proposal, May 2022; Ph.D. Dissertation, Nov. 2022. (Now with Arconic, Inc.)
5. Kamrun Nahar, "Combined Artificial Neural Network and Stochastic Learning Automata Architecture for Enhanced Machine Learning," Ph.D. Dissertation, Howard University, Nov. 2021. (Now works as a Postdoctoral Researcher supported by American Society for Engineering Education)

M.Eng. Theses

1. Minyechil Mekonnen, "Finite Element Modeling and Simulation of Electromagnetic Scattering Problems," M.Eng. Thesis, Howard University, Dec. 2021. (Continues as a Ph.D. student)

M.Eng. Non-Theses

1. Amzad Hossain, Electrical and Computer Engineering, Howard University, May 2025. (Continues as a Ph.D. student)

Past Undergraduate Students

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| 1. Johan Milele Tamze Kouanga | <i>Electrical Engineering</i> |
| 2. Karci Gibson | <i>Electrical Engineering</i> |
| 3. Mekhi Beard | <i>Computer Engineering</i> |
| 4. Chisom Atulomah | <i>Computer Engineering</i> |
| 5. Olaide R. Afolabi | <i>Electrical Engineering</i> |
| 6. Grace Owolabi | <i>Electrical Engineering</i> |
| 7. Faith T. Adegbenro | <i>Electrical Engineering</i> |
| 8. Nana-Akua Ofosu | <i>Computer Engineering</i> |
| 9. Oluwatamilor E. Ogunbanjo | <i>Computer Engineering</i> |
| 10. Javid Mitchell | <i>Computer Science</i> |

Graduate Student Committee

1. Adrien Njanko, "Graph Neural Networks for Connected Systems: Convergence Dynamic and Cyber Defense," Advisor: Dr. Danda Rawat, Howard University, Ph.D. Dissertation, 2025.
2. Gloria Mollah, "Intelligent Wireless Communication System," Advisor: Dr. Danda Rawat, Howard University, Ph.D. Proposal, Nov. 2024.
3. Robert Coleman, "Next Generation Platforms for Quantum Transformational Computing," Advisor: Dr. Eric Seabron, Howard University, Ph.D. Proposal, Nov. 2024.
4. Abigail Oyekola, "Investigate The Feasibility and Study The Performance of THz-Band Communications Systems For Next Generation of Communications Systems," Advisor: Dr. Danda Rawat, Dr. Imtiaz Ahmed, Howard University, Ph.D. Proposal, 2024.
5. Salomon Sathe, "Performance Evaluation of Secure Vehicular Communications in Terahertz Wireless Bands," Advisor: Dr. Danda Rawat, Howard University, Ph.D. Proposal, 2022; Ph.D. Dissertation, 2024.
6. Abdulaziz Alali, "Performance Evaluation of Physical Layer Security in sub-THz band for UAV Communications," Advisor: Dr. Danda Rawat, Howard University, Ph.D. Proposal, 2022; Ph.D. Dissertation, 2023.
7. Amber Wingfield, "Parameter Characterization for the Fabrication of a Diamond Light Emitting Diode," Ph.D. Dissertation, Advisor: Dr. Charles Kim, Howard University, 2022.
8. Khaled Alnifie, "Investigation of the Human's Weaknesses in Organizational Cyber Security: A Meta-Analytic Approach," Advisor: Dr. Charles Kim, Howard University, Ph.D. Proposal, 2022; Ph.D. Dissertation, 2023.
9. Madiha Gul, "Detection of Compromised Component in a Computing System," Ph.D. Dissertation, Advisor: Dr. Charles Kim, Howard University, 2018.
10. Ikemefuna Uba, "Towards real-time dynamic tracking of reliability of circuit-active GaN FET," Ph.D. Proposal, Advisor: Dr. Charles Kim, Howard University, 2018.

Society Membership

Senior Member Institute of Electrical and Electronics Engineers (IEEE) IEEE Antennas and Propagation (AP) Society IEEE Microwave Theory and Techniques (MTT) Society	2017–present
Full Member The International Society for Optics and Photonics (SPIE)	2025–present
Full Member U.S. National Committee for the International Union of Radio Science (USNC-URSI) Commission B - Fields and Waves	2023–present
Life Member Applied Computational Electromagnetics Society (ACES)	2011–present
Member Institute of Electrical and Electronics Engineers (IEEE) IEEE Antennas and Propagation (AP) Society	2012–2016
Student Member Institute of Electrical and Electronics Engineers (IEEE) IEEE Antennas and Propagation (AP) Society	2008–2011

Professional Activities

Academic Community Service

- Member of Board of Directors**, Applied Computational Electromagnetics Society (ACES), 2024–2027
- Member of IEEE Senior Member Review Panel**, IEEE, 2022–present
- Member of AP-S Meetings Committee**, IEEE Antennas and Propagation Society (AP-S), 2022.
- Chair, Website and Publications Subcommittee**
- Member, Conference Sponsorship Review Subcommittee**

Journal Editorship

- Associate Editor**, *IEEE Antennas and Wireless Propagation Letters (AWPL)*, 2024–present.
- Academic Editor**, *PeerJ Computer Science*, 2020–present.
- Associate Editor**, *IEEE Access*, 2019–present.
- Associate Editor & Editorial Board Member**, *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, 2019–present.
- Associate Editor & Editorial Board Member**, *Advances in Mathematical Physics*, 2018–present.
- Guest Editor** of a special issue “Challenges and Endeavors of Over-the-Air (OTA) and Electromagnetic Compatibility (EMC) Tests for 5G Radios” for *IEEE Access*, scheduled, 2021.
- Guest Editor** of a special issue “Multiscale Modeling and Simulation Methods for Electromagnetic and Multiphysics Problems” for *International Journal of Numerical Modelling: Electronic Networks, Devices and Fields*, published, October, 2021.
- Lead Guest Editor** of a special issue “Advanced Modeling and Simulation Methods for Multiphysics and Multiscale Problems” for *International Journal of Antennas and Propagation*, published, August 18, 2017. (Call for papers can be found [here](#).)

Conference Committees

Special Session Organizer and Chair, 2025 International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, FL, USA, May 18–21, 2025.

Special Session Organizer and Chair, 2024 International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, FL, USA, May 19–23, 2024.

Special Session Organizer and Chair, IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (NEMO'2023), Winnipeg, Canada, June 28 - 30, 2023.

Member of Organizing Committee, Student Paper Competition Chair, Special Session Chair, 2023 International Applied Computational Electromagnetics Society (ACES) Symposium, Monterey, CA, USA, March 26–30, 2023.

Member of Organizing Committee, Special Session Chair, 2022 International Applied Computational Electromagnetics Society (ACES-China) Symposium, Xuzhou, China, July 28–31, 2022.

Member of Steering Committee, Publicity Chair, and Member of Technical Program Committee, IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, CO, USA, July 10–15, 2022.

Member of Steering Committee, Technical Program Committee Co-Chair, 2021 International Applied Computational Electromagnetics Society (ACES-USA) Symposium, Online meeting due to pandemic, August 1–5, 2021.

Member of Organizing Committee, Student Paper Competition Chair, 2021 International Applied Computational Electromagnetics Society (ACES-China) Symposium, Chengdu, China, July 28–31, 2021.

Member of Technical Program Committee, Symposium on Recent Advances in Communication Theory, Information Theory, Antennas and Propagation (CIAP'20), Chennai, India, October 14–17, 2020.

Special Session Organizer and Chair, 2020 International Applied Computational Electromagnetics Society (ACES) Symposium, Monterey, CA, USA, March 22–26, 2020.

Special Session Organizer and Chair, IEEE International Conference on Computational Electromagnetics (ICCEM), Singapore, March 25–27, 2020.

Special Session Organizer, International Conference on Electromagnetics in Advanced Applications (ICEAA), Granada, Spain, September 9–13, 2019.

Special Session Organizer and Chair, IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, USA, July 7–12, 2019.

Member of Organizing Committee, Short Course/Tutorial Chair, IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (NEMO'2019), Cambridge, MA, USA, May 29–31, 2019.

Special Session Organizer and Chair, 2019 International Applied Computational Electromagnetics Society (ACES) Symposium, Miami, FL, USA, April 14–18, 2019.

Session Chair, IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, USA, July 2018.

Member of Technical Program Committee, International Applied Computational Electromagnetics Society (ACES) Symposium, Beijing, China, July 2018.

Session Organizer and Chair, IEEE International Conference on Computational Electromagnetics (ICCEM), Chengdu, China, March 2018.

Session Chair, IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, San Diego, CA, USA, July 2017.

Member of Scientific Committee, 13th International Workshop on Finite Elements for Microwave Engineering, Florence, Italy, May 2016.

Member of Scientific Committee and Session Chair, 12th International Workshop on Finite Elements for Microwave Engineering, Chengdu, China, May 2014.

Journal and Proposal Review

NSF Reviewer	2020, 2022-2023
DOE Reviewer	2024
Journal of the Optical Society of America	2024–present
Journal of Computational Physics	2018–present
Computer Physics Communications	2019–present
Proceedings of the IEEE	2011–present
IEEE Access	2018–present
IEEE Antennas and Propagation Magazine	2014–present
IEEE Transactions on Antennas and Propagation	2011–present
IEEE Transactions on Microwave Theory and Techniques	2015–present
IEEE Transactions on Magnetics	2014–present
IEEE Transactions on Plasma Science	2020–present
IEEE Transactions on Geoscience and Remote Sensing	2021–present
IEEE Transactions on Instrumentation & Measurement	2023–present
IEEE Journal on Multiscale and Multiphysics Computational Techniques	2018–present
IEEE Photonics Journal	2017–present
IEEE Antennas and Wireless Propagation Letters	2013–present
IET Microwaves, Antennas and Propagation	2014–present
Scientific Reports	2017–present
Electromagnetics	2013–present
Applied Computational Electromagnetics Society (ACES) Journal	2010–present
Waves in Random and Complex Media	2015–present
Progress In Electromagnetics Research (PIER)	2009–present
Journal of Electromagnetic Waves and Applications (JEMWA)	2009–present
International Journal of Antennas and Propagation	2015–present
International Journal of Numerical Modelling: Electronic Networks, Devices and Fields	2015–present
Engineering with Computers	2023–present
Computers in Biology and Medicine	2018–present
International Journal of RF and Microwave Computer-Aided Engineering	2016–present
Elsevier, Engineering Science and Technology (JESTECH)	2014–present
Universal Journal of Electrical and Electronic Engineering	2015–present

Departmental Service

1. Member, Faculty Search Committee	2020
2. Member, The Laboratory Committee	2019–present
3. Member, EE/CpE Assessment Committee	2018–present

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| 4. Member, Undergraduate Curriculum Committee | 2018–present |
| 5. Chair, Graduate Curriculum Committee | 2021–present |

Collegial Service

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| 1. Member, Ad hoc Strategic Plan Committee | 2024 |
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University Service

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| 1. Judge | |
| Howard University Research Symposium | April 11, 2019 |

Invited Talks

1. Computational Electromagnetics and Its Applications in Science and Engineering, Lawrence Berkeley National Laboratory, Berkeley, CA, June 2024
2. Computational Electromagnetics and Its Applications in Science and Engineering, Department of Electrical Engineering, University of North Texas, Denton, TX, Feb 2024
3. Computational Electromagnetics and Multiphysics Research at Howard University, NASA JPL, Pasadena, CA, May 2023
4. Computational Electromagnetics Research at Howard University, Ansys Inc., Pittsburgh, PA, Mar. 2023
5. Computational Electromagnetics Research: An Overview and Case Studies, NSF-sponsored workshop, Online Summer Research Experiences on Nanoparticles, July, 2021
6. Computational Electromagnetics Research: An Overview and Case Studies, NSF-sponsored workshop, Online Summer Research Experiences on Nanoparticles, July, 2020
7. Computational Electromagnetics Research: A Brief Overview, Howard University Research Retreat Symposium, April 9, 2019
8. All-Frequency Stable Finite-Element Formulation and Application in Electromagnetic Multiscale Problems, Howard University Research Symposium, April 11, 2019
9. Computational Modeling and Simulation of Electromagnetic and Multiphysics Problems: Challenges and Opportunities, Department of Electrical Engineering and Computer Science, Howard University, April 5, 2018
10. Computational Modeling and Simulation Methods for Electromagnetic and Multiphysics Problems, Resonant Inc., Santa Barbara, CA, March 20, 2018
11. Computational Modeling and Simulation Methods for Electromagnetic and Multiphysics Problems, School of Engineering and Technology, Central Michigan University, March 16, 2018
12. Computational Modeling and Simulation of Electromagnetic and Multiphysics Problems: Challenges and Opportunities, Department of Electrical and Computer Engineering, University of Wisconsin–Madison, August 15, 2017
13. Computational Modeling and Simulation of Electromagnetic and Multiphysics Problems: Challenges and Opportunities, Department of Electrical and Computer Engineering, Stony Brook University, May 11, 2017
14. CEM Challenges in Multiphysics Modeling and Simulation, IEEE International Symposium on Antennas and Propagation, Fajardo, Puerto Rico, June 30, 2016

15. Calderón Technique Based Integral Equation Methods in Computational Electromagnetics, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, August 30, 2011

Publications

1 edited book, 3 book chapters, 2 editorials, 38 journal articles, 72 full conference papers, 24 conference abstracts.

Citations: 1339, h-index: 21, i10-index: 34. (as of Feb. 2025, based on Google Scholar)

Edited Book

1. Q. Ren, **Su Yan**, and A. Elsherbeni (ed.), *Advances in Time-Domain Computational Electromagnetic Methods*, Wiley-IEEE Press, Nov. 2022. ISBN: 978-1-119-80837-4, DOI:10.1002/9781119808404

Book Chapter

1. **Su Yan**, "Adaptive Discontinuous Galerkin Time-Domain Method for the Modeling and Simulation of Electromagnetic and Multiphysics Problems," in *Advances in Time-Domain Computational Electromagnetic Methods*, Q. Ren, **Su Yan**, and A. Elsherbeni (ed.), Wiley-IEEE Press, Nov. 2022. ISBN: 978-1-119-80837-4
2. J.-M. Jin and **Su Yan**, "Multiphysics Modeling with Computational Electromagnetics," in *Encyclopedia of RF and Microwave Engineering*, 2nd Ed, Hoboken, NJ: John Wiley & Sons, Inc., 2021. In Production.
3. B. M. Notaroš and **Su Yan**, "New Trends in Finite Element Methods," in *New Trends in Computational Electromagnetics*, Ö. Ergül (ed.), The IET, pp. 259–313, Oct. 2019.

Editorial

1. **Su Yan** and Y. Liu, "Multiscale modeling and simulation methods for electromagnetic and multiphysics problems," Special Issue in *Int J Numer Model El*, Oct. 2021.
2. **Su Yan**, Y. Wu, H. Zhao, and H. Guo, "Advanced Modeling and Simulation Methods for Multiphysics and Multiscale Problems," Special Issue in *Int J Antennas Propag.*, Nov. 2017.

Journal Articles

1. M. Mekonnen and **Su Yan**, "A Novel $\mathbf{A}-\phi$ formulation for wideband and multiscale electromagnetic simulation," *IEEE Trans. Antennas Propag.*, Mar. 2025, Under Review.
2. C. Díaz-Cáez and **Su Yan**, "Efficient electromagnetic scattering simulation of electrically extra-large problems using phase information and adaptive mesh automation," *IEEE Trans. Antennas Propag.*, vol. 72, no. 6, pp. 5191–5200, June 2024. doi: 10.1109/TAP.2024.3393711
3. **Su Yan**, P. Chen, M. I. Wade, and T. L. Gill, "Optimal pupil basis set for telescope-coronagraph design and perturbation analysis based on the method of moments," *J. Opt. Soc. Am. A*, vol. 39, no. 12, pp. 2422–2437, 2022. doi: 10.1364/JOSAA.472995
4. I. Ahmed, **Su Yan**, D. B. Rawat, and C. Pu, "Dynamic resource allocation for IRS assisted energy harvesting systems with statistical delay constraint," *IEEE Trans. Veh. Technol.*, vol. 71, no. 2, pp. 2158–2163, Feb. 2022. doi: 10.1109/tvt.2021.3133825
5. **Su Yan**, "A continuous–discontinuous Galerkin method for electromagnetic simulations based on an all-frequency stable formulation," *Progress In Electromagnetics Research M*, vol. 106, pp. 153–165, 2021. doi: 10.2528/pierm21100412

6. **Su Yan** and J.-M. Jin, "An enhanced transient solver with dynamic p -adaptation and multirate time integration for electromagnetic and multiphysics simulations," *Int J Numer Model El*, Jun. 2019, 10.1002/jnm.2626.
7. J.-M. Jin and **Su Yan**, "Multiphysics modeling in electromagnetics: Technical challenges and potential solutions," *IEEE Antennas Propag. Mag.*, vol. 61, no. 2, pp. 14–26, Apr. 2019.
8. P. Karimi, X. Zhang, **Su Yan**, M. Ostoja-Starzewski, and J.-M. Jin, "Electrostatic and magnetostatic properties of random materials," *Phys. Rev. E*, vol. 99, p. 022120, Feb. 2019.
9. **Su Yan**, J. Qian, and J.-M. Jin, "An advanced electromagnetic-plasma simulator based on the discontinuous Galerkin time-domain algorithm with dynamic adaptation and multirate time integration techniques," *IEEE J. Multiscale and Multiphys. Comput. Techn.*, vol. 4, pp. 76–87, Feb. 2019.
10. **Su Yan**, A. D. Greenwood, and J.-M. Jin, "Simulation of high-power microwave air breakdown modeled by a coupled Maxwell–Euler system with a non-Maxwellian EEDF," *IEEE Trans. Antennas Propag.*, vol. 66, no. 4, pp. 1882–1893, Apr. 2018.
11. G. Chen, L. Zhao, W. Yu, **Su Yan**, K. Zhang, and J.-M. Jin, "A general scheme for the DGTD modeling and S-parameter extraction of inhomogeneous waveports," *IEEE Trans. Microw. Theory Tech.*, vol. 66, no. 4, pp. 1701–1712, Apr. 2018.
12. **Su Yan**, J. D. Kotulski, and J.-M. Jin, "Nonlinear multiphysics and multiscale modeling of dynamic ferromagnetic–thermal problems," *J. Appl. Phys.*, vol. 123, no. 10, p. 105107, Mar. 2018.
13. J. Li, **Su Yan**, Y. Liu, B. M. Hochwald, and J.-M. Jin, "A high-order model for fast estimation of specific absorption rate induced by multiple transmitters in portable devices," *IEEE Trans. Antennas Propag.*, vol. 65, no. 12, pp. 6768–6778, Dec. 2017.
14. **Su Yan**, C.-P. Lin, R. R. Arslanbekov, V. I. Kolobov, and J.-M. Jin, "A discontinuous Galerkin time-domain method with dynamically adaptive Cartesian meshes for computational electromagnetics," *IEEE Trans. Antennas Propag.*, vol. 65, no. 6, pp. 3122–3133, Jun. 2017.
15. **Su Yan** and J.-M. Jin, "A dynamic p -adaptive DGTD algorithm for electromagnetic and multiphysics simulations," *IEEE Trans. Antennas Propag.*, vol. 65, no. 5, pp. 2446–2459, May 2017.
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