I will join the Florida State University, FL, USA as an Assistant Professor starting August 2026, and I am recruiting motivated PhD students to join my research group.

Xinze Li

Email: xinzel@uark.edu
Tel: +1 4797992542
University of Arkansas, Fayetteville, USA
Research Area: AI in Power Electronics

EDUCATION AND POST DOCTORAL FELLOWSHIP

University of Arkansas Fayetteville, USA
Post Doctoral Fellow, Lecturer Jul. 2024 – Jul. 2026 (Expected)

- Supervisor: Alan Mantooth (IEEE Fellow, IEEE Division II Director)
- Project Title: Machine Learning Optimized Power Electronics
  - DoD-funded, in collaboration with Eaton, University of Wisconsin-Milwaukee, and MetaMorph
- Research Scope: Explainable AI-Based Prognostics and Health Management of Power Semiconductors
- Teaching: Graduate course – Fundamentals of AI for Power Electronics Design
  - 40-hour, 3-credit, 14 students enrolled (11 Ph.D. student, and 3 master students)
- Mentoring: 3 Ph.D. students (with 1 published at IEEE Trans. On Power Electronics), 4 undergraduates

Nanyang Technological University Singapore
Research Fellow Oct. 2023 – Jun. 2024

- Supervisor: Changyun Wen (IEEE Fellow), Yun Yang, Kezhi Mao
- Project Title: Artificial Intelligence for High-Frequency and Three-Dimensional Wireless Power Transfer
- Research Scope: Physics-Informed Artificial Intelligence for Power Electronics Modeling and Design

Nanyang Technological University (QS Ranking #26, 2024) Singapore
Doctor of Philosophy, Electrical and Electronic Engineering Jul. 2018 – Mar. 2023

- GPA: 4.75/5 (top 1%)
- Supervisor: Kezhi Mao; Co-supervisors: Josep Pou (IEEE Fellow), Changyun Wen (IEEE Fellow)
- Research Topic 1 – Doctorate thesis: Applications of Artificial Intelligence in the Circuit and Modulation Design of DC-DC Converters (https://dr.ntu.edu.sg/handle/10356/165390)
- Research Topic 2 – Text Style Transfer under Low-Data Regime (natural language processing)
- Winner of Graduate College Collaborative Research Award in the academic year 2023-2024

Politecnico Di Milano Milano, Italy
IDEA League Summer School, Next-Generation Mobility Jul. 2022 - Aug. 2022

Shandong University Shandong Province, China
Bachelor, Electrical and Electronic Engineering Sep. 2014 – Jun. 2018

- GPA: 94/100 (top 1%)

INDUSTRY AND PROJECT EXPERIENCE

University of Arkansas, Fayetteville, Arkansas, USA
Post Doctoral Fellow, Lecturer Jul. 2024 – Now, Supervisor: Alan Mantooth

- Project lead: Eaton - Machine learning optimized power electronics
  - Managed a 3-engineer team, coordinated between collaborators, developed multi-physics multi-objective design tool for DC cap bank and busbar, coordinated DPT and 300-kW high-power test for hardware prototype
- Project lead: Prognostics and health management for power semiconductors
  - Mentors two Ph.D. students, collaborates with Toyota America, develops light AI solutions to predict the remaining useful life of SiC power modules and traction inverters given practical driving behaviors
- Research group leader: Electronic design automation group
  - URL: https://mscad.uark.edu/design-automation-group-2/

Nanyang Technological University, Singapore
Research Fellow Oct. 2023 – Jun. 2024

- Project lead: Optimization of 3D spatial and PCB coils for wireless power transfer
  - Developed multi-physics AI solution to improve magnetic field uniformity, coordinated prototype validation, and mentored one Ph.D. student to successfully publish one IEEE Trans. on Power Electronics Journal

- Project lead: Optimization of adaptive controllers for wireless power transfer
  - Developed AI-based adaptive controller for WBG wireless power transfer systems to improve transient dynamics, coordinated prototype validation, and published one IEEE Trans. On Industry Application Journal

Rolls-Royce@NTU Corporate Lab - EPSIL@N, Singapore
Researcher Jun. 2022 – Mar. 2023, Supervisor: Josep Pou

- Project lead: a fleet management project in Germany
  - Designed a probabilistic AI-based optimization framework to model and optimize fuel consumption, coordinated with Rolls-Royce Germany
- Project participant: a 300-kW fuel cell project
  - Optimized DAB-inverter cascaded system using AI, conducted system-level controllability analysis using Middlebrooks' impedance criteria for the cascading system of 3 DAB in parallel and a three-phase four-wire inverter considering grid following/isolating/forming modes
- Project participant: a 150-kW AC rack project

Singtel, Singapore Market Leader in Telecommunication in Singapore
Artificial Intelligence Engineer May 2021 - Sep. 2021

- Project lead of a computer-vision-based patient anomaly behavior monitoring project
  - Developed a polygon object detection framework to handle various perspectives of CCTV in hospital and a ML-based pose detection framework to detect patient anomaly behavior, which is open-sourced and used by Singtel and 4000+ developers (GitHub: https://github.com/XinzeLee/PolygonObjectDetection)

TEACHING AND MENTORING EXPERIENCE

University of Arkansas Fayetteville, AR, USA
Lecturer Jul. 2024 – Now

- Design and instruct a new graduate course – Fundamentals of AI for Power Electronics Design
- Course details: 3 credits, 40 hours, 14 graduate students enrolled (11 Ph.D. students, 3 master students)
- Course contents: Overview of AI in power electronics and design automation, basics of meta-heuristic algorithms, machine learning algorithms, generative AI engineering, reinforcement learning for control
- Course highlights: Project-based meta-learning, generative AI for coding/debugging, algorithm mindset
  - Student case study: After 8 weeks of classes, Eric Allee, without prior background of AI, is now capable and has written 2000+ lines of python codes in his mid-term exam (with diverse neural network structures), and achieved ~3.5% mean average percentage error for the MagNet Challenge dataset.

Co-Supervisor for Undergraduate Students Jun. 2025 – Aug. 2025

- Supervised 4 undergraduate students as part of an NSF Research Experience for Undergraduates (REU) project, focusing on AI applications in power electronics design
- Two students (Youssef Ali and Jared Hernandez), who had no priori background in AI and PE, successfully published a technical paper at the IEEE Design Methodologies Conference (DMC) 2025

Co-Supervisor for Graduate Students Jul. 2024 - Present

- Guides and supervises research directions, develops main methodologies and integrates contributions, assists in algorithm implementation, experiment design, scientific writing and publication
  - David Sector Agogo: Probabilistic AI-based failure mechanism analysis and remaining life prediction in SiC power modules, navy-funded research
  - Anna Corbitt: Light and explainable AI-based remaining useful life prediction of Toyota automotive traction inverters, Toyota America-funded research
  - Hui Cao: Decoupling control and modulation for DAB and triple-active-bridge converters, published one paper at IEEE Trans. on Power Electronics

Nanyang Technological University Singapore
Teaching Assistant Aug. 2019 - Mar. 2022

- Undergraduate Courses (1) *Web Applications Design*; (2) *Machine Learning Design and Applications*
- Graduate Course: *Power Electronic Converters*

Co-Supervisor for Graduate Students Sep. 2019 - Present

- 4 master of engineering students
- Ph.D. candidate: Jiaxin Dong (graduated) – Doctorate thesis: Operation and efficiency improvements of a hybrid dual-active-bridge converter for energy storage systems

ACADEMIC SERVICES

Invited Talks or Session Chairs (5 Sessions)

- 2025 *IEEE Design Methodologies Conference (DMC)*
  - Event Organizer: AI Challenge in Power Electronics Design
- 2025 *IEEE Wide Bandgap Power Devices and Applications (WiPDA)*
  - Tutorial: AI in Power Electronics Design – Present and Future
- 2025 *IEEE Energy Conversion Conference and Expo (ECCE)* (Flagship Conference)
  - 3-Hour Tutorial: Reimagine Power Electronics Design with AI
  - Session Chair: Battery-Friendly Model Predictive Control for Direct-Drive Wave Energy Converters with Hybrid Energy Storage System
- 2025 *IEEE Applied Power Electronics Conference (APEC)* (Flagship Conference) Prof. Education Seminar
  - 3-Hour Tutorial: AI in Power Electronics Design – Present and Future
- 2024 *IEEE Energy Conversion Congress and Exposition (ECCE)* (Flagship Conference) Special Session
  - Topic: Next Generation AI for Power Electronics – Explainable, Flexible, and Lightweight
- 2024 *International Conference on Electrical Power Systems and Intelligent Control* Workshop
  - Topic: Advanced Modeling and Control for DC-DC Converters

Guest Editors (3 Editorial Roles)

- Frontiers in Electronics (Impact factor: 2.545)
  - Topic: Advanced Control and Life Cycle Management for DC-DC Converters
  - URL: https://www.frontiersin.org/research-topics/61148/advanced-control-and-life-cycle-management-for-dc-dc-converters
- MDPI Mathematics (Impact factor: 2.3, JCR-Q1)
  - Topic: Physics-Informed AI and Deep Learning Algorithms for Smart Grid
  - URL: https://www.mdpi.com/journal/mathematics/special_issues/Phys_Inf_AI_Deep_Learn_Algorithms_Smart_Grid

Reviewers (Submitted 90+ Reviews) Jul. 2019 - Present

- IEEE Transactions on Industrial Electronics (42 papers)
- IEEE Transactions on Power Electronics (7 papers)
- IEEE Journal of Emerging and Selected Topics in Power Electronics (6 papers)
- IEEE Journal of Emerging and Selected Topics in Industrial Electronics (3 papers)
- IEEE Transactions on Consumer Electronics (2 papers)
- IEEE Open Journal of Power Electronics (4 papers)
- Nature Scientific Report (3 papers)
- MDPI Journals (12 papers)
- Conference Proceedings (3 papers)

AWARD

Geneva Invention Salon Switzerland

- Invention Title: Plug-and-Play Power Electronics Device Fingerprint Detector and Stability Analysis System with Tiny Machine Learning
- Invention Award: Silver (Second Prize)

ESI Highly Cited Paper

- Artificial-Intelligence-Based Triple Phase Shift Modulation for Dual Active Bridge Converter With Minimized Current Stress
- Web of Science: WOS:001042129300068

IEEE Industry Applications Society USA

- IAS Prize Paper Award: Second Prize

Nanyang Technological University Singapore

- Winner of *Graduate College Collaborative Research Award* in the academic year 2023-2024
- 4-year government research grant for PhD fellowship + tuition waiver

Total amount: 209,600 SGD

IEEE Conference on Applied Power Electronics Conference and Exposition (APEC), 2023 USA

- Outstanding presentation award

RESEARCH INTERESTS

Edge-AI and TinyML Based Digital Twin for Power Electronics Systems;

Explainable AI with Physics-informed Systems for Power Electronics;

Design Automation and Advanced Control of Power Electronics Systems;

Explainable AI-based Prognostics and Health Management for Wide Bandgap Power Semiconductors

SELECTED PUBLICATIONS

Google Scholar (https://scholar.google.com/citations?user=YilrlZMAAAAJ)

- Citation: **863**; h-index: **16**; i10-index: **19** (till April-15-2026)

Journals

1. **X. Li**, X. Zhang, F. Lin and F. Blaabjerg, "Artificial-Intelligence-Based Design for Circuit Parameters of Power Converters," in *IEEE Transactions on Industrial Electronics*, vol. 69, no. 11, pp. 11144-11155, Nov. 2022, doi: 10.1109/TIE.2021.3088377.
2. **X. Li**, J. Pou, J. Dong, C. Wen, S. Mukherjee, and X. Zhang, 'Data-Driven Modeling with Experimental Augmentation for the Modulation Strategy of the DAB Converter', in *IEEE Transactions on Industrial Electronics,* doi: 10.1109/TIE.2023.3265027.
3. **X. Li**, X. Zhang, F. Lin, C. Sun and K. Mao, "Artificial-Intelligence-Based Triple Phase Shift Modulation for Dual Active Bridge Converter with Minimized Current Stress," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, doi: 10.1109/JESTPE.2021.3105522.
4. **X. Li**, X. Zhang, F. Lin, C. Sun and K. Mao, " Artificial-Intelligence-Based Hybrid Extended Phase Shift Modulation for the Dual Active Bridge Converter with Full ZVS Range and Optimal Efficiency," in *IEEE Journal of Emerging and Selected Topics in Power Electronics,* doi: 10.1109/JESTPE.2022.3185090.
5. **X. Li**, K. Mao, F. Lin, and X. Zhang, 'Particle swarm optimization with state-based adaptive velocity limit strategy', *Neurocomputing*, vol. 447, pp. 64–79, Aug. 2021. https://doi.org/10.1016/j.neucom.2023.126352
6. **X. Li**, K. Mao, F. Lin, and Z. Feng, 'Feature-aware Conditional GAN for Category Text Generation', *Neurocomputing*, vol. 547, Aug. 2023. https://doi.org/10.1016/j.neucom.2023.126352.
7. **X. Li**, X. Zhang and F. Lin, "Multi-Objective Design of Output LC Filter for Buck Converter via the Coevolving-AMOSA Algorithm," in *IEEE Access*, vol. 9, pp. 11884-11894, 2021, doi: 10.1109/ACCESS.2020.3034361.
8. **X. Li**, F. Lin, H. Wang, X. Zhang, H. Ma, C. Wen, and F. Blaabjerg, "Temporal Modeling for Power Converters with Physics-in-Architecture Recurrent Neural Network," in *IEEE Transactions on Industrial Electronics*, doi: 10.1109/TIE.2024.3352119.
9. **X. Li,** F. Lin, X. Zhang, H. Ma and F. Blaabjerg, "Data-Light Physics-Informed Modeling for the Modulation Optimization of a Dual-Active-Bridge Converter," in *IEEE Transactions on Power Electronics*, vol. 39, no. 7, pp. 8770-8785, July 2024, doi: 10.1109/TPEL.2024.3378184.
10. **X. Li**, F. Lin, C. Sun, X. Zhang, H. Ma, C. Wen, F. Blaabjerg, and H. A. Mantooth, "Topology Transfer: A Generic Modeling Approach for Varied Dual-Active-Bridge Converters via Physics-in-Architecture and Mixture Density Networks," in *IEEE Transactions on Industrial Electronics,* doi: 10.1109/TIE.2024.3406858.
11. **X. Li**, F. Lin, J. J. Rodríguez-Andina, J. M. Guerrero, H. A. Mantooth and H. Ma, "NeurPecs: Physics-Informed AI-Based Adaptive Circuit Simulator for Power Converters," in *IEEE Transactions on Industrial Electronics*, doi: 10.1109/TIE.2025.3582591.
12. **X. Li**, Z. Sun, K. Mao, and Y. Yang, A Robust Artificial Intelligence-Empowered Adaptive Proportional-Integral Control for Wireless Power Transfer Systems, in *IEEE Transactions on Industry Applications*.

13. F. Lin, **X. Li**, W. Lei, J. J. Rodríguez-Andina, J. M. Guerrero, C. Wen, X. Zhang, and H. Ma, "PE-GPT: a New Paradigm for Power Electronics Design", in *IEEE Transactions on Industrial Electronics,* October 2024, doi: 10.1109/TIE.2024.3454408. (**Corresponding Author**)
14. J. Dong, J. Pou, **X. Li**, S. Mukherjee, A. K. Gupta and Y. Zeng, "Hybrid Duty Ratio Phase-Shift Modulation for a Si + SiC Neutral-Point-Clamped Dual-Active-Bridge Converter," in *IEEE Access*, vol. 11, pp. 129866-129881, 2023, doi: 10.1109/ACCESS.2023.3332764. (**Corresponding Author**)
15. F. Lin, **X. Li**, X. Zhang and H. Ma, "STAR: One-Stop Optimization for Dual-Active-Bridge Converter With Robustness to Operational Diversity," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 12, no. 3, pp. 2758-2773, June 2024, doi: 10.1109/JESTPE.2024.3392684. (**Corresponding Author**)
16. F. Lin, P. Wilson, **X. Li** and H. A. Mantooth, " Demystifying and Navigating AI Ethics in Power Electronics," in *IEEE Power Electronics Magazine*, 2026, 10.1109/MPEL.2025.3646734.
17. F. Lin, Z. Wang, C. Ren, **X. Li**, J. J. Rodríguez-Andina, S. Vazquez, H. A. Mantooth, M. Skoglund, T. Van der Laan, M. Usman, "Quantum Computing for Future Smart Grid: Opportunities and Roadmap", **Nature Review Electrical Engineering**. (**Accepted, Co-first Author**)
18. **X. Li**, F. Lin, J. J. Rodríguez-Andina, S. Vazquez, H. A. Mantooth, and L. G. Franquelo, " Fundamentals of Artificial Intelligence for Power Electronics", in *IEEE Transactions on Industrial Electronics*. (**Under Review**)
19. **X. Li**, F. Lin, H. A. Mantooth, and J. M. Guerrero, " AI Explainability for Power Electronics: From a Lipschitz Continuity Perspective", in *IEEE Transactions on Artificial Intelligence*. (**Under Review**)
20. H. Cao, G. Zhu, **X. Li**, P. Darvish and Y. Zhao, "An Isolated Triple-Active-Bridge Converter with Highly Dynamic and Adaptive Power Decoupling Control," in IEEE Transactions on Power Electronics, doi: 10.1109/TPEL.2025.3620241.
21. Z. Xiao, **X. Li**, and Y. Tang, A Lightweight Artificial Neural Network Start-up Controller for CLLC Resonant Converters, in *IEEE Transactions on Power Electronics,* doi: 10.1109/TPEL.2024.3436847.
22. F. Lin, X. Zhang and **X. Li**, "Design Methodology for Symmetric CLLC Resonant DC Transformer Considering Voltage Conversion Ratio, System Stability, and Efficiency," in *IEEE Transactions on Power Electronics*, vol. 36, no. 9, pp. 10157-10170, Sept. 2021, doi: 10.1109/TPEL.2021.3059852.
23. F. Lin, X. Zhang, **X. Li**, H. Ma and C. Cai, "Design of Symmetrical CLLC-Resonant DC Transformer Considering Voltage Transfer Ratio and Cascaded System Stability," in *IEEE Transactions on Industrial Electronics*, vol. 69, no. 1, pp. 463-474, Jan. 2022, doi: 10.1109/TIE.2020.3048283.
24. F. Lin, X. Zhang, **X. Li**, C. Liu, and H. Ma, "Parameter Design for Symmetrical CLLC-Type DC Transformer Considering Cascaded System Stability and Power Efficiency," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 9, no. 5, pp. 6219-6231, Oct. 2021, doi: 10.1109/JESTPE.2020.3034402.
25. F. Lin, X. Zhang, **X. Li**, C. Sun, W. Cai and Z. Zhang, "Automatic Triple Phase-Shift Modulation for DAB Converter With Minimized Power Loss," in *IEEE Transactions on Industry Applications*, vol. 58, no. 3, pp. 3840-3851, May-June 2022, doi: 10.1109/TIA.2021.3136501. (**IAS Prize Paper Award-Second Prize**)
26. F. Lin, X. Zhang, **X. Li**, C. Sun, G. Zsurzsan, W. Cai, and C. Wang, 'AI-Based Design with Data Trimming for Hybrid Phase Shift Modulation for Minimum-Current-Stress Dual Active Bridge Converter', in *IEEE Journal of Emerging and Selected Topics in Power Electronics,* doi: 10.1109/JESTPE.2022.3232534.
27. Y. Zeng, X. Zhang, **X. Li**, C. Sun, G. Zsurzsan, W. Cai, and C. Wang, 'Deep Reinforcement Learning Enabled Distributed Uniform Control for a DC Solid State Transformer in DC Microgrid', in *IEEE Transactions on Industrial Electronics,* doi: 10.1109/TIE.2023.3294584.
28. K. Wang, Z. Sun, **X. Li**, Y. Wang and Y. Yang, "A Cubic Wireless Charging Container System with Highly Uniform Magnetic Field Distribution," in *IEEE Transactions on Power Electronics*, doi: 10.1109/TPEL.2024.3491072.

Books and Patents

29. X. Zhang, **X. Li**, H. Ma, B. Zhao, and Z. Zeng, 'AI Based Design Methodology for Power Converters', in *Springer*, ISBN-13: 9789811914034, URL: https://www.barnesandnoble.com/w/ai-based-design-methodology-for-power-converters-xin-zhang/1141047635.
30. F. Lin and **X. Li**, 'Method and system for generating optimized power converter design based on multimodal large language models', *US Patent*, 12,393,752, 2025.

Conferences

31. J. Liu, F. Lin, **X. Li**, S. Zhao, and K. H. Lim, "Physics-Informed Autonomous LLM Agents for Explainable Power Electronics Modulation Design," in Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2026. (**Top AI conference**; Oral; **Corresponding Author**)

32. F. Lin, J. Liu, **X. Li**, S. Zhao, B. Zhao, H. Ma, X. Zhang, and X. Liao, "PE-GPT: A Physics-Informed Interactive Large Language Model for Power Converter Modulation Design," *2024 IEEE Energy Conversion Congress and Exposition (ECCE)*
33. W. Lei, F. Lin, **X. Li**, X. Zhang, H. Ma, R. Li, and L. Xu, "Attention Mechanism Empowered Dual Active Bridge Converter Performance Modeling with Enhanced Interpretability and Lighter Data," *2024 IEEE Energy Conversion Congress and Exposition (ECCE)*
34. K. Wang, S. Shang, Y. Wang, **X. Li**, and Y. Yang, "Octagonal Prism-Based Wireless Charging Container with Multiple Folding Coils for Even Magnetic Flux Distribution Inside," *2024 IEEE 10th International Power Electronics and Motion Control Conference (IPEMC2024-ECCE Asia), Chengdu, China,* 2024, pp. 3031-3035, doi: 10.1109/IPEMC-ECCEAsia60879.2024.10568010.
35. **X. Li**, Z. Sun, K. Chen, and Y. Yang, "Artificial Intelligence Assisted Adaptive Controller Design with Position Robustness in a GaN-based Wireless Power Transfer System," *2024 IEEE 7th Inernational Electrical and Energy Conference, Harbin, China,* 2024, pp. 3444-3450*,* doi: 10.1109/CIEEC60922.2024.10583659.
36. **X. Li**, F. Lin, X. Zhang, and M. Hao, "A Nested Deep Learning Framework for the Steady-State Modeling of Power Converters in Time Domain," *2024 IEEE Applied Power Electronics Conference and Exposition (APEC)*, Long Beach, CA, USA, 2024, pp. 2604-2608, doi: 10.1109/APEC48139.2024.10509490.
37. **X. Li**, F. Lin, X. Zhang, X. Liu and H. Ma, "Performance Modeling for Power Converters with Light Gradient Boosting Machine," *2023 IEEE 2nd International Power Electronics and Application Symposium (PEAS)*, Guangzhou, China, 2023, pp. 1176-1179, doi: 10.1109/PEAS58692.2023.10395787.
38. F. Lin, **X. Li**, X. Zhang, X. Liu and H. Ma, "Modeling of Dual Active Bridge Converter with Data Pruning for Optimal Current Stress Performance Under EPS Modulation," *2023 IEEE 2nd International Power Electronics and Application Symposium (PEAS)*, Guangzhou, China, 2023, pp. 2555-2558, doi: 10.1109/PEAS58692.2023.10395413.
39. J. Dong, J. Pou, **X. Li** et al., "Switching Characteristics Analysis for Hybrid Neutral Point Clamped Dual Active Bridge with Hybrid Duty Ratio Phase-Shift Modulation," *IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society*, Singapore, Singapore, 2023, pp. 1-4, doi: 10.1109/IECON51785.2023.10311713.
40. **X. Li**, F. Lin, J. Pou, M. Suvajit and J. Dong, "Data-Driven Modeling of Zero Voltage Switching of Non-Resonant Dab Converters Under TPS Modulation," *2023 IEEE Applied Power Electronics Conference and Exposition (APEC)*. **(Best Presentation Award)**
41. **X. Li**, F. Lin, X. Zhang, M. Huang and H. Wang, "Multi-objective Design of LC Filter for High-efficiency, High-power-density and High-performance Buck Converter," *2019 IEEE Energy Conversion Congress and Exposition (ECCE)*, 2019, pp. 5132-5136, doi: 10.1109/ECCE.2019.8913162.
42. **X. Li** and X. Zhang, "Design of LC Filter in Synchronous Buck considering Power Loss and Cost Criterions using Particle Swarm Optimization," *2019 IEEE 13th International Conference on Power Electronics and Drive Systems (PEDS)*, 2019, pp. 1-4, doi: 10.1109/PEDS44367.2019.8998831.
43. **X. Li**, X. Zhang and F. Lin, "Pareto-Frontier-Based Multi-Objective Design of Output LC Filter for High Efficiency, High Reliability, and High Power-Density Buck Converter," *2020 IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)*, 2020, pp. 1579-1582, doi: 10.1109/IPEMC-ECCEAsia48364.2020.9367986.
44. **X. Li**, X. Zhang and F. Lin, "Design of LC Filter for Boost Converter with the Considerations of Efficiency and Power Density," *IECON 2020 The 46th Annual Conference of the IEEE Industrial Electronics Society*, 2020, pp. 2846-2849, doi: 10.1109/IECON43393.2020.9254758.
45. F. Lin, X. Zhang and **X. Li**, "Stability-Oriented Resonant Parameter Design for CLLC-Type Resonant Dual Active Bridge Converter with Swarm Intelligence," *2020 IEEE Energy Conversion Congress and Exposition (ECCE)*, 2020, pp. 6175-6178, doi: 10.1109/ECCE44975.2020.9235886.
46. X. Huang, X. Zhang and **X. Li**, "Multi-objective Optimization for Smaller, Efficient and Better Performed Design of Buck-boost Converters," *2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)*, 2020, pp. 266-269, doi: 10.1109/PEDG48541.2020.9244342.
47. F. Lin, X. Zhang and **X. Li**, "Swarm Intelligence Aided Parameter Design for the Symmetrical CLLC-Type DAB Converter with Robust Voltage Conversion Gain," *IECON 2020 The 46th Annual Conference of the IEEE Industrial Electronics Society*, 2020, pp. 2856-2860, doi: 10.1109/IECON43393.2020.9255209.
48. F. Lin, X. Zhang and **X. Li**, "Two-Objective-Oriented Resonant Parameter Design for Symmetrical CLLC Dual Active Bridge Converter with Swarm Intelligence," *2020 IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)*, 2020, pp. 1816-1820, doi: 10.1109/IPEMC-ECCEAsia48364.2020.9368113.