Kaisen Yang

Graduate Research Assistant, Center for Power Electronics Systems (CPES)
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Education

Virginia Tech, Blacksburg, U.S. May 2025 (Expected)

M.Sc. in Electrical and Electronics Engineering

Advisor: Prof. Qiang Li

Key Courses:
Power Converter Modeling & Control, Advanced Power Conversion Tech, EMI Noise Reduction, Applied Linear Systems

Dalian Maritime University, Dalian, China Jun. 2024

*B.E. in Electrical Engineering, GPA: **92.0**/100, Rank: **1**/137*

Key Courses:
ElectricMachinery, Power Electronic Technology, Signals and Systems, Fundamentals of Power Systems, High Voltage, Control Systems of Electric Drives, etc.

Project Experience

Voltage Regulator (VR) Transient Improvement Ongoing

- Auxiliary circuits are connected to Multi-phase Buck Converter during load transient
- Novel control strategy is developing for aux circuit to co-operate with the main circuit

48V-1V PoL Converter for Datacenter Power Supply (Hardware) Ongoing

- New topology for single-stage 48V-1V VR features fewer components and lower voltage stress are developed
- Mechanism of parasitic effects caused switching loss are analyzed and PCB design is optimized

Dual-Active Bridge Resonant Converter (Hardware) Jan. 2024

- A Dual-Active Bridge Resonant LLC Converter was designed to run are 10kHz
- Phase shift control was combined with frequency control to achieve wide output voltage range
- ZVS is achieved with peak efficient of 93.03% at 30% load

Academic Service

- Volunteer Reviewer for *IEEE Transactions on Power Electronics*
- Volunteer Reviewer for *IEEE Journal of Emerging and Selected Topics in Power Electronics*
- Volunteer Reviewer for *IEEE Open Journal of Power Electronics*

Skills

- Power Converters Topology and Control System Design (AD, SIMPLIS, LTspice, MATLAB)
- Magnetic Components Design and Simulation (Ansys Maxwell, Q3D)
- MCUs and DSPs for Electronic Design
- Efficient Use of Oscilloscopes, Function Generators, Network Analyzer, Power Analyzer, etc.
- IELTS 7.5(6.5), GRE 323(Q170)
- **Critical Thinking and Quick Learning**

Awards

- Dalian Maritime University Top Ten Students and President's Scholarship
- Chinese National Scholarship