

Yeonho Jeong

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PROFESSIONAL ACADEMIC/INDUSTRIAL EXPERIENCE

- Assistant Professor, **University of Rhode Island**, RI, USA, 2020 – Present
- Postdoctoral Fellow, **University of Colorado Denver**, CO, USA, 2018 – 2020
- Senior Research Engineer, **Solu-M**, South Korea, 2015 – 2018
- Research Engineer, **Samsung Electro-Mechanics**, South Korea, 2008 – 2015

EDUCATION

- **KAIST**, Ph.D. in Electrical Engineering, 2018
- **KAIST**, M. S. in Electrical Engineering, 2014
- **Dankook University**, B.S. in Electrical Engineering, 2008

HONORS AND AWARDS

- **Best Paper Award, *IEEE Transportation Electrification Conference, 2016***

JOURNAL PUBLICATIONS

Undergraduate and graduate student/post-doc/visiting scholar advised

- [1] K. W. Kim, M. Y. Kim, J. I. Kang, and **Y. Jeong**, “High-Efficiency Multi-Output LLC Resonant Converter with Multi-Winding Transformer and Cost-Effective Analog Control Circuit,” *IEEE*

Journal of Emerging and Selected Topics in Industrial Electronics, Early Access.

- [2] **Y. G. Kwak**, **Y. Jeong**, and B. H. Lee, “Port Configuration Method of Three-Switch Converter for High-voltage Gain in Hybrid UAVs Applications,” *Journal of Electrical Engineering & Technology*, June 2023.
- [3] B. Babaiahgari, **Y Jeong**, and J. D. Park, “Dynamic Control of Region of Attraction using Variable Inductor for Stabilizing DC Microgrids with Constant Power Loads,” *IEEE Trans. Ind. Electron.*, vol. 68, no. 10, pp. 10218-10228, Oct. 2021.
- [4] K. W. Kim, **Y. Jeong**, J. S. Kim, and G. W. Moon, “Low Common Mode Noise Full-Bridge LLC Resonant Converter with Balanced Resonant Tank,” *IEEE Trans. Power Electron.*, vol. 36, no. 4, Apr. 2021.
- [5] K. W. Kim, **Y. Jeong**, J. S. Kim, and G. W. Moon, “Low Common-Mode Noise LLC Resonant Converter with Static-Point-Connected Transformer,” *IEEE Trans. Power Electron.*, vol. 36, no. 1, Jan. 2021.
- [6] **Y. Jeong**, M. S. Lee, J. D. Park, J. K. Kim, and Ronal A. L. Rorrer, “Hold-up Time Compensation Circuit of Half-Bridge LLC Resonant Converter for High Light-load Efficiency,” *IEEE Trans. Power Electron.*, vol. 35, no. 12, pp. 13126-13135, Dec. 2020.
- [7] M. H. Park, **Y. Jeong**, R. A. L. Rorrer, D. Choi, and G. W. Moon, “Hold-up Time Extension Method for LLC Resonant Converter by Detecting Operation Region,” *IEEE Trans. Power Electron.*, vol. 35, no. 10, pp. 9949-9952, Oct. 2020.
- [8] **Y. Jeong**, M. H. Park, and G. W. Moon, “High Efficiency Zero-Voltage-Switching Totem-pole Bridgeless Rectifier with Integrated Inrush Current Limiter Circuit,” *IEEE Trans. Ind. Electron.* vol. 67, no. 9, pp. 7421-7429, Sep. 2020.
- [9] C. Y. Lim, **Y. Jeong**, and G. W. Moon, “Half-Bridge Integrated Phase-Shifted Full-Bridge Converter With High Efficiency Using Center-Tapped Clamp Circuit for Battery Charging Systems in Electric Vehicles,” *IEEE Trans. Power Electron.* vol. 35, no. 5, pp. 4934-4945, May. 2020.
- [10] **Y. Jeong**, J. D. Park, and G. W. Moon, “An Interleaved Active-Clamp Forward Converter Modified for Reduced Primary Conduction Loss without Additional Components,” *IEEE Trans. Power Electron.*, vol. 35, no. 1, pp. 121-130, Jan. 2020.
- [11] M. H. Park, J. I. Baek, **Y. Jeong**, and G. W. Moon, “An Interleaved Totem-pole Bridgeless Boost PFC Converter with Soft-Switching Capability Adopting Phase-Shifting Control,” *IEEE Trans. Power Electron.*, vol. 34, no. 11, pp. 10610-10618, Nov. 2019.
- [12] C. Y. Lim, **Y. Jeong**, and G. W. Moon, “Phase-Shifted Full-Bridge DC-DC Converter With High Efficiency and High Power Density Using Center-Tapped Clamp Circuit for Battery Charging in

- Electric Vehicles,” *IEEE Trans. Power Electron.*, vol. 34, no. 11, pp. 10945-10959, Nov. 2019.
- [13] K. W. Kim, H. S. Youn, J. I. Baek, **Y. Jeong**, and G. W. Moon, “Analysis on Synchronous Rectifier Control to Improve Regulation Capability of High-Frequency LLC Resonant Converter,” *IEEE Trans. Power Electron.*, vol. 33, no. 8, pp. 7252-7259, Aug. 2018.
- [14] **Y. Jeong**, J. K. Kim, and G. W. Moon, “A Bridgeless Dual Boost Rectifier With Soft-Switching Capability and Minimized Additional Conduction Loss,” *IEEE Trans. Ind. Electron.*, vol. 65, no. 3, pp. 2226-2233, Mar. 2018.
- [15] **Y. Jeong**, J. K. Kim, J. B. Lee, and G. W. Moon, “An Asymmetric Half-bridge Resonant Converter Having a Reduced Conduction Loss for DC/DC Power Applications With a Wide Range of Low Input Voltage,” *IEEE Trans. Power Electron.*, vol. 32, no. 10, pp. 7795-7804, Oct. 2017.

CONFERENCE PUBLICATIONS

Undergraduate and graduate students/post-docs/visiting scholars advised.

- [1] **X. Zhang**, M. Y. Kim, J. I. Kang and **Y. Jeong**, “A Scalable Multi-input Hybrid Converter for Energy Management Control in Hybrid Energy Systems Empowering Electric Mobility,” *in proc. IEEE Energy Conversion Congress and Exposition (ECCE)*, 2023.
- [2] **X. Zhang**, K. W. Kim, M. Y. Kim, J. I. Kang, and **Y. Jeong**, “A New Multi-Output Structure with CRM Boost PFC Converter,” *in proc. IEEE Energy Conversion Congress and Exposition (ECCE)*, 2023.
- [3] Z. Xu, M. Yu, Q. Yang, **Y. Jeong**, J. Cai and T. Wei, “A Novel FPGA-Based Circuit Simulator for Accelerating Reinforcement Learning-Based Design of Power Converters,” *in proc. 2023 IEEE 34th International Conference on Application-specific Systems, Architectures and Processors (ASAP)*, 2023.
- [4] **S. Thurber**, J. Baek, and **Y. Jeong**, “An Auxiliary Circuit with a Flexible LC Resonant Tank for High-Efficiency and Low-Cost Totem-Pole Boost Bridgeless Power-Factor Correction Converter,” *in Proc. IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2023.
- [5] **X. Zhang**, R. A. L. Rorrer, and **Y. Jeong**, “A Novel Digital Energy Management Control Strategy of a Fully Active Hybrid Converter for Unmanned Aerial Vehicle Applications,” *in Proc. IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2023.
- [6] Z. Xu, M. Yu, Q. Yang, **Y. Jeong**, and T. Wei, “A Novel FPGA Simulator Accelerating Reinforcement Learning-Based Design of Power Converters,” *Proceedings of the 2023*

ACM/SIGDA International Symposium on Field Programmable Gate Arrays, 2023.

- [7] Z. Xu, **X. Zhang**, T. Wei, K. W. Kim and **Y. Jeong**, “An FPGA-based Power Converter Simulation Accelerator Towards Highly Time-Efficient Machine Learning-Aided Design Methodology,” *IEEE Energy Conversion Congress & Exposition (ECCE)*, 2022.
- [8] J. Y. Kim, **Y. Jeong** and J. K. Kim, “Double-Voltage Charger for On-Board Charger With 800 V Battery,” *The ICT-Future Vehicle session at ICNGC 2022*, 2022.
- [9] **X. Zhang**, K. W. Kim, and **Y. Jeong**, “Low Cost and Small Component Count Hybrid Converter with Energy Management Control for Unmanned Aerial Vehicle Applications,” in *Proc. IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2022.
- [10] K. W. Kim, **Y. Jeong**, M. Y. Kim, and J. I. Kang, “High Efficiency Dual-Output LLC Resonant Converter with Synchronous Rectifier Control,” in *Proc. IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2022.
- [11] J. S. Choi, **N. Lee**, Y. -J. Cheon, S. W. Cho, H. -W. Kim, J. Koo, J. Choi, **Y. Jeong**, and T. Chung, “A Flat Architectural Wall Approach to Electrical Integration and Test for GK2A and GK2B,” in *Proc. IEEE Aerospace Conference*, 2022.
- [12] S. H. Lee, **Y. Jeong**, and J. K. Kim, “Integrated DC/DC converter for Reducing Voltage Stress and DC Offset Current of Transformer,” in *Proc. ICT-Future Vehicle Workshop 2021*, 2021.
- [13] **Y. Jeong**, K. W. Kim, R. A. L. Rorrer, and J. D. Park, “A Novel Multi-Input and Single-Output DC/DC Converter for Small Unmanned Aerial Vehicle Applications,” in *Proc. 2020 IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 1302-1308.
- [14] S. H. Ko, **Y. Jeong**, B. H. Lee, R. A. L. Rorrer, and J. D. Park, “Asymmetric Dual Active Clamp Forward Converter with Phase-Shift Control for Small Conduction Loss,” in *Proc. 2020 IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 1866-1871.
- [15] B. Babaihgari, **Y. Jeong**, and J. D. Park, “A Stability Enhancement Method for DC Microgrids with Constant Power Loads Using Variable Inductor,” in *Proc. 2020 IEEE in Proc. Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 2236-2240.
- [16] M. H. Park, **Y. Jeong**, D. Choi, D. M. Kim, and G. W. Moon, “Hold-up Time Extension Method in LLC Converter by Detecting Operation Region,” in *Proc. IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)*, 2020, pp. 1706-1709.
- [17] K. W. Kim, **Y. Jeong**, J. S. Kim, J. E. Park, and G. W. Moon, “Low Common-Mode Noise Structure Based on Half-Bridge LLC Converter for Medium and High Power Applications,” in *Proc. IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)*, 2020., pp. 640-643.

- [18] M. S. Lee, C. Y. Lim, **Y. Jeong**, T. W. Kim, and G. W. Moon, “A High Efficiency Phase-Shift Full-Bridge Converter with Improved Clamping Circuit to Eliminate Oscillation for EV Battery Charger,” in *Proc. IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)*, 2020, pp. 1696-1701.
- [19] **Y. Jeong**, R. A. L. Rorrer, B. H. Lee, and J. D. Park, “A Novel Control Scheme for High Efficiency Fuel Cell Power Systems in Parallel Structure,” in *Proc. 2019 IEEE Energy Conversion Congress & Exposition (ECCE)*, 2019, pp. 940-946.
- [20] B. Babaihgari, **Y. Jeong**, and J. D. Park, “Stability Analysis for Power Management Between Standalone DC Microgrids with Constant Power Loads,” in *Proc. 2019 IEEE Energy Conversion Congress & Exposition (ECCE)*, 2019, pp. 5778-5782.
- [21] M. H. Ullah, **Y. Jeong**, and J. D. Park, “Multi Agent-based Distributed Energy Arbitrage in Residential Distribution System,” in *Proc. 2019 IEEE Power and Energy Society General Meeting (PESGM)*, 2019, pp. 1-5.
- [22] D. K. Kim, **Y. Jeong**, J. E. Park, N. Y. Lee, and G. W. Moon, “Boost-Forward Integrated Converter for High Power Density Spacecraft Applications,” in *Proc. 2019 10th International Conference on Power Electronics and ECCE Asia*, 2019, pp. 1-6.
- [23] M. H. Park, **Y. Jeong**, D. K. Kim, K. M. Kim, and G. W. Moon, “Pre-Regulating Boost Converter with Asymmetric Half-bridge LLC Converter for DC Server Power Supply,” in *Proc. 2019 10th International Conference on Power Electronics and ECCE Asia*, 2019, pp. 1927-1932.
- [24] C. Y. Lim, **Y. Jeong**, M. S. Lee, Y. D. Lee, and G. W. Moon, “High Efficient Hybrid Converter Using Center-tapped Clamp Circuit,” in *Proc. 2019 10th International Conference on Power Electronics and ECCE Asia*, 2019, pp. 2067-2072.
- [25] D. K. Kim, **Y. Jeong**, J. I. Baek, J. E. Park, C. W. Lim, G. W. Moon, “High Efficiency and High Power Density Weinberg Converter Reducing Conduction Loss and Output Current Ripple for Space Applications”, in *Proc. Applied Power Electronics Conference and Exposition (APEC)*, 2019, 1583-1586.
- [26] **Y. Jeong**, M. H. Park, K. W. Kim, B. H. Lee, and G. W. Moon, “High Voltage Gain Interleaved Active-Clamp Forward (IACF) Converter having Reduced Primary Conduction Loss,” in *Proc. ECCE Asia*, 2018, pp. 838-844.
- [27] K. W. Kim, J. I. Baek, **Y. Jeong**, K. M. Kim, and G. W. Moon, “Analysis for High-Frequency LLC Resonant Converter with Planar Transformer at Light-Load Condition,” in *Proc. ECCE Asia*, 2018, pp. 2365-2369.
- [28] C. Y. Lim, **Y. Jeong**, K. W. Kim, F. S. Kang, and G. W. Moon, “A High-Efficiency Power Supply from Magnetic Energy Harvesters,” in *Proc. ECCE Asia*, 2018, pp. 2376-2379.
- [29] **Y. Jeong**, J. K. Kim, and G. W. Moon, “Analysis on half-bridge LLC resonant converter by using variable inductance for high efficiency and power density server power supply,” in *Proc. APEC*,

- 2017, pp. 170-177.
- [30] **Y. Jeong**, J. S. Park, J. K. Kim, C. Y. Lim, M. H. Park, and G. W. Moon, "A zero-voltage-switching dual boost power factor correction rectifier with active clamp circuit having minimized conduction losses," in *Proc. ECCE Asia*, 2017, pp. 254-259.
- [31] M. H. Park, C. O. Yeon, J. I. Baek, **Y. Jeong**, G. W. Moon, and J. S. Park, "An improved current compensation method for high PF and low THD in digital boost power factor corrector," in *Proc. ECCE Asia*, 2017, pp. 1065-1070.
- [32] C. Y. Lim, **Y. Jeong**, and G. W. Moon, "Phase leading input capacitor compensation using variable inductor with high efficiency in a CRM boost PFC," in *Proc. ECCE Asia*, 2017, pp. 852-856.
- [33] **Y. Jeong**, J. I. Baek, J. Choi, and G. W. Moon, "Half Bridge LLC Resonant Converter with High Voltage Gain for Single-Phase AC/DC Power System," in *Proc. ITEC Asia-Pacific*, 2016, pp. 573-578.
- [34] D. K. Kim, **Y. Jeong**, C. Y. Lim, B. Kang, and G. W. Moon, "Bidirectional Bridgeless PFC with Reduced Input Current Distortion and Switching Loss Using Gate Skipping Technique," in *Proc. ITEC Asia-Pacific*, 2017, pp. 579-583 – **Best Paper Award**.
- [35] **Y. Jeong**, J. B. Lee, C. O. Yeon, C. Y. Lim, J. K. Han, and G. W. Moon, "Asymmetric Half-Bridge Resonant Converter having a Reduced Conduction Loss for DC/DC Power Systems with a Low Input Voltage," in *Proc. ECCE Asia*, 2016, pp. 621-628.
- [36] J. K. Han, J. I. Baek, C. E. Kim, **Y. Jeong**, C. O. Yeon, and G. W. Moon, "A simple THD improving method for CCM boost PFC converter under mixed conduction mode operation," in *Proc. ECCE Asia*, 2016, pp. 466-470.
- [37] J. I. Baek, J. Choi, **Y. Jeong**, Y. Jang, G. W. Moon, and C. H. Yu, "Asymmetrical Half-Bridge Converter with Reduced DC-offset current in Transformer," in *Proc. ECCE Asia*, 2016, pp. 2249-2253.
- [38] C. Y. Lim, J. H. Kim, **Y. Jeong**, D. K. Kim, H. S. Youn, and G. W. Moon, "A High Efficiency Critical Mode Boost PFC Using a Variable Inductor," in *Proc. ECCE Asia*, 2016, pp. 2792-2797.
- [39] S. W. Jwa, J. B. Lee, **Y. Jeong**, K. W. Kim, G. W. Moon, and J. H. Kim, "Active Clamped Current-Fed Full-Bridge Integrating LLC Converter with Low Current and Voltage Stress," in *Proc. ECCE Asia*, 2016, pp. 3211-3217.
- [40] J. -W. Kim, J. -P. Moon, H. -S. Youn, **Y. Jeong**, and G. -W. Moon, "Phase Leading Input Current Compensation in Digitally Controlled CRITICAL Mode Boost PFC," in *Proc. ECCE Asia*, 2015, pp. 2688-2695.
- [41] **Y. Jeong**, J. W. Kim, C. Y. Lim, D. K. Kim, J.I. Baek, and G. W. Moon, "A Strategic Control Scheme of Phase-Shift Full Bridge Converter for Improving Light-load Efficiency in Server Power System," in *Proc. ECCE Asia*, 2015, pp. 488-494.
- [42] D. K. Kim, C. O. Yeon, J. H. Kim, **Y. Jeong**, and G. W. Moon, "LLC Resonant Converter with

High Voltage Gain Using Auxiliary LC Resonant Circuit,” in *Proc. ECCE Asia*, 2015, pp. 1505-1512.

- [43] **Y. Jeong**, C. E. Kim, S. Y. Cho, D. Y. Kim, and G. W. Moon, "Unexpected Bi-Directional Operation of Phase-Shift Full-Bridge Converter in Parallel Operation System," in *Proc. ECCE Asia*, 2013, pp. 999-1004.

PATENTS

U.S. Patents

- [1] J. N. Lee and **Y. Jeong**, POWER SUPPLY APPARATUS, US.9263953.B2, 2016

Korean Patents

- [1] S. H. Won, D. M. Jang, B. J. Choi, J. W. Kim, **Y. Jeong**, T. W. Heo, D. J. Park, J. K. Lee, D. S. Kim, and D. J. Kim, SERIAL COMMUNICATION APPARATUS, 1012876740000, 2013. **(Registered)**
- [2] B. J. Choi, D. M. Jang, J. W. Kim, **Y. Jeong**, T. W. Heo, S. H. Won, J. P. Kim, J. K. Lee, D. S. Kim, and D. J. Kim, MEASURING ROTATION SPEED OF FAN USINGING COUNTER, 1012737500000, 2013. **(Registered)**
- [3] **Y. Jeong**, C. E. Kim, J. P. Kim, and D. S. Kim, POWER SUPPLY WITH IMPROVED SYSTEM EFFICIENCY, 1011414160000, 2012. **(Registered)**
- [4] D. M. Jang, B. J. Choi, J. W. Kim, **Y. Jeong**, T. W. Heo, S. H. Won, J. P. Kim, J. K. Lee, D. S. Kim, and D. J. Kim, MONITORING APPARATUS OF POWER, 1011385900000, 2012. **(Registered)**
- [5] D. J. Kim, Y. Jeong, and D. S. Kim, POWER SUPPLY APPARATUS USING DUAL FEEDBACK CONTROL, 1012190010000, 2012. **(Extinguishment)**

INVITED SEMINARS/PRESENTATIONS

- [1] “Future of Mobility,” [Panelist] Future Science and Technology Session, *The 1st World Congress of Korean Scientists and Engineers*, Seoul, South Korea, July 5th, 2023.

- [2] “Time-Efficient Machine Learning-aided Electric Design Automation for Power Conversion Systems Enabled by FPGA Accelerators: A Fast Power Converter Auto Designer,”
Korea National University of Transportation, Chungju, South Korea, May 2023
Jeonbuk National University, Jeonju, South Korea, May 2023
Ajou University, Suwon, South Korea, July 2023
Hanbat National University, Dae-jeon, South Korea, Sep. 2023
- [3] “High-Efficiency Topologies for Industrial Applications in Power Electronics,”
University of Rhode Island, RI, USA, Feb. 2020
University of Michigan Dearborn, MI, USA, Feb. 2020
Manhattan College, NY, USA, Feb. 2020
- [4] “Introduction of Power Electronics and Server Power Systems,” presented at CEAS Seminar Series at *University of Colorado Denver, Denver, CO, Oct 2018*
- [5] “State of the art for Server Power Systems,” presented at *Myung-ji University, South Korea, Aug 2018*

ACADEMIC/INDUSTRIAL PROJECTS

- **United States Geological Survey, PI, “Toward High Reliability: Novel Power Conversion System and Power Management Control for Water Monitoring Stations,” 2024-, \$248,395.**
- **Champlin Foundation, Primary-PI, ““Real-time Simulator and Educational Laboratory for Advanced Electric Transportation Technologies”, 2024-, \$134,088.**
- **NDEP/NIUVT: Undergraduate Research Assistant Fundings (2022-Present)**
 Recipients: Mason Jacob (2023~), Zachary Weinstein (2023~), Alex Amado (2023), Zach Chofay (2022-2023), Edgar Ponce (2022-2023), Gianni Smith (2022)
- **DARPA Subterranean (SubT) Challenge, Team MARBLE (CU Denver), 2018-2019**
- **Solu-M, AC/DC server power systems with 800 W, 1.6 kW, and 2.0 kW, 2015-2018**
- **Samsung Electro-Mechanics, AC/DC and DC/DC server/network power systems with 300 W, 450 W, 700 W, 750 W, 1.6 kW, and 2.0 kW, 2008-2015**

STUDENT ADVISING

- **Graduate Students:** Xueshen Zhang (2021~) and Shaun Thurber (2022~)
- **Current Undergraduate Students:** Mason Jacob (2023~), Alex Amado (2023), Zachary Weinstein (2023~), Samuel Rebuck (2023~), Steven Kowalewski (2022~), Gianni Smith (2022~), Abby Tadamala (2023~), Layhla Morales (2023~).
- **Graduated Students:** Edgar Ponce (2023), Zach Chofay (2023), Shaun Thurber (2022), Christopher Charron (2022), and Nataly Karnaukh (2022).
- **Advisor of Undergrad Student Groups:**
URI Formula SAE Club (2021~)
URI International Future Energy Challenge (IFEC) Team (2022~)

STUDENT AWARDS

- **Undergraduate Research Grants**, Office of Undergraduate Research and Innovation.
Ryan Hirsch, Andrew Harris, Isaiah Smith, “*Funding Proposal for URI Formula SAE Race Suspension Design Analysis*,” 2023, \$1,400.
Joey Hook, Nicholas Caito, Jeremy Herrera Santos, “*URI Formula SAE Brake System Research*,” 2023, \$1,400.
O'Malley Sherlock, Joshua Weiss, Peter Hernandez, “*URI Baja SAE Chassis Design Research Project*,” 2023, \$1,400.
Nathan Mendoza, Liam Crisfield, Jack Petrarca, “*Telemetry and Control System for URI's First Formula SAE Style Car*,” 2023, \$1,400.
Nicholas Costick, Edgar Ponce Baldelamar, Zachary Chofay, “*Funding Proposal for IFEC 2023: Solid State Transformer (SST) Project*,” 2022, \$1,336.
- **Shaun Thurber, 1st Place, Outstanding Teaching Assistant Award, 2023.**
- **Xueshen Zhang, 2nd Place, Outstanding Research Assistant Award, 2023.**
- **Xueshen Zhang, APEC Student Travel Support, 2022, \$1,000.**

TEACHING

- **Spring 2024, ELE 449 (Developed)** – *Power Electronics Design Laboratory*
- **Spring 2023, ELE 322** – *Electromagnetics I*
- **Fall 2021-2023, ELE 446/556 (Developed)** – *Introduction to Power Electronics*
- **Spring 2021-2022, ELE 343** – *Electronics II*

ACADEMIC SERVICES

- *Member, Electrical Engineering Technician Search Committee, 2021*
- *Member, Electrical Engineering Tenure-Track Faculty Search Committee, 2023*

PROFESSIONAL SERVICE

- **Technical Program Committee Chair/Member**
 - *Technical Session Chair, IEEE Applied Power Electronics Conference, 2022-2023.*
 - *Topic Chair, IEEE Energy Conversion Congress and Exposition, 2022-2023.*
 - *Technical Session Chair, ICPE 2023 – ECCE Asia Conference, 2023.*
- **Panel Reviewer**
 - *National Science Foundation (NSF)*
- **Paper Reviewer**
 - *IEEE Transactions on Industrial Electronics*
 - *IEEE Transactions on Power Electronics*
 - *IEEE Transactions on Energy Conversion*
 - *IEEE Transactions on Industry Applications*
 - *IEEE Transactions on Transportation Electrification*
 - *IEEE Journal of Emerging and Selected Topics in Power Electronics*
 - *IEEE Access*
 - *KIPE Journal of Power Electronics*
 - *MDPI Energies — Open Access Journal*
 - *IEEE Applied Power Electronics Conference (APEC)*

- *IEEE Energy Conversion Congress and Exposition*
- *IEEE Energy Conversion Congress and Exposition Asia*
- *IEEE Wireless Power Transfer Conference*
- *AIAA Propulsion & Energy Forum*

- **Technical Consultant**
 - *Korea Railroad Research Institute, Aug. 2018*

- **Professional Society Memberships**
 - *IEEE Senior Member*
 - *Member, SAE International (The Society of Automotive Engineers)*
 - *Member, KIPE (The Korean Institution of Power Electronics)*
 - *Member, KSEA (Korean-American Scientists and Engineers Association)*