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EDUCATION

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

ACADEMIC EXPERIENCE

- Assistant Professor, **University of Rhode Island**, RI, USA, 2020 – Present
- Postdoctoral Fellow, **University of Colorado Denver**, CO, USA, 2018 – 2020

INDUSTRIAL EXPERIENCE

- Senior Research Engineer, **Solu-M**, South Korea, 2015 – 2018
- Research Engineer, **Samsung Electro-Mechanics**, South Korea, 2008 – 2015

JOURNAL PUBLICATIONS

- [1] 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.*, (**Early accepted**).
- [2] 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.*, (**Early accepted**).
- [3] 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.*, (**Early accepted**).

- [4] **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.
- [5] 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.
- [6] **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.
- [7] 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, Oct. 2019.
- [8] **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.
- [9] 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.
- [10] 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.
- [11] 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.
- [12] **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.
- [13] **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

- [1] **Y. Jeong**, K. W. Kim, R. A. L. Rorrer, and J. D. Park, “A Novel Multi-Input and Single-Output D

- C/DC Converter for Small Unmanned Aerial Vehicle Applications,” in *Proc. 2020 IEEE in Proc. Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 1302-1308.
- [2] 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 in Proc. Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 1866-1871.
- [3] B. Babaiaghari, **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.
- [4] **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.
- [5] B. Babaiaghari, **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.
- [6] 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.
- [7] 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.
- [8] 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.
- [9] 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.
- [10] 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.

- [11] **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.
- [12] 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.
- [13] 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.
- [14] **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.
- [15] **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.
- [16] 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.
- [17] 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.
- [18] **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.
- [19] 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.
- [20] **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.

- [21] 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.
- [22] 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.
- [23] 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.
- [24] 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.
- [25] 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.
- [26] **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.
- [27] 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.
- [28] **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 USING 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] “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
- [2] “Introduction of Power Electronics and Server Power Systems,” presented at CEAS Seminar Series at *University of Colorado Denver*, Denver, CO, Oct 2018
- [3] “State of the art for Server Power Systems,” presented at *Myung-ji University*, South Korea, Aug 2018

TEACHING

- **Spring 2021, ELE 343** – *Electronics II*

INDUSTRIAL PROJECTS

- AC/DC server power systems with 800 W, 1.6 kW, and 2.0 kW, Solu-M, 2015-2018
- 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, Samsung Electro-Mechanics, 2008-2015

HONORS, AWARDS, AND RECOGNITION

- Best Paper Award, *IEEE Transportation Electrification Conference*, 2016
- Member, *IEEE (Institute of Electrical and Electronics Engineers)*
- Member, *KIPE (The Korean Institution of Power Electronics)*

PROFESSIONAL SERVICE

- **Paper Reviewer**
 - *IEEE Transactions of Industrial Electronics*
 - *IEEE Transactions of Power Electronics*
 - *IEEE Transactions on Industry Applications*
 - *IEEE Journal of Emerging and Selected Topics in Power Electronics*
 - *KIPE Journal of Power Electronics*
 - *MDPI Energies — Open Access Journal*
 - *IEEE APEC 2019 and 2020*
 - *IEEE ECCE ASIA 2019*
- **Technical Consultant**
 - *Korea Railroad Research Institute*, Aug. 2018