Li, Yiming

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EDUCATION

09/2011-06/2015 Department of Electrical Engineering, Zhejiang University

B.S.E. Electrical Engineering

08/2015-12/2019 Department of Electrical and Computer Engineering, University of Florida

Ph.D. Electrical Engineering, GPA: 4.0/4.0

RESEARCH PROJECTS

09/2015-12/2019 Research Assistant, ECE Department, University of Florida

Research on the Common Mode Noise Measurement and Reduction for the AC/DC Flyback Adapters of Consumer Electronics with Touchscreens, supported by Google Inc. (09/2015 – 05/2017)

- ➤ Proposed techniques of the modeling, measurement and reduction of common mode (CM) noise for multi-winding switching transformers.
- ➤ Investigated and proposed a sensitivity test setup for the touchscreens of consumer electronics interfered by the CM voltages of power adapters.

Research on Transformer and EMI Filter Design for High Power-Density Flyback Power Adapters, supported by Google Inc. (08/2017 – 12/2019)

- ➤ Proposed a guideline to optimize the winding structure of the switching transformers to minimize the copper loss and the CM EMI noise.
- ➤ Eliminated the near field couplings in high power-density power converters.

05/2017-08/2017

Technical Intern, Hardware Team, Google Inc.

Research on EMI Filter Size Reduction for the AC/DC Flyback Adapters

- ➤ Built an EMI diagnosis test platform complying with EN55022 standard.
- > Proposed a dc-bus EMI filter topology with smaller size and lower power loss than conventional EMI filters.

HONORS & AWARDS

12/2012 Outstanding Student Leader Awards of Zhejiang University
 12/2012 First-Class Scholarship for Outstanding Merits/Students
 07/2015 Outstanding Graduate Student of Zhejiang University

SOFTWARE & SKILLS

Circuit Design: Matlab, Saber, ADS
Magnetics Design: Ansys Maxwell / HFSS

Measurement Devices: Network Analyzer, Spectrum Analyzer

SELECTED PUBLICATIONS

(From 2017 to 2019, 15 technical papers have been published in IEEE Transactions and conferences.)

- 1. Y. Li, H. Zhang, S. Wang, H. Sheng, C. P. Chng and S. Lakshmikanthan, "Investigating Switching Transformers for Common Mode EMI Reduction to Remove Common Mode EMI Filters and Y Capacitors in Flyback Converters," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, Dec. 2018.
- 2. Y. Li, L. Yang, S. Wang, H. Sheng, S. Lakshmikanthan and L. Jia, "Investigation of a DC bus differential mode EMI filter for AC/DC power adapters," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, 2018. (Received the only outstanding presentation award in EMC session.)
- 3. Y. Li, S. Wang, H. Sheng, C. P. Chng and S. Lakshmikanthan, "Investigating CM Voltage and Its Measurement for AC/DC Power Adapters to Meet Touchscreen Immunity Requirement," in IEEE Transactions on Electromagnetic Compatibility, Aug. 2018.
- 4. **Y. Li**, S. Wang, H. Sheng and S. Lakshmikanthan, "Investigate and Reduce Capacitive Couplings in a Flyback Adapter with a DC-Bus Filter to Reduce EMI," in *IEEE Transactions on Power Electronics*. Early Access. Dec. 2019.

PATENTS

- 1. H. Sheng, **Y. Li,** S. Wang, and S. Lakshmikanthan, "Common-mode Noise Reduction", Granted Nov. 2018. US10141100B2.
- 2. H. Sheng, **Y. Li,** S. Wang, and S. Lakshmikanthan, "DC Bus Filter Topologies with Improved High Frequency Performance for Isolated Power Adapters". (Pending)