Kunal Jha

CONTACT INFO

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Los Angeles, CA

EDUCATION

MS in Electrical Engineering
North Carolina State University
Raleigh, NC
Aug 2017 - May 2019

B.Tech in Electrical and Electronics Engineering
National Institute of Technology Karnataka
India
Aug 2013 - May 2017

TECHNICAL SKILLS

Simulation
- PLECS
- SIMetrix
- Altium
- Sauna
- MATLAB Simulink
- WaveStudio
- COMSOL
- Cadence Allegro

Languages
- MATLAB
- Python
- Verilog
- C

Lab Equipment
- 4-ch & 8-ch Oscilloscopes
- Power Supplies
- Programmable DC Loads
- Signal Generators
- Digital Multimeters

RELEVANT COURSEWORK
- Power Electronics
- Advanced Power Electronics
- Power Elec. Design and Packaging
- Dynamics & Control of Electrical M/C
- Electric Motor Drives
- Semiconductor Power Devices
- Principles of Transistor Devices

WORK EXPERIENCE

Senior Staff Applications Engineer
Infineon Technologies | Apr 2021 – Present | Los Angeles, CA
- Leading the Fit-for-Use Testing and assisting new product development for key products for their intended applications
- Creating and optimizing PCB Layouts for evaluation and demo boards for device/technology characterizations

Staff Applications Engineer
Infineon Technologies | Oct 2020 – Mar 2021 | Los Angeles, CA
- Performed Competitive Benchmarking at device and system levels for key product applications
- Assisted in development of new packaging concepts to understand their impact on electrical and thermal performance

Senior Applications Engineer
Infineon Technologies | Aug 2019 – Sept 2020 | Los Angeles, CA
- Conducted Trade and Performance Studies for electrical and thermal parameters of MOSFETs for different packages and technologies
- Provided Customer Support on MOSFET products

New Product Definitions Intern
Power Integrations Inc. | May 2018 – Aug 2018 | San Jose, CA
- Tested flyback converters of various power ratings used for charging applications by checking the working of new MOSFETs
- Successfully designed a high-frequency fly-back converter using Eta Designer to calculate core loss of transformer for different core materials and geometries and determine their effect on system efficiency

PROJECTS

New Product Innovation
Apr 2020 - Present | Infineon Technologies
- Testing new products in various DC-DC Converters to compare their thermal and electrical performance against existing products
- Working with New Product Definition and Marketing teams to find areas of improvement and make the required design changes

Series-Sync Buck Converter for High-Power Solar Applications
Mar 2021 | Infineon Technologies
- Designed a series synchronous-buck converter with 12 MOSFETs to replicate Multi-Level inverter operation for reducing testing time and effort for solar applications.
- Successfully conducted thermal and waveform analysis of MOSFETs to determine if MOSFETs are fit for use in the application

Control of Induction Motor in an EV Propulsion Drive
Nov 2018 | North Carolina State University
- Developed a vehicle road model and an induction machine model for an EV in rotor flux reference frame to implement instantaneous torque control with a speed controller in indirect rotor flux orientation system
- The vehicle model successfully followed the speed command given to the controller with minimal delay in the system