NICHIN K. SREEKANTASWAMY

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EDUCATION

University of Pennsylvania, Philadelphia, PA, USA
Master of Science in Engineering, Electrical Engineering, May 2017 GPA: 3.77 / 4.00
Birla Institute of Technology and Science, Pilani – Goa Campus, INDIA
Bachelor of Engineering (Hons.), Electrical and Electronics Engineering, May 2015 GPA: 8.89 / 10.00

PROFESSIONAL EXPERIENCE

Axon Enterprise Inc., Scottsdale, AZ, USA
Electrical Engineer- Video Camera Division *March 2019-Current*

- Currently focused on developing a high speed video transportation system for the wearable point-of-view camera 'Flex3', including interdisciplinary work with the mechanical engineering team on product ergonomics and cabling options.
- Successfully launched body worn camera 'AB3' by contributing to work on digital video interface, PCBA design for RF noise mitigation, USB signal integrity, image sensor fixed pattern noise mitigation, mics and speaker characterization, GNSS performance characterization (GPS and GLONASS), PCBA DFM and component second sourcing.

Keywords: Optical Fibers, FPGA, PDM & PCM audio, Digital MEMS microphone, MIPI CSI2 video interface, image row noise, image black level, 4G LTE RF noise, GNSS CEP and Time-to-First-Fix, USB2.0 Eye diagram, USB-IF.

Engineering Development Program (Rotational Program) *June 2017-March 2019*
Worked in R&D: Video Camera division as an Electrical Engineer and NPI Project Manager; Conducted Electrical Weapons division as an Electrical Engineer and Firmware Engineer.

- Designed from scratch the battery charging & Ethernet data offload stations *Docks* for the 'AB3' camera. Successfully completed architecture design, component selection, circuit design, schematic capture, BOM management, PCB layout guidance and inspection, DFM with contract manufacturer during PCB fabrication and assembly, functional test and debugging of finished PCBA.
- Project management of 'AB3' *Docks* with the contract manufacturer in Mexico to setup the assembly line, chart out required post-assembly tests, provide technical guidance to test fixture manufacturers, setup supply chain networks for all the required electronics, plastics, metals, labels and packaging, consolidate the schedule and ship the completed product.
- Redesign and validation of the battery charging and data aggregators *Docks* for the latest weapon 'Taser7'. Worked on Li-Po battery charging, multi-cell balancing, battery protection circuit as well as designed and implemented the charging/balancing algorithm in Embedded C. Tested and modified the *Docks* design to pass ESD compliance IEC61000-4-2 Class IV.

Keywords: Switching DC/DC converters, linear regulators, USB 2.0 high speed, USB 3.0 super speed, USB-C port configuration, USB PD, Qualcomm Quickcharge 3.0, USB to Ethernet bridge, RJ45, MDI/MII ports, Li-Po battery charging and protection, active multi-cell balancing, Cypress PSoC4, ESD protection.

The Wharton School, University of Pennsylvania, Philadelphia, PA, USA
Studen Expert-in-Residence – Wharton Entrepreneurship *August 2016-May 2017*
Provided technical guidance to entrepreneurs in electronics design and manufacture of hardware products.

PUBLICATION

Gois P., **Sreekantaswamy N.**, Basavaraju N., Rufino M., Sebastiao L., Botelho J., Gomes J., Pasoal A. (2016). "Development and Validation of Blue Ray, an Optical Modem for the MEDUSA class AUVs", IEEE 3rd Underwater Communications and Networking Conference, La Spezia, ITALY

INTERNSHIPS

Barn Owl LLC, Colorado Springs, CO, USA
Product Development Lead *June-August 2016*
Successfully designed, prototyped and tested wireless water tank monitoring units. Supported in this endeavor by Wharton Entrepreneurship's Startup Internship Award.

Instituto Superior Tecnico, Lisbon, PORTUGAL
Research Student at DSOR (Dynamical Systems and Ocean Robotics) Laboratory *January-June 2015*
Developed an economical underwater optical communication system for fast data transmission between marine robots.

California Institute of Technology, Pasadena, CA, USA
Research Fellow at LIGO (Laser Interferometer Gravitational wave Observatory) *June-August 2014*
Built an automated system to remotely acquire transimpedance frequency response graphs of various RF photodetectors.
Keywords: Optical Fibers, RF Photodiodes, Transimpedance transfer function, Network Analyzer, GPIB over Wi-Fi, Python.

Indira Gandhi Centre for Atomic Research, Kalpakkam, INDIA
Summer Research Intern at NDE (Non Destructive Evaluation) Laboratory *May-July 2013*
Designed a programmable signal conditioning circuit to aid and improve eddy current testing equipment.