NICHIN SREEKANTASWAMY
WEBSITE: www.nich.in   E-MAIL: nichins@seas.upenn.edu   PH: +1 (267) 777 3560

EDUCATION

University of Pennsylvania, Philadelphia, PA, USA
Master of Science in Engineering, Electrical Engineering, May 2017   GPA: 3.80 / 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

CURRENT POSITIONS

The Wharton School, University of Pennsylvania, Philadelphia, PA, USA
Electronics Technical Consultant (Student Expert in Residence- Wharton Entrepreneurship)   *September 2016-Current*

School of Engineering and Applied Science, University of Pennsylvania, Philadelphia, PA, USA
Teaching Assistant for the course on Human Factors Engineering   *August 2016-Current*

INTERNSHIPS

Barn Owl LLC, Colorado Springs, CO, USA
Product Development Lead   *June-August 2016*
Successfully managed tasks from design and testing to prototype manufacturing of wireless water tank monitoring units. Worked with Low Power Wide Area Networks (LPWAN) enabled by Long Range (Semtech's LoRa) radio modules and a database with a RESTful API interface. Supported in this endeavor by Wharton Entrepreneurship's Startup Internship Award.
Keywords: Altium designer, PCB Fabrication, LoRaWAN, Antenna, Python, Javascript, RaspberryPi, Xbee.

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 over a range of short distances. Designed and implemented the algorithms for encoding and signal processing on a custom Xilinx Spartan 3E FPGA board. Keywords: Xilinx System Generator, Manchester Encoding, UART, Data Mule AUV.

California Institute of Technology, Pasadena, CA, USA
Summer Research Fellow at LIGO (Laser Interferometer Gravitational wave Observatory)   *June-August 2014*
Built an automated frequency response measurement system that allowed lab personnel to remotely acquire transimpedance frequency response graphs of various RF photodetectors without disturbing the interferometer setup. Integrated a network analyzer and several multiplexed photodetectors for wireless data transfer over Wi-Fi.
Keywords: Optical Fibers, Python, GPIB (General Purpose Interface Bus), Network Analyzer, Transimpedance response.

Indira Gandhi Centre for Atomic Research, Kalpakkam, INDIA
Summer Research Intern at NDE (Non Destructive Evaluation) Laboratory   *May-July 2013*
Completed the design and implementation of a programmable signal conditioning circuit to aid and improve eddy current testing equipment used for finding manufacturing defects inside materials by removing various types of electrical noises.
Keywords: NI Multisim and Ultiboard, Tunable bandpass filter

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

HIGHLIGHTED COURSE PROJECTS AT PENN

ESE 519- Real Time and Embedded Systems   *September 2016*
AVR Development Board from scratch. Circuit and PCB design for a Arduino Uno replica. Keywords: Eagle CAD.

ESE 527- Design of Smart Systems   *March-April 2016*
Built a GPS location based energy saving thermostat, based on the Google Nest and Nest cam. It also doubles up as a security device that captures images and sends alerts. Keywords: RaspberryPi, Python, Apache 2 Web Server, PHP.

ESE 680- Human Factors Engineering   *March-April 2016*
Worked on a smart display system that provides nurses and doctors with complete situational awareness just before entering a patient's room. Keywords: Cognitive Task Analysis, Work-flow Modeling, Situational Awareness.

MEAM 620- Advanced Robotics   *January-February 2016*
Completed a project on path planning, trajectory generation and flight control of quadrotors (Kmel Nano +). Dijkstra/A* search algorithms find a static path for the quadrotor, from which smooth trajectories are generated. PID control is implemented to fly the robot while visual tracking systems provided position and orientation feedback. Keywords: Matlab