

## Education

- North Carolina State University: PhD in Electrical Engineering 05/14 – present
- North Carolina State University: MS in Electrical Engineering 08/12 – 05/14
- Amrita Vishwa Vidyapeetham: B.Tech in Electronics & Instrumentation Engineering 07/06 – 04/10
  - o Graduated with distinction in the top 10%

## Technical Projects

- First Principle based degradation modeling to understand SOH and SOF of lithium ion batteries 04/15 – present
  - o Designing a 3D battery model in COMSOL to represent battery degradation
- Energy Monitoring System for ELFs / Organic Transit Vehicles 05/13 – 05/14
  - o Working on the design of a Battery Level Monitoring and Energy Management System
- PHEV Emulator 05/13 – present
  - o Working on the design of a GUI and controller for a PHEV Emulator
- Intelligent Battery Management System 01/13 – present
  - o Working on the design of a State of Charge Estimation and Battery Monitoring Software
- Intelligent Space (iSpace) & The Green City 01/13 – 05/13
  - o Working on design a user friendly GUI in LabVIEW to integrate the two projects
- Digital Control Systems Analyzer 10/10 – 12/10
  - o Worked on a designing an effective GUI in MatLab for a DCS analyzer
- Human Computer Interface Using EMG Signals: Hand Gesture Based Manipulator Control 04/10
  - o Designed & manufactured prototype for prosthetics
  - o Second Place at an All India Level Competition by AUMA India for best final year project.
  - o Best project prize at College Level by AUMA India
- Smart Rain Sensor 02/09
  - o Designed & manufactured prototype for commercial use
- Computer Controlled Robots 10/08
  - o Designed & manufactured prototype for serial communication robots

## Work Experience

- Summer Intern at Toshiba International Corporation 05/14 – 08/14
  - o Implement an SOC/SOH estimation algorithm for their UPS batteries
- LabVIEW Student Ambassador for National Instruments 08/13 – 05/14
  - o Teach Students how to use LabVIEW and prepare them for the CLAD Exam.
- Teaching Assistant for Agent Based Mechatronics, Advanced Mechatronics and Microelectronics 08/13 – present

## Paper Publications

- Balagopal, B.; Mo-Yuen Chow, "The state of the art approaches to estimate the state of health (SOH) and state of function (SOF) of lithium Ion batteries," in Industrial Informatics (INDIN), 2015 IEEE 13th International Conference on , vol., no., pp.1302-1307, 22-24 July 2015
- Rahimi-Eichi, Habiballah; Balagopal, Bharat; Chow, Mo-Yuen; Tae-Jung Yeo, "Sensitivity analysis of lithium-ion battery model to battery parameters," Industrial Electronics Society, IECON 2013 - 39th Annual Conference of the IEEE , vol., no., pp.6794,6799, 10-13 Nov. 2013

## Technical Skills

- Certified LabVIEW Associate Developer 05/13 – present
- Member of Advanced Diagnosis, Automation and Control Laboratory 01/13 – present
- IEEE Student Member 01/09 – present

## Leadership Skills

- Member of the Orientation Team at NC State to welcome new graduate students 04/15 – present
- Script writer and director of Orientation Welcome movie for new graduate students 04/15 – present
- Class Representative 07/08 – 05/09
- Member of the Student Council 06/05 – 04/06
- Web Coordinator 06/05 – 03/06
- Class Leader 06/02 – 04/05
- Captain of the school basketball team
- Working with the Dean & Administration, launched the first technical fest 07/09 – 01/10
- Organized the induction programme for the incoming Freshmen 07/08

- First place - Debate contest (Karuna Club, Chennai), Inter School Dramatics competition
- School representative – Interactive discussion with Dr. A. P. J. Abdul Kalam (then The President of India) 09/05

**Other**

- Proficient in English, Hindi, Tamil and Malayalam
- Can converse in Mandarin and write in Pinyin