

# Curriculum Vitae

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## EDUCATION

Program	Institution	%/GPA	Year of completion
Ph.D. in Mechanical Engineering	University of Michigan	-	2022 (expected)
M.S. in Mechanical Engineering	University of Michigan	4	2019
B Tech in Mechanical Engineering Minor in Microelectronics	IIT Madras, Chennai	8.61 9(minor)	2015
Class XII	Nano Junior College	95.3	2011
Class X	Bharatiya Vidya Bhavan's Public School	93.8	2009

## Professional & Research Experience

- Working as Graduate Student Research Assistant in Powertrain Control Lab  
Advisor: Prof. Anna G Stefanopoulou, Dr. Jason Seigel (August 2017-Present)
  - Main area of research is Battery Modelling and Control
  - Worked on Thermal Runaway of Lithium-Ion Batteries
  - Worked on Creating a Electrochemical-Mechanical Model for a Blended Cathode Li-ion battery
  - Working on Optimal/Fast Charging of a Li-ion battery
- Worked as "Assistant Manager" at "Energo Engineering Projects Limited" (August 2015-April 2017)
  - Lead for on-site performance testing of thermal power plants
  - Analysis of data for determining performance shortfalls
  - Cost Benefit Analysis on various methods to improve power plant efficiency
- Life Cycle Analysis of Bio-Diesel (Coconut and Jatropha)  
Advisor: Prof. Pramod Mehta, IIT-Madras (December 2013-May 2015)
  - Analysis of the overall production process from cultivation of crop, extraction of oil to production of Bio-Diesel (Life Cycle Inventory)
  - Calculation of overall energy and emissions of production, processing and utilization
- Tata Research Design and Development Centre, Pune, Summer Intern (May 2014-July 2014)
  - RTD-CFD analysis of molten steel in tundish was conducted to determine homogeneity of steel
  - A multiphase CFD model was developed to calculate the interaction of molten steel with air and slag to determine re-oxidation of steel in tundish
- Mounting structure for solar panel array  
Advisor: Prof Chetan Solanki, IIT-Bombay (Summer 2013)
  - Design of a support structure for solar panels which can be assembled easily, quickly and in which slope of the panel can be adjusted easily.
  - SolidWorks was used in the design of the system
- Modeling and implementation of Dynamical systems  
Advisor: Dr. Nathan Delson, University of California, San Diego (Summer 2012)
  - Automated a Kinetic Sculpture, tracking and modulating object displacement and velocity
  - Lego MindStorms was used for modeling the sculpture (using RobotC code)
- Placement of photovoltaic modules employing Geographic Information Systems (GIS databases)  
Advisor: Prof. Jan Kliestl, University of California, San Diego (Summer 2012)
  - Worked on the assembly of a Sky Imager system for monitoring solar irradiance
  - Considered optimal positioning photovoltaic modules in several domestic areas through usage of Geographic Information Systems (GIS), e.g., Google Earth

## CONFERENCE PRESENTATIONS

- “Mechanical Measurements for Early Detection of Thermal Runaway Induced by an Internal Short Circuit” with Mingxuan Zhang, Jason B. Siegel, Gregory B. Less & Anna G. Stefanopoulou, Electrochemical Society 233<sup>rd</sup> Meeting, May 13-17, **2018**
- “Investigations on Sustainability of Biodiesel Fuels” with P S. Mehta & K Anand, Indo-German Conference on Sustainability, Indian Institute of Technology Madras, February 27-28, **2016**

## SCHOLASTIC ACHIEVEMENTS

- Kishore Vaigyanik Protsahan Yojana (KVPY) Scholar, (2010)
  - selected by the Department of Science and Technology, India as one of the top 11<sup>th</sup> grade students for pursuing scientific research.
- Attended a training Camp for *International Junior Science Olympiad*, (2009)
  - as one of the top 30 students, attended a camp in Homi Bhabha Centre for Science Education, Mumbai.
- Attended *Catch Them Young Program* at Infosys, Hyderabad, (2007)
  - as one of the top 30 students selected from Hyderabad
- Secured **8<sup>th</sup>** rank in *8<sup>th</sup> National Cyber Olympiad* conducted by Science Olympiad Foundation
- Secured **1<sup>st</sup>** rank in state of Andhra Pradesh in Science: *International Assessment of Indian Schools* conducted by University of New South Wales (2004)

## SKILLS

- Programming: C, MATLAB, Simulink
- AutoCAD, SolidWorks, Labview
- Machine shop and Soldering skills

## POSITIONS OF RESPONSIBILITY

- Production Coordinator, Saarang 2013 (September 2012 – January 2013)
  - Lead for all printing works of the festival
  - Lead for Internal Publicity on the campus
- Coordinator, Sustainability Network, IIT Madras (August 2012 – May 2013)
  - Organized E-Waste collection on the Campus
  - Helped organize and conduct activities of S-NET

## EXTRA-CURRICULAR ACTIVITIES

- Hostel Volunteer, Jamuna Hostel, IIT Madras (August 2011 – May 2012)
- Music, Table Tennis, Swimming, Basketball