NANDOLA YASH ANIL

yashnandola@iisc.ac.in, nandolayash@gmail.com +91 9935323013, 8469116224 Skype ID: live:nandolayash_1

ACADEMIC PROJECTS

Well-to-Wheel Analysis (WTW) of Light Motor Vehicles in Indian Context (Fuel Life Cycle Analysis)

Advisor: Prof. R. V. Ravikrishna

July 2020 – Present | IISc, Bangalore | LCA Team

- To generate engine models, simulate over **Modified Indian Drive Cycle (MIDC)** for drivetrains of **Conventional Vehicles(CVs)** and **Alternate Fuel Vehicles(AFVs)**(gasoline, diesel, hybrid, plug-in hybrid, electric) using **AVL Cruise M** and compare results of their performance with each other.
- To model, simulate "fuel life cycle" and determine **fuel/energy consumption** and **emissions** (i.e. WTW analysis) using GREET, by performing:
  1. **Well-to-Tank** analysis for **fuel upstream activities** using **GREET** (dev. by Argonne National Laboratory) and,
  2. **Tank-to-Wheel** analysis for **vehicle operations** of CVs and AFVs using **AVL Cruise M**.
- Use Monte Carlo Simulation Technique to perform stochastic analysis for parameters for which uncertainty is involved.

Flamelet Generated Manifold (FGM)

Literature Review - Applied Combustion Course

May 2020 – June 2020 | IISc, Bangalore

- Understanding the concept, theory, implementation of FGM technique and its applications to solve problems related to Turbulent Combustion (systems with reacting flows).

Design and Development of a Railroad Track Energy Harvesting System

July 2016 – May 2017 | MNNIT, Allahabad

- Designed and developed a **virtual prototype of the energy harvester** in **MSC Adams**, carried out its simulation - the system is capable to generate power in the **order of 1-10 Watts**.
- Energy generated can be utilized to power major track side accessories - signals, warning systems, etc. possibly making railroad independent from national grid. The concept and design can be further utilized to develop a physical model, its testing and its implementation at the actual site.

WORK EXPERIENCE

Vedanta Resources Limited (SESA Goa Limited, Value Added Business)

June 2017 - Oct 2017 | Graduate Engineer Trainee

Posted as Mechanical Maintenance Engineer in Met Coke division. In-charge of Charging Machine and allotted project to ensure "Zero Breakdown" of the Charging Machine.

ONGC Petro additions Limited

May 2015 - June 2015 | Summer Training | Dahej, Gujarat, India

Understood the process of Cryogenic Separation of Nitrogen from Liquefied Air, studied the procedure to estimate no. of plates required in a Rectification Column for cryogenic separation of Nitrogen from air.

SCHOLARSHIPS AND ACHIEVEMENTS

2019	Rank 323 (Score: 837/1000) - GATE.
2015-16	Merit Scholarship - Excellence in Academics (MNNIT Allahabad).
2013-15	Central Sector Scheme of Scholarships for College and University Students (Dept. of Higher Education, Govt. of India).
2013	Scholarship for Higher Education (Top 1% in GSHSEB).
2012	**Kishore Vaigyanik Protsahan Yojana (KVPY)**

EDUCATION

Indian Institute of Science, Bangalore

M. Tech in Mechanical Engineering

Bangalore, India, 2019-21

CGPA: 9.10/10 (Upto Sem 2)

MNNIT, Allahabad

B. Tech in Mechanical Engineering

Prayagraj, India, 2013-17

CPI: 8.90/10

Vidya Kunj High School

Std XII

GSHSEB, Gandhinagar, 2013

% (Percentile): 86.80 (98.83)

Std X

GSHSEB, Gandhinagar, 2011

% (Percentile): 92.20 (99.59)

PROGRAMMING AND SOFTWARE TOOLS

Python | MATLAB | AVL Cruise M | GREET (Life Cycle Analysis)

COURSEWORK

Convective Heat Transfer | Computational Gas Dynamics | Applied Combustion | Solid Mechanics | Thermodynamics | Fluid Mechanics | Material and Structure Property Correlations

RESEARCH INTERESTS

Heat Transfer | Reacting Flows - Combustion | Thermal and Fluid Science | Fundamentals of material and structure property correlations

HOBBIES

Drawing | Numismatics