Guduri Vasu | **10D170025**
Energy Systems Engineering | **UG Third Year(Dual Degree)**
Indian Institute of Technology, Bombay | **Male**
Specialization: Energy Systems | **DOB: 15/08/1991**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	6.85
Intermediate/+2	Intermediate Public Examination, Andhra Pradesh	Sri Chaitanya	2009	94.80
Matriculation	Board of Secondary Education, Andhra Pradesh	Bhashyam Public School	2007	93.00

SCHOLASTIC ACHIEVEMENTS:

- Secured **All India Rank 7411** in **IIT Joint Entrance Exam** – amongst 4,50,000 students
- Among top **1%** in **All India Engineering Entrance Examination**
- Among top **1%** in **EAMCET**, an Engineering entrance exam conducted by Andhra Pradesh State Board

PROJECTS UNDERTAKEN:

SOLAR THERMAL POWER PLANT SIMULATOR (STPPS): May2012-July 2012

Guide: Prof. SANTANU BANDYOPADHYAY

- The solar thermal power plant simulator is **developed by IITB** as a part of the project titled **"Development of a Megawatt-scale Solar Thermal Power Testing, Simulation and Research facility",** sponsored by the Ministry of New and Renewable Energy **(MNRE).**
- Essentially the **simulator solves energy and mass balance equations** for user defined plant configuration.
- The main features of simulator are **graphical technology user interface** for data input and output, manual as well as database entry of climatic and equipment parameters, overall plant optimization.
- My part was calculation was the calculation of **Hourly beam radiation** from **monthly mean average daily radiation** using various radiation models available. The calculations are done by writing code in **c sharp.**

MICROBIAL FUEL CELLS: Jan 2011-April 2011

Guide: Prof. RANGAN BENERJEE

- Made microbial fuel cell which **produces electricity as well as pure water**, as a part of department course project.
- The cells are filled with mud containing **cultured anaerobic bacteria** which produce electrons and H+ ions. This part acts as anode. We used carbon rod as cathode. We made a salt bridge which acts as semi permeable membrane for H+ ions.
- There is **external supply of oxygen** for the production of **pure water**. H+ ions, O_2 and electrons combine to form pure water at cathode.

MAXIMUM POWER POINT TRACKER (MPPT):

Guide: Prof. RAJESH GUPTA Jan 2012-April 2012

- Made MPPT to **increase the efficiency of solar photo voltaic cells** by ensuring that the cell always operates in maximum power region.
- We used **boost converter** which **dynamically changes the resistance** as seen by the cell and used **micro-controller for tracking the maximum power point**.

TECHNICAL PROFICIENCY:

- **Programming:** C, C plus plus, Java (basic), basic micro-controller programming
- **Software Packages:** MATLAB, SCILAB, Adobe Photoshop, After Affects, Premier Pro.

POSITION OF RESPONSIBILITY:

- Worked as an **organizer in Mood Indigo** 2010 (Asia's largest cultural festival) in the department of **Horizons Art Arena.**
- Worked as a **coordinator in Techfest 2012** and successfully organized **Techfest National Open Quiz (TNOQ)** for the first time in the history of Techfest.

EXTRA CURRICULAR ACTIVITIES:

- Stood 8th in **TRACKMANIA**, a robot racing event conducted by **IIT BOMBAY**
- Performed dance in **Gyrations**, an inter hostel dance competition in **IIT BOMBAY**
- Participated in **Line Follower** in IIT BOMBAY
- Part **of Limca Book of World records** for solving **Rubik's cube** in less than 30 minutes by 937 people at the same place **(IIT BOMBAY)** simultaneously.
- Successfully completed training for **NCC B certificate.**
- Interests: Like playing tennis, cricket, carom, basketball, learning software's

RELEVANT COURSES UNDERTAKEN:

- **ENERGY:** Introduction to Energy Engineering, Introduction to Renewable Energy Technologies, Introduction to Nuclear Engineering, Equipment Design and Control, Material Science for Energy Applications, Power Generation and Systems Planning, Energy Systems Lab, Solar Energy Lab.
- **ELECTRICAL:** Basic Electrical Engineering, Analog Electronics, Power Electronics and Machines, Electrical Machines and Power lab, Electronics lab.
- **MECHANICAL:** Thermodynamics, Heat and Mass Transfer, Fluid Mechanics, Combustion Engineering, Thermal and Fluid Engineering Lab, IC Engine and Combustion Lab.
- **MATHEMATICS:** Calculus, Linear Algebra, Differential Equations, Numerical Integration
- **OTHERS:** Economics, Philosophy, Statistics.