

# SIDDHARTH SOMNATH MERUKAR

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## Education

### Indian Institute of Technology, Patna

July 2020 – Present

*Bachelor of Technology in Chemical Engineering*

*Patna, Bihar, India*

CPI (Overall) : 8.23/10 after 4 semesters | Intermediate (XII) : 91.01% | Matriculation (X) : 97.3%

## Experience

### Research Internship

May 2022 – July 2022

*Process Equipment Design Laboratory, IIT Kharagpur*

*Dr. Parthasarathi Ghosh, Professor, IIT Kharagpur*

- As a part of the ISRO Propulsion Complex (IPRC), Mahendragiri Project entitled 'Development of 1-D code for cryogenic fluid management system', worked on the Investigation of Ullage Collapse Factor for Pressurizing Cryogenic Propellant Tank for Ground Testing Facilities.
- Validated an experimental data using Generalized Fluid System Simulation Software (GFSSP) to generate a simulation model.
- Used the simulation model to generate multiple simulations varying the controlling parameters and these simulations were used to update an existing correlation to determine the collapse factor. ( [click here](#) for the project report )

### Research Internship

December 2021 – Present

*Thermal & Fluid Transport Laboratory, IIT Patna*

*Dr. Rishi Raj, Associate Professor, IIT Patna*

- Working on a novel technology to develop prognostic tools for advance prediction & control of vapor explosion induced accidents in boilers with the help of boiling acoustics. ( [click here](#) for further details )
- Involved in CFD simulations employing ANSYS Fluent for the same.
- Simulated Boiling in a 2D cylinder to detect pressure variations near the heater surface & in the bulk of the fluid at different excess temperatures.

## Technical Skills

**Softwares:** Ansys Fluent, GFSSP, MATLAB

**Languages:** Python, C, C++, LaTeX

## Relevant Coursework

- |                   |                                 |                        |
|-------------------|---------------------------------|------------------------|
| • Fluid Mechanics | • Chemical Process Calculations | • Chemical Engineering |
| • Mass Transfer   | • Mechanical Operations         | Thermodynamics         |
| • Heat Transfer   | • Process Equipment Design      |                        |

## Position of Responsibility

### Chemical Engineering Students' Society (ChESSx)

August 2021 – Present

*Overall Coordinator*

*IIT Patna*

- Conducted and hosted online webinars to make fellow batchmates aware about future opportunities in the field of Chemical Engineering.

## Miscellaneous

- Interests :** Rocket Technology, Space science, play & follow Lawn Tennis & Cricket.
- Awarded best project in the health department at CBSE State level science Exhibition & was subsequently selected for National level of the same held at DAV Public School , New Delhi, India for the project done on the topic 'Repetitive Strain Injuries'.
- Selected as Company Sergeant Major (Highest Individual Rank given) for the school troop in National Cadet Corps(NCC) and commanded the Independence Day Parade on 15th August 2019.Awarded Best Outgoing NCC cadet at annual summer camp (November 2019) held at 1 MAH SIG COY, Pune, Maharashtra, India.Completed the NCC training with 'A' Certificate.