

SHOURYA BOSE

Curriculum Vitae | July 2020

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EDUCATION

M.Sc. (Hons.) in Mathematics

BITS Pilani, KK Birla Goa Campus*

August 2014 – December 2019

B.E. (Hons.) in Electrical & Electronics Engineering

BITS Pilani, KK Birla Goa Campus*

August 2014 – December 2019

EXPERIENCE

Visiting Researcher

Department of Electrical Engineering, IISc Bengaluru

Jan 2020 – Present

Bengaluru, India

- Continued work on NCS taken up during Research Internship.

Research Intern

Department of Electrical Engineering, IISc Bengaluru

Jan 2019 – Dec 2020

Bengaluru, India

- Interning under the supervision of Dr. Pavankumar Tallapragada.
- Research topics focus on the concept of Networked Control Systems (NCS).

System Designer - ADCS

Pixxel

Sep 2018 – Dec 2018

Bengaluru, India

- Voluntary work for Team Pixxel, a Bengaluru-based startup aiming to launch an earth-observation satellite constellation.
- Job responsibility involves design of orbits for the proposed constellation, and simulation of spacecraft dynamics on said orbits.

Intern

HMT Tractors, Pinjore

May 2016 – Jul 2016

Pinjore, Punjab

- Interned at one of India's largest governmental tractor manufacturers.
- Understood the supply chain of tractor manufacturing.
- Presented an energy audit of the paint shop and gear assembly shop as a part of internship project.

PUBLICATIONS

- Bose. S, and Tallapragada. P. Event-Triggered Stabilization under Action-Dependent Markov Packet Drops. Submitted to *IET Control Theory and Applications*.
- Bose. S, and Tallapragada. P. Event-Triggered Second Moment Stabilization under Markov Packet Drops. In *Fifth Indian Control Conference (2019)*.
- Prakash. B, Setia. A, and Bose. S. Numerical solution for a system of fractional differential equations with applications in fluid dynamics and chemical engineering. In *International Journal of Chemical Reactor Engineering*, 15(5) (2017).

SKILLSET

- I enjoy using accurate mathematical analysis and sound first principles to solve challenging engineering problems. My current theoretical interest centers around Networked Control Systems (NCS), which falls within the broad field of Autonomous Systems.
- I also enjoy validating theoretical results by simulating them on robotic simulation testbeds, as well as software simulations.
- I am well versed with soft skills required to effectively make a point, and communicate efficiently with my colleagues to expedite jobs requiring teamwork.

COMPUTER SKILLS

- Programming Languages:** C, C++, MATLAB, Mathematica, GNU Octave, Python (NumPy, CVXPY, Matplotlib), L^AT_EX, x86 Assembly, basic OpenCV, basic Verilog HDL.
- Software:** AGI Graphics STK (Aerospace simulation software), LABView, NASA Remote Sensing Toolkit, Adobe Photoshop and Illustrator.
- Operating Systems:** I prefer Ubuntu for daily use. However, I am comfortable with other Linux distros, as well as Windows and OSX.

MISCELLANEOUS

- Hult Prize** is an entrepreneurship competition. It is organized annually by the Hult Institute with support of Clinton Foundation among many other nonprofit organizations. The aim of Hult Prize is to encourage entrepreneurial solutions which can help in eliminating massive social issues like poverty. I was part of a four-member team that **won Hult Prize 2015 Goa regional round** held at BITS Goa, following which we **presented our idea** at the **Hult Prize Global Eliminations** held at Hotel Al-Jumeirah, Dubai.
- I enjoy college level **Parliamentary Debating**. I have, as a part of different teams from our college, attended more than **eight** intervarsity parliamentary debating tournaments.

* Deemed University & Institute of Eminence as declared by Government of India.