

DEVANSH AGRAWAL

Email: devansh@umich.edu · Profile: <https://dev10110.github.io>

Linked-in: <https://www.linkedin.com/in/devansh-r-agrawal/>

I am an eager and motivated PhD candidate, with a research focus on robust and computationally efficient controller design for nonlinear systems. I always strive to understand fundamental principles and use them to guide my thinking.

EDUCATION

- **University of Michigan, Ann Arbor, USA** 08/2020–present
 - PhD Candidate, Aerospace Engineering, GPA: 4.0/4.0
- **Imperial College London, UK** 10/2016–06/2020
 - Masters of Engineering, Aeronautical Engineering
 - First Year: 83.42%, Second Year: 78.65%, Third Year: 82.5%, Dean's List every year
- **Massachusetts Institute of Technology, AeroAstro, USA** 08/2018–06/2019
 - Year Abroad Student Exchange Program - GPA: 4.9/5.0
 - Selected by Imperial professors as one of two students representing Imperial's aeronautical eng. department to MIT

PUBLICATIONS

- Agrawal, Devansh, and Dimitra Panagou. Safe Control Synthesis via Input Constrained Control Barrier Functions. (under review, submitted to CDC 2021)
- Haofeng Xu et al. Higher thrust-to-power with large electrode gap spacing electroaerodynamic devices for aircraft propulsion. J. Phys. D 2019.
- Devansh Agrawal et al. Wind tunnel testing of blown flap wing. AIAA Aviation Forum 2019.
- Hae Ung Lee et al. Subcellular electrical stimulation of neurones enhances the myelination of axons by oligodendrocytes. Plos One. 2017.
- Devansh Agrawal et al. Conformal phased surfaces for wireless powering of bioelectronic microdevices. Nature Biomed Eng. 2017.

EXPERIENCE

- **HackPartners**, Software Development, London UK, 04/2020–08/2020
 - Developing a phone app to assist users to maintain social distancing practices during Covid-19 pandemic. Developing phone-based ultrasound and bluetooth enabled distance live measurement. Performing the digital signal processing, and iOS dev.
- **MIT**, Electro-Aerodynamic Thruster Research, Cambridge USA 09/2018–06/2019
 - Studied use ionic wind as primary thruster for light aircrafts, enabling solid state planes without emissions.
- **Dyson**, Floorcare Separation Systems Research, Tetbury UK 06/2018–08/2018
 - Studied gas cyclone aerodynamics, with applications to solids separation. Developed simple analytical model to predict cyclone separation efficiency.
- **Imperial College London**, Robot Intelligence Lab, London UK 06/2017–09/2017
 - Self-proposed project, to develop robot for autonomously performing search and rescue in caves.
- **NUS Singapore Institute of Neurotechnology**, Wireless Powering Lab, Singapore 01/2016–10/2016
 - Developed conformal antennas for wireless powering of embedded microdevices in human body. First author of published Nature Biomedical Eng. paper.

SKILLS AND LANGUAGES

- Julia, Python, MATLAB, Simulink, Mathematica, ROS, C++,
- 3D Printing, Laser Cutting, Milling, Turning, Arduino, Rasp Pi
- Solidworks, Autodesk Fusion, Adobe Photoshop, Illustrator, Microsoft Office, \LaTeX .
- English (Fluent), Japanese (Intermediate), Hindi (Fluent in Speaking, Beginner in Reading/Writing)