

Mishal Assif P K | Resume

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📧 [mishalassif.github.io](https://github.com/mishalassif)

✉ mishal2@illinois.edu

EDUCATION

University of Illinois Urbana-Champaign

Ph.D in Electrical Engineering

CPI: 4.00/4.00

Urbana-Champaign, USA

Present

Indian Institute of Technology Bombay

B.Tech + M.Tech in Mechanical Engineering

CPI: 8.63/10.00

Bombay, India

August 2019

PUBLICATIONS

Scenario approach for minmax optimization in the nonconvex setting: positive results and caveats

M. Assif P K, D. Chatterjee, R. Banavar

2020

SIAM Journal on Optimization, Vol.30(2), 2020. [\[doi\]](#), [\[arXiv preprint\]](#)

A simple proof of the discrete time geometric Pontryagin maximum principle

M. Assif P K, D. Chatterjee, R. Banavar

2020

Automatica, Vol.114, 2020. [\[doi\]](#), [\[arXiv preprint\]](#)

Measure of quality of finite-dimensional linear systems: A frame-theoretic view

M. Assif P K, M. R. Sheriff, D. Chatterjee

2019

Submitted. [\[arXiv preprint\]](#)

Variational collision avoidance on Riemannian manifolds

M. Assif, R. Banavar, A. M. Bloch, M. Camarinha, L. Colombo

2018

Proceedings of the IEEE Conference on Decision and Control, 2018. [\[doi\]](#), [\[arXiv preprint\]](#)

TEACHING EXPERIENCE

Microprocessors and Automatic Control Lab

Teaching Assistant

Spring 2019

Microprocessors and Automatic Control

Teaching Assistant

Fall 2018

Differential Geometric Methods in Control

Teaching Assistant

Spring 2018

TECHNICAL EXPERIENCE

Autonomous Underwater Vehicle Team (AUV-IITB)

Software developer, Controls subsystem

2015 - 2016

- Developed and tuned a PID controller for controlling a 4 DOF AUV.
- Wrote drivers for a Doppler Velocity Log (DVL) and an Inertial Measurement unit (IMU).
- Secured second place at the International AUVSI Robosub competition 2016.

SOFTWARE SKILLS

Programming Languages: C++, Python, Matlab.

Other tools: \LaTeX , ROS, Gazebo, OpenCV.