

Disip Chaturvedi

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EDUCATION

IIT-BOMBAY

B.TECH. IN METALLURGICAL
ENGINEERING & MATERIAL SCIENCE
with
MINOR IN AEROSPACE ENGR. &
SYSTEMS & CONTROL ENGR.

Expected April 2019 | Mumbai, India
Major. GPA: 7.30

NGF PUBLIC ACADEMY

INTERMEDIATE/+2
Grad. April 2014 | Indore, India
Cum. %: 87.80

DELHI PUBLIC SCHOOL MATRICULATION

Grad. April 2012 | Indore, India
Cum. GPA: 10

COURSEWORK

AEROSPACE

Navigation & Guidance
Spaceflight Mechanics
Introduction to Aerospace Engr.

SYSTEMS & CONTROL

Control Theory
Adaptive Control Theory
Nonlinear Control Theory
Systems Theory*
Process Control Theory +Practicum*

OTHER

Mathematics for Systems & Control*
Computer Programming & Utilization
Intro. to Electrical Engr. + Practicum
Theory of Machines and Machine Design
Stochastic Processes*

(* to be completed by Nov'18)

TECHNICAL SKILLS

EXPERIENCED:

ROS • Gazebo • C++ • Matlab
• QGroundControl • ARGoS3

FAMILIAR:

Solidworks • ROSBuzz • Drone Pilot

MISCELLANEOUS:

Nvidia Jetson TX1 • Arduino • \LaTeX

RESEARCH EXPERIENCE

MISTLAB | SUMMER RESEARCH INTERNSHIP

May 2018 – July 2018 | Polytechnique Montreal, Canada
Worked with V.S. Varadhran & Prof. Giovanni Beltrame on detection & classification of faults in robotic swarms using adaptive immune strategy in vertebrates. I also worked on setup of Spiri drones, for formation flights with other drones in the lab.

EMBEDDED CONTROLS LAB | BACHELOR'S DEGREE PROJECT

Dec' 2017 – Apr' 2018 | Indian Institute of Technology-Bombay, India
Worked with Prof. Leena Vachhani & Prof. Dipti Gupta to develop state estimation strategy & throw-able shell for spherical robot developed previously.

TECHNICAL EXPERIENCE

EXOFLY | TEAM MEMBER

Aug' 2018 – Present | Indian Institute of Technology-Bombay, India
Working with Prof. Srikant Sukumar on modeling system dynamics of a proposed powered exoskeleton flight suit for the Boeing sponsored competition GoFLY.

TECHNICAL TEAMS | TEAM MEMBER

Jul 2016 – Dec 2016 | Indian Institute of Technology-Bombay, India

- Worked with team Rakshak on design of wings for the autonomous drone.
- Worked with team HYPER on design and manufacturing of a Ornithopter
- Replicated a miniature Jet Engine to study the effects of varying area, placement & number of secondary dilution airholes on combustion chamber.

COURSE PROJECTS

CONTROLLER DESIGN

Autumn 2018 | Course: Adaptive Control Theory
Designed controller for control of the longitudinal flight dynamics of an UAV using adaptive back-stepping techniques.

MISSION DESIGN

Autumn 2018 | Course: Spaceflight Mechanics
Designed a basic burnout including trajectories of launch, maneuvering & orbital decay for Atlas-Centaur SLV-3D booster rocket carrying the satellite HEAO-2.

ACCOLADES

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|------|---|--|
| 2017 | AA Grade | For Bachelor's Degree Project |
| 2015 | 99.8 percentile | Joint Entrance Examination |
| 2014 | Certificate of Merit by State Government | Qualified among Top 1% for Indian National Maths Olympiad |

SOCIETIES

INSTITUTE ELECTRONICS & ROBOTICS CLUB | SECRETARY

Apr 2017 – Mar 2018 | IIT-B
Organized & mentored in workshops & competitions for the IIT-B & IIT Goa students.

DEPARTMENT ACADEMIC COUNCIL | MENTOR

Apr 2017 – Mar 2018 | IIT-B
Assisted 8 sophomores with planning their academic load & improving their academic performance.