

Curriculum Vitae

Tandralee Chetia
She/Her, 24

[Email: tandraleec@gmail.com](mailto:tandraleec@gmail.com)

Incoming student for MS in Mechanical Engineering

EDUCATION				
B.Tech (Aerospace)	IIST* Trivandrum, India	CGPA 7.69/10	Grade 'A' in 17 courses	2015-19
Class XII (K-12)	Cotton College, Guwahati, India (Assam State Board)	96.4%	6th rank amongst 27969 students of Assam state	2013-15
Class X (K-10)	Sophy Mercy Memorial School, Sibsagar, India (Assam State Board)	91.67%	100% in Advanced Maths and General Science	2000-13
PROFESSIONAL EXPERIENCE				
ISRO Propulsion Complex, India		Scientist/Engineer 'SC'		2019-2022
Primary Responsibility	<ul style="list-style-type: none"> Realisation of the Integrated Cryogenic Engine & Stage Test Facility for ISRO's GSLV Designed & reviewed 7 service and 2 propellant fluid systems, each containing over 100 components Coordinated with a team of around 300 people for purchase, design, delivery & erection of flow components 			
Research Work	<ul style="list-style-type: none"> Computational fluid dynamic analysis of a pintle nozzle 			
Membership	<ul style="list-style-type: none"> Attended seminars and learned from scholars across India as a member of the Aeronautical Society of India 			
Impact	<ul style="list-style-type: none"> Designed sampling cylinders that are easier to handle & 70% lighter than existing standard designs Devised mimics (test control schemes) for 15 subsystems, each containing over 50 components Was graded A(Outstanding) by my higher-ups on my annual performance report for two consecutive years 			
PROJECTS & SUMMER INTERNSHIPS				
IIST Trivandrum, India	<ul style="list-style-type: none"> Project title-Aerodynamic and Flight Dynamic Analysis and Design of a Bio-Inspired Flapping Wing MAV: Worked on aerodynamic and flight dynamic parametric studies to achieve an optimum design of a flapping wing micro air vehicle under the guidance of Dr. Dhayalan R. and Dr. Sreejalekshmi K.G. 			2019
Indian Institute of Technology (IIT) Kanpur	<ul style="list-style-type: none"> Project Title - Design of Wing and Aileron for a VTOL Aircraft: Estimated wing parameters from thumb rules and historical data. Designed a MATLAB code to determine & analyze the change in aileron size on variation of constraints Research advisors: Dr. Dhayalan R., Dr. Subrahmanyam Saderla 			2018
IIST Trivandrum, India	<ul style="list-style-type: none"> Worked in a team of two to make a coloured cubes sorting mini robot Worked on the path planning of a planar serial chain manipulator under the guidance of Dr. Kurien Issac K. 			2018
NESAC**, Umiam, India	<ul style="list-style-type: none"> Designed and demonstrated payload drop mechanisms for a hexacopter to be implemented in providing aid to people residing in inaccessible areas under the guidance of Mr. Chirag Gupta 			2017
Tezpur University, India	<ul style="list-style-type: none"> Formulated a mathematical model for elasto-plastic stress analysis in disks subjected to rotation under the guidance of Dr. Seikh Mustafa Kamal 			2016
SKILLS & RESEARCH INTERESTS				
Computer Languages	C, MATLAB, Python			
Software & Tools	LaTeX, MS Excel, MS Word, ADAMS, Ansys Mechanical, Ansys Fluent, Autocad, CATIA			
Research Interests	Design of mechanisms, aerodynamics, fluid dynamics			
ACHIEVEMENTS & AWARDS				
Competitive exams	<ul style="list-style-type: none"> All India Rank of 157 in Graduate Aptitude Test in Engineering (Aerospace) conducted by IIT 			2019

	<ul style="list-style-type: none"> • All India Percentile Score of 98.79 in the Joint Entrance Examination for engineering (JEE Main) 	2015
Awards	<ul style="list-style-type: none"> • Third prize in the market survey competition on "Innovative technologies for waste management in local markets" held in connection with the Cleanliness mission of Indian Government 	2018
	<ul style="list-style-type: none"> • Certificate of Merit by Assam Higher Secondary Education Council for securing 6th rank in Science Stream in the grade 12 exam 	2015
	<ul style="list-style-type: none"> • Anundoram Barooah Award by Government of Assam in recognition of excellent academic performance in the grade 10 exam 	2013
Publications	<ul style="list-style-type: none"> • Research article: Chetia, T., Rajaram, D. and Sreejalekshmi, K.G. (2022), "Aerodynamic and flight dynamic parametric studies of a flapping wing", <i>International Journal of Intelligent Unmanned Systems</i>, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJIUS-06-2021-0039 	2021
	<ul style="list-style-type: none"> • Conference Paper: Analysis & Design of a Bio-inspired Flapping Wing MAV: Presented a paper in the 3rd National Conference on Academic, Industrial, Scientific and Defence Research in Mechanical and Aeronautical Engineering (NCMAE), 2019 at Chandigarh, India (https://wingsofaero.in/society/3rd-ncmae-2019/) 	2019
Certificate Courses	<ul style="list-style-type: none"> • Technology Entrepreneurship: Lab to Market (HarvardX) 	2020
	<ul style="list-style-type: none"> • A Hands-on Introduction to Engineering Simulations (CornellX) 	2020
EXTRACURRICULAR ACTIVITIES		
NGO Ayang, Majuli, India	<ul style="list-style-type: none"> • Volunteered as a teacher and artist at the non-government organization 'Ayang' situated on Majuli, largest river island in the world • Taught kids basic science & art and improved the teaching process in local schools 	2019
Music Club, IIST	<ul style="list-style-type: none"> • Founding Member of the Music Club, "Neptunes" of my undergrad college • Actively organised and participated in events of diverse languages and genres. 	2015-19
Conscientia, IIST	<ul style="list-style-type: none"> • Events & Social Initiatives Coordinator at the Astro-technical fest Conscientia • Spearheaded a 2-tier team of 20+ people to conduct various technical competitions and workshops for local schools(footfall-520+) 	2018
Dhanak, IIST	<ul style="list-style-type: none"> • Head of Decorations team at the Cultural fest Dhanak (footfall-980+) • Spearheaded a team of 40+ people to decorate the college campus 	2017
Master of Art & Craft	<ul style="list-style-type: none"> • Awarded a Master of Art & Craft (Senior Diploma) at the age of 16 by Society of Art & Craft, West Bengal affiliated to All India Handicraft and Fine Arts Association 	2013
Bisharad in Sattriya	<ul style="list-style-type: none"> • Awarded a Bisharad (equivalent to an undergraduate degree) in Sattriya classical dance of India by Sankari Sangeet Pariksha Parishad, Assam 	2011

*Indian Institute of Space Science and Technology, Govt of India, Department of Space

**North Eastern Space Applications Centre, Govt of India, Department of Space