

National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Brief Profile: 1-2 paragraphs (not exceeding 500 words)

Saurav Kumar Dutta obtained his PhD and BE, all in Mechanical Engineering from IIT Guwahati and Gauhati University, respectively. Post PhD, he worked as a Postdoctoral Research Associate in the Department of Electrical Engineering at University of Notre Dame, Indiana, USA. His broad research interests are in the design and development of industrial and service robots. Since March 2024, he is serving as Assistant Professor in the Faculty of Mechanical Engineering at NIT Trichy.



1. Name: **Saurav Kumar Dutta**
2. Designation: **Assistant Professor**
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4. Telephone (Direct) (Optional):
Telephone : _____ Extn (Optional): _____
Mobile (Optional): _____
5. Email (Primary): **sauravkdutta@nitt.edu** Email (Secondary) :
6. Field(s) of Specialization: **Machine Design,
Robotics, Solid Mechanics, Finite Element
Method**
7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology, Tiruchirappalli	21/03/2024	Continuing
Research Associate	Indian Institute of Technology Hyderabad	15/01/2024	20/03/2024
Senior Project Scientist	Indian Institute of Technology Kanpur	08/08/2023	09/01/2024
Postdoctoral Research Associate	University of Notre Dame, Indiana, USA	16/05/2022	15/05/2023
Project Fellow/JRF-GATE	Indian Institute of Technology Guwahati	21/01/2022	19/04/2022

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8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	Indian Institute of Technology Guwahati	2021	N/A	Mechanical Engineering with specialization in Machine Design and Robotics
BE	Gauhati University	2015	1st class with Honours	Mechanical Engineering
12th (AISSCE)	Central Board of Secondary Education	2011	Pass	Physics, Chemistry, Biology, Mathematics, English
10th (AISSE)	Central Board of Secondary Education	2009	Pass	English, Sanskrit, Science, Social Studies, Mathematics

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2015	Institute Fellowship for GATE qualified direct PhD students	Indian Institute of Technology Guwahati	July 2015	October 2020

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13. Details of Academic Work

(i) Curriculum Development

BoS 2024 member for revising and updating the curriculum of M.Tech (Industrial Safety Engineering), given by Mechanical Engineering Dept.

(ii) Courses taught at Postgraduate and Undergraduate levels

MEPE 25 - Industrial Robotics for 7th Semester B.Tech ME students

ME 634 - Finite Element Methods in Heat Transfer Analysis for 1st Semester M.Tech TPE students

(iii) Projects guided at Postgraduate level

1) Niranjan Kumar E (Thermal Power Engineering) - with Prof. R. Anand - continuing

2) Arpan Thakur (Industrial Safety and Engineering) - with Prof. S.P. Sivapirakasam - continuing

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
May 9 to May 14, 2024	NEP 2020 Orientation and Sensitization Programme	National	Participant	Teaching Learning Center - IIT Madras	IIT Madras

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Dec 9 to Dec 11, 2021	5 th International and 20 th National Conference on Machines and Mechanisms	International	Paper presenter	AMM, India	PDPM IITDM Jabalpur
Dec 5 to Dec 7, 2019	4 th International and 19 th National Conference on Machines and Mechanisms	International	Paper presenter	AMM, India	IIT Mandi
Oct 18 to Oct 20, 2018	International Conference on Advances in Mechanical Processing and Design - 2019	International	Paper presenter	KIIT University	KIIT University
Dec 20 to Dec 22, 2018	First International Conference on Emerging Trends in Mechanical Engineering-2018	International	Paper presenter	SRIT Anantapur	SRIT Anantapur
Dec 17 to Dec 19, 2018	5 th IFToMM Asian Mechanism and Machine Science Conference	International	Participant	IFToMM	IISc Bangalore

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

18. Invited Talks delivered

Topic	Date	Inviting Organization

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19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member	Association for Machines and Mechanisms, India (Indian affiliate of IFToMM)	A20180014 dated 25th October 2018
Member	Institute of Electrical and Electronics Engineers (IEEE)	100313482 dated 5th June 2024

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Dutta, S. K., Reddy, B. S., and Dwivedy, S. K.	Complibot: A Compliant External Pipe Climbing Robot	<i>Mechanics based Design of Structures and Machines</i>	52(4)	2106-2135	2024	2.9
Dutta, S. K., Reddy, B. S., and Dwivedy, S. K.	Tuning Proportional-Integral-Derivative Gains of a Three-Dimensional RRRP Pick and Place Robot for Asymptotic Trajectory Tracking	<i>ASME Journal of Dynamic Systems, Measurement and Control</i>	143(4)	041001	2021	1.7

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(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
<u>Dutta, S. K.,</u> Reddy, B. S., and Dwivedy, S. K.	Design of a Novel Mechanism for Actuation of a Bistable Buckled Beam	Recent Advances in Machines and Mechanisms	351-360	Machines and Mechanisms	Jabalpur	2023
<u>Dutta, S. K.,</u> Reddy, B. S., and Dwivedy, S. K.	Design of a Two Degrees of Freedom Actuator for Rehabilitation Robotic Applications	Machines, Mechanism and Robotics	1189-1196	Machines and Mechanisms	Mandi	2022
<u>Dutta, S. K.,</u> Balathil, J. K., Reddy, P. A., & Reddy, A. N.	Design of a Torque Controller with Application to a Single Degree of Freedom Haptic Device	Advances in Mechanical Processing and Design	551-559	Machine Design and Manufacturing	Bhubaneswar	2021
<u>Dutta, S. K.,</u> Reddy, A. N., & Dwivedy, S. K.	A Study of Direct and Inverse Problems in Force Sensing of Elastic Bodies	Emerging Trends in Mechanical Engineering	347-355	All fields of Mechanical Engineering	Anantapur	2020

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number