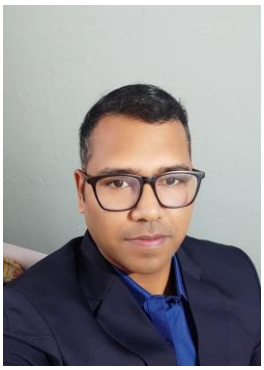
National Institute of Technology, Tiruchirappalli:
Performa for CV of Faculty/ Staff Members

Curriculum Vitae



I am Dr. Tara Chand Kumar Maurya, currently working as an Assistant Professor in the Department of Mechanical Engineering at National Institute of Technology Tiruchirappalli. I completed my Ph.D. from the Indian Institute of Technology Roorkee, with research focused on droplet formation and mixing in microfluidic systems. My areas of specialization include Computational Fluid Dynamics (CFD), multiphase flow, and microfluidics. I have experience in numerical simulations using COMSOL Multiphysics and experimental techniques such as μ-PIV and high-speed imaging. I have published research articles in peer-reviewed journals, including *Chemical Engineering Science* and the *Journal of Fluids Engineering*. My research interests also include lab-on-chip systems and acoustofluidics which is useful in the application of biomedical system development.

1. Name: Dr. Tara Chand Kumar Maurya
2. Designation: Assistant professor
3. Office Address: ME2025, Department of Mechanical Engineering, NIT Tiruchirappalli, Tamil Nadu, 620015.
5. Email (Primary): tmaruya@nitt.edu Email (Secondary): tarachandkm1990@gmail.com
6. Field(s) of Specialization: Microfluidic, Multiphase, Acoustic fluidic
7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Trichy	23-12-2025	----

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

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	Indian Institute of Technology Roorkee, Uttarakhand	2025	A	Microfluidic
MTech	Indian Institute of Technology (BHU), Varanasi, Uttar Pradesh	2018	First	Thermal and Fluid Engineering
BTech	Motilal Nehru National Institute of Technology, Allahabad	2014	First	Mechanical Engineering

Intermediate	CAV Inter College, Allahabad, UP	2008	First	Mathematics
High school	Janta Inter College Birbhanpur Jaunpur, UP	2006	First	Science

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
2023	Best Poster Presentation	Department of Mechanical Engineering, IIT Roorkee

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2025	Institute Postdoc Fellowship	IIT Madras	15-05-2025	16-12-2025

13. Details of Academic Work
(i) Curriculum Development
(ii) Courses taught
Postgraduate: Advance Engineering Simulation Lab
Undergraduate: Additive Manufacturing
(iii)Projects guided at Postgraduate level
(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
14-12-2022	Conferences	International	Paper presenter	(FMFP-2022), IIT Roorkee	IIT Roorkee
27-12-2021	Conferences	National	Paper presenter	(FMFP-2021), BITS Pilani	Hybrid Mode
9-12-2020	Conferences	International	Paper presenter	(FMFP-2020), IIT Guwahati	Hybrid Mode
19-10-2022	Conferences	International	Poster presenter	(AMPCO), IIT Roorkee	IIT Roorkee
21-12-2017	Conferences	International	Paper presenter	(ATSMDE), VJTI Mumbai	VJTI Mumbai
14-12-2022	Workshops	International	Participant	(FMFP-2022), IIT Roorkee	IIT Roorkee
28-12-2019	Conferences	International	Other	(IHMTC-2019), IIT Roorkee	IIT Roorkee
30-01-2026	Workshop	National	Participant	NIT Trichy	NIT Trichy

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

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date

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)
Maurya, Tara Chand Kumar, and Sushanta Dutta	Pinch-off Dynamics of Droplet Formation in Microchannel Flow	***Chemical Engineering Science***	282	119296	2023	4.5
Maurya, Tara Chand	The Influence of Vortex Flow in the	***Journal of Fluids***	147, no. 6	061402	2025	2.5

Kumar, and Sushanta Dutta.	Dispersed Phase on Droplet Formation Dynamics	***Engineering***				
Maurya, Tara Chand Kumar, and Sushanta Dutta.	Experimental investigation of secondary flow during the droplet formation in the flow-focusing channel	***Journal of Flow Visualization and Image Processing***	31	59-76	2024	0.8

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Tara Chand Kumar Maurya, S. Dutta, 2022	Experimental investigation of secondary flow during droplet's formation in the Co-flow channel	Proceedings of the 9th International and 49th National Conference on Fluid Mechanics and Fluid Power (FMFP)	6	Cutting-edge research in fluid mechanics	IIT Roorkee	2022
Tara Chand Kumar Maurya, S. Dutta	Numerical Study of Break-up Mechanism of the Droplets Formation in the Microfluidic T Junction	Proceedings of the 48th National Conference on Fluid Mechanics and Fluid Power (FMFP)	6	Advancements in turbomachinery, multiphase flows, bio-fluid mechanics, and sustainable energy applications	BITS Pilani	2021
Tara Chand Kumar Maurya, S. Dutta	Numerical Simulation of Two immiscible Liquids Flow in T-microchannel using Level-Set-Method	Proceedings of 8th International Conference on Fluid Mechanics and Fluid Power (FMFP)	6		IIT Guwahati	2020
Botcha Appalanaidu, **Tara Chand Kumar maurya**, and Maran Rajakumaran	Organ-on-a-chip: Mimicking Human Organ on a Microchip using Additive Manufacturing.	Proceedings of the 3rd International Conference on Advances in Materials Processing: Challenges and Opportunities. (AMPCO)	1		IIT Roorkee	2022
Ajeet Kumar,	Prediction of	proceeding of	6		VJTI	2017

J.V. Tirkey, **Tarachand Kumar Maurya** and S.K. Shukla	Engine Performance and Emissions Characteristics of CI Engine with the Variation of Stroke/Bore Ratio	International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE)			Mumbai	

(C) Books & Monographs

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