

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

Thermodynamics and Statistical Mechanics, Phase transition, Nucleation and Crystallization, Supercooled Liquid, Disordered Solids, Gas Hydrate, Microporous Materials, Solid-Liquid interaction, Carbon based materials such as Graphene, Carbon Nanotube.

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Tiruchirappalli	02-04-2024	Till Date
Research Associate (postdoctoral)	IIT Roorkee	26-04-2022	29-02-2024

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

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	IIT Kanpur	2021	1 st	Chemical Engineering
M.Tech	IIT Kanpur	2013 (upto 3 rd Sem.)	1 st	Chemical Engineering
B.Tech	BIT Sindri Dhanbad	2012	1 st	Chemical Engineering

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

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11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2019	Best Oral Presentation Award	IIT Kanpur

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

13. Details of Academic Work

- (i) Curriculum Development
- (ii) Courses taught at Postgraduate and Undergraduate levels
- (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/	Role (Participant/ Speaker/	Event Organized by	Venue

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		National/ Local)	Chairperson, Paper presenter, Any other)		
12/06/2024 to 14/06/2024	Mechanical Response of Amorphous Solids Modelled by Large Scale Particle Based Simulation	National	Speaker	IIT Madras, IIT Guwahati, IIT Bhilai, IIT BHU, NIT Hamirpur, BITs Pilani	Sterling Kodai Lake, Tamil Nadu, India
31/03/2023 to 01/04/2023	Computational Analysis on Thermodynamics Aspects of Relaxation in Supercooled Liquid at Water at Different Cooling Rate	National	Participant	IISER Bhopal	IISER Bhopal, India
31/03/2023 to 01/04/2023	Molecular Dynamics Study to Investigate the System Size Effects on Tetrahedral Materials in Supercooled Region	National	Paper presenter	IISER Bhopal	IISER Bhopal, India
19/12/2022 to 21/12/2022	Mechanical response of Amorphous Silica Modelled by Large Scale Particle Based Simulation		Poster presenter	IIT Kharagpur Research Park, India	IIT Kharagpur Research Park, India
14/04/2022 to 16/04/2022	Characterization of Supercooled Monatomic Potential Model of Water During Liquid- Amorphous Transition	International	Paper presenter	MNIT Allahabad, India	Online

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14/04/2022 to 16/04/2022	A Computational Analysis on Thermodynamics Changes of Carbon in Liquid, and Solid State at T_{LL}	International	Participant	IICE Kolkata, India	HIT Kolkata, India
14/04/2022 to 16/04/2022	A Computational Analysis on Thermodynamics Changes with Chirality in Multi Walled Carbon Nanotube (MWCNTs)	International	Participant	IICE Kolkata, India	HIT Kolkata, India
21/02/2020 to 23/03/2020	Topological Identification Criteria, Stability, and Relevance of Pentagonal Nanochannels in Amorphous Ice	National	Poster presenter	IIT Kanpur	IIT Kanpur, India
30/03/2019 to 31/03/2019	Mechanism of Stable Stacking-Disordered Ice, Pentagonal Rings Formation, and Crystallization in Supercooled Monatomic (mW) Water	National	Paper presenter	IIT Kanpur	IIT Kanpur, India
19/05/2018 to 20/05/2018	Structure Pattern Responsible for Relaxation of Liquid-Amorphous Transition of Supercooled Tetrahedral Liquids	National	Paper presenter	IIT Bombay	IIT Bombay, India
17/07/2017 to 21/07/2017	Structural Characterization of Relaxation of Supercooled	International	Poster presenter	Jozef Stefan Institute and University of Ljubljana,	Ljubljana, Slovenia, Europe

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	Tetrahedral Liquid in Terms of Boat and Chair Rings				
17/07/2017 to 21/07/2017	Dynamical Instability Causes the Demise of a Supercooled Tetrahedral Liquid	International	Poster presenter	Jozef Stefan Institute and University of Ljubljana,	Ljubljana, Slovenia, Europe
03/12/2016 to 04/12/2016	Thermodynamics and Structural Aspects of Liquid-Amorphous Transition of Supercooled Tetrahedral Liquid	National	Poster presenter	IIT Gandhinagar	IIT Gandhinagar, India
27/12/2016 to 30/12/2016	Thermodynamics and Structural Aspects of Liquid-Amorphous Transition of Supercooled Tetrahedral Liquid	National	Poster presenter	IIT Madras, Anna University Chennai	A.C.TECH ANNA University Chennai, India

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
Mechanical Response of Amorphous Solids Modelled by Large Scale Particle Based Simulation	12/06/2024 to 14/06/2024	IIT Madras, IIT Guwahati, IIT Bhilai, IIT BHU, NIT Hamirpur, BITs Pilani

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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)
Nandlal Pingua and A. K. Gautam	Molecular Dynamics Study on Relaxation of Supercooled Liquid Water at Different Cooling rate	Material Today Communications	39	108777	2024	3.46
Nandlal Pingua, and Pankaj A. Apte	Topological Identification Criteria, Stability, and Relevance of Pentagonal Nanochannels in Amorphous Ice	Journal of Physical Chemistry B	123	10301-10310	2019	3.5
Nandlal Pingua, and Pankaj A. Apte	Increase in Local Crystalline Order Across the Limit of Stability Leads to Cubic-Hexagonal Stacking in Supercooled	Journal of Chemical Physics	149	074506	2018	4.4

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	Monatomic (mW) Water					
Arvind K. Gautam, A. Goyal, Nandlal Pingua , and Pankaj A. Apte	Dynamical Instability Causes the Demise of a Supercooled Tetrahedral Liquid	Journal of Statistical Physics	168	1302-1318	2017	1.762
P. A. Apte, Nandlal Pingua , A. Goyal, U. Kumar, S. Y. Willow, X. C. Zeng, and B. D. Kulkarni	The freezing Tendency Towards 4- Coordinated Amorphous Network Causes Increase in Heat Capacity of Supercooled Stillinger-Weber	RSC Advances	5	44679-44686	2015	4.036

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Arvind K. Gautam, Nandlal Pingua , Avinash Chandra	Molecular Dynamics Study to Investigate the System Size Effects on Tetrahedral Materials in Supercooled Region	Advances in Chemical Engineering and Science (ACES) 2023	-	The process development and Intensification for sustainability development	IISER Bhopal, India	2023

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Arvind K. Gautam, Nandlal Pingua , Avinash Chandra,	Production of Bio Fuels: An overview on Biodiesel Production from Waste Cooking Oil	IIP Publisher, Michigan, USA	2024	978-1-68576-456-2

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Sunatak Kamsonlian				
Arvind K. Gautam, Nandlal Pingua , Avinash Chandra, Raj Kumar Arya,	Domestic Waste Management and Their Utilization	Springer Nature Singapore Pvt. Ltd.	2024	9789813346895