Curriculum Vitae

Brief Profile:

Dr. Umasankar Chintada is an Assistant Professor in the Department of Metallurgical and Materials Engineering at the National Institute of Technology, Tiruchirappalli (NIT Trichy). His research and teaching expertise include the mechanical behavior of materials, sheet metal forming, electron microscopy, structure-property correlation, and thermal and thermo-mechanical treatment. He holds a Ph.D. in Metallurgical and Materials Engineering from the Indian Institute of Technology Madras (IIT Madras). His dissertation focused on developing high-strength, stretch-flangeable automotive steel through the Quenching and Partitioning (Q&P) process. During his doctoral research, Dr. Umasankar achieved a Technology Readiness Level (TRL) of 4 and secured an Indian patent (Patent No. 551340) for a miniaturized stretch-flangeability testing device, which offers 99% material savings. Dr. Umasankar earned his M.Tech in Materials Science and Engineering from IIT Bhubaneswar, where he received the Best Thesis Award for his work on high-pressure grinding rolls. His previous professional experience includes roles as a Project Associate and Senior Research Fellow at IIT Madras, as well as consulting for the startup InsituMicron. At NIT Trichy, he actively mentors B.Tech students and instructs specialized metallurgy courses. With his strong academic background and extensive research experience, he is committed to educational excellence and aims to build a vibrant research group that will significantly advance materials science in India.

1. Name: Dr. Umasankar Chintada
2. Designation: Assistant Professor
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4. Telephone (Direct) (Optional):
   Telephone : Extn (Optional):
   Mobile (Optional):
5. Email (Primary): umasankar@nitt.edu Email (Secondary): chintadaumasankar@gmail.com
6. Field(s) of Specialization: Mechanical Behavior of Materials, Sheet Metal Forming, Electron Microscopy, Structure-Property Correlation, Thermal & Thermo-Mechanical Treatment.

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Tiruchirappalli, India	December 2025	Till Date
Post-Doctoral Research Associate	Industrial Consultancy and Sponsored Research, IIT Madras	Jan 2025	Nov 2025
Research Associate	Industrial Consultancy and Sponsored Research, IIT Madras	2024	2025

8. Academic Qualifications

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D.	Indian Institute of Technology Madras	2025	Thesis Highly Commended	Metallurgical and Materials Engineering
M.Tech.	Indian Institute of Technology Bhubaneswar	2018	First Class with Distinction	Materials Science and Engineering
B.Tech.	Rajiv Gandhi University of Knowledge Technologies – IIIT Nuzvid	2015	First Class with Distinction	Metallurgical and Materials Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Assistant Professor	Department of Metallurgical and Materials Engineering, NIT Tiruchirappalli	Dec 2025	Till Date
Faculty Mentor (B.Tech. Students)	Department of Metallurgical and Materials Engineering, NIT Tiruchirappalli	Mar 2026	Till Date

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2018	Best Thesis Award for outstanding research and academic excellence in MTech	IIT Bhubaneswar

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From	To
2018	PhD institute fellowship (HTRA)	MHRD, Govt. of India	2018	2024
2016	MTech institute fellowship (HTTA)	MHRD, Govt. of India	2016	2018
2009	Meritorious full six-year scholarship for Integrated BTech	Govt. of Andhra Pradesh, India	2009	2015

13. Details of Academic Work

(i) Curriculum Development.

(ii) Courses taught at Postgraduate and Undergraduate levels

MTLR33 Materials Testing and Inspection Laboratory (B.Tech.)
MTPE25 Metallurgical Failure Analysis (B.Tech.)
MT644 Foundry Metallurgy (M.Tech.)

(iii) Projects guided at Postgraduate level

(iv) Other contribution(s)

PG Project Review Panel Member
Department Data Insights Committee
Institute Day Committee

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.

Date (s)	Title of Activity	Level of Event (International / National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
Jan 2025	Advanced Microscopy and its Applications in Materials Science Problems	National	Poster Presenter	IIT Madras	Chennai, India
Apr 2023	AMALGAM 2023	National	Participant	IIT Madras	Chennai, India
June 2022	19th International Conference on Strength of Materials (ICSMA 19)	International	Poster Presenter	ICSMA-19	Metz, France
Nov, 2022	76th Annual Technical Meeting (ATM) of the Indian Institute of Metals (IIM-ATM 2022)	National	Poster Presenter	IIM Hyderabad Chapter	Hyderabad, India
Nov, 2022	International Symposium on Advanced Microscopy and its Application in Materials Science	International	Poster Presenter	IIT Madras	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

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
France	June 26 to July 1, 2022	ICSMA–19 Conference

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal
Umasankar, C., Prasad, K., Choi, Y.T., Lee, D.W., Kim, H. S., Sankaran, S., & Chakkingal, U.	Role of direct quenching and partitioning processes in improving austenite stability and stretch flangeability in a low C steel.	Met. Mater. Int.	31	84–99	2025	4
Prasad, K., Umasankar, C., Kim, E.S., Rajanna, R., Hariharan, K., Jain, J., Chakkingal, U., & Kim, H. S.	Elucidating the effects of interrupted loading on the stretch-flangeability of DP980 steel	Mater. Sci. Eng. A.	924	147717	2025	7
Dixit, S., Dash, B. B., Gupta, S., Umasankar,	Effect of microstructure and crystallographic	Phil. Mag.	105	826-870	2025	1.5

C., Bhattacharjee, A., & Sankaran, S.	texture on high-temperature dynamic deformation behavior of Ti 6Al-4V alloy: a post-test analysis on texture evolution and deformation mechanism.					
Umasankar, C., Sobti, A., Sankaran, S., & Chakkingal, U.	Influence of quenching and partitioning times on austenite stability and tensile properties of CMnAlSi quenching and partitioning steel.	J. Mater. Eng. Perform.	33	13311–13326	2024	2.3

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year

(C) Books & Monographs

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