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

Curriculum Vitae

Dr. Matruprasad Rout is currently working as an assistant professor in the department of Production Engineering, National Institute of Technology Tiruchirappalli, India. He obtained his PhD from Indian Institute of Technology Kharagpur in 2018 and M. Tech. in Production Engineering from National Institute of Technology Rourkela in 2011. His research areas are high temperature deformation, recrystallization, mechanical metallurgy and finite element analysis of bulk metal forming processes.

1. Name: Matruprasad Rout
2. Designation: Assistant Professor Grade II
3. Office Address: Room No. 116, Ground Floor, OJAS
4. Telephone (Direct) (Optional):

   Telephone: Extn (Optional):

   Mobile (Optional):
5. Email (Primary): matruprasad@nitt.edu Email (Secondary):
6. Field(s) of Specialization: Metal Forming, Mechanical Metallurgy, Finite Element Analysis of Bulk Metal Forming Processes

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology Tiruchirappalli, 620015, Tamil Nadu, India	29.05.2020	Till date
Assistant Professor	KIIT Deemed to be University, Bhubaneswar, 751002, Odisha, India	20.07.2018	05.05.2020

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

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	Indian Institute of Technology Kharagpur	2018	NA	Metal Forming
M. Tech.	National Institute of Technology Rourkela	2011	1st	Production Engineering
B. Tech.	Biju Patnaik University of Technology, Odisha	2009	1st	Mechanical Engineering

Diploma	State council for Technical Education and Vocational Training, Odisha	2005	1st (Hons.)	Mechanical Engineering
HSC	Board of Secondary Education, Odisha	2002	1st	---

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Member of DPEC for M. Tech Manufacturing Technology	Department	AY 2020-21	
Member- NBA Committee	Department	2021	2022

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)
2009	GATE	MHRD	July-2009	Jun-2011
2012	Research Fellowship (PhD)	MHRD	July-2012	Jun-2017

13. Details of Academic Work

(i) Curriculum Development

(ii) Courses taught at Postgraduate and Undergraduate levels

PG:

Mechanical Behavior of Materials (PR619)

UG:

Metallurgy and Materials Engineering (PRPC12)
Kinematics and Dynamics of Machines (PRPC15)
Manufacturing Technology (MEPC16)

(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
Constitutive Modelling and Its Implementation in Finite Element Modelling of Hot Rolling Process: A Comparative Study	National Institute of Technology Tiruchirappalli	2021	2023	Ongoing

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
Aug. 26-27, 2020	National Online Conference on Research and Developments in Material Processing, Modelling and Characterization	National	***Paper Presenter***: Microstructure and texture study of high temperature upset forged 304LN stainless steel	National Institute of Technology Jamshedpur, India	Online
Aug. 10-14, 2020	E-content development	Local	***Participant***	NITTTR, Chennai	Online
Dec. 16-18, 2016	6th International and 27th All	International	***Paper Presenter***: Study on Static	CoE, Pune, India	CoE, Pune, India

	India Manufacturing Technology, Design and Research Conference (AIMTDR)		Recrystallisation Behaviour of 304LN Stainless Steel by Two-Stage Compression Test		
Dec. 08-10, 2016	International Conference on Advances in Materials and Manufacturing, (ICAMM)	International	***Paper Presenter***: Evolution of Microstructure and Texture in 304 Austenitic Stainless Steel by Two Different Modes of Hot Rolling	Osmania University and DRDO	Hyderabad, India
Dec. 10-12, 2016	Indo-Belgian workshop on Crystallography & Texture		***Participant***	IIEST Shibpur in association with IIM, BESU chapter	IIEST Shibpur, India
Sep. 08-10, 2015	2nd International Conference on Rolling & Finishing Technology of Steel (RAFTS)	International	***Paper Presenter***: Experimental study of plastic anisotropy in hot cross rolling	RDCIS, Steel Authority of India (SAIL)	RDCIS, Ranchi, India
Dec. 12-14, 2014	5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR)	International	***Paper Presenter***: Finite Element Analysis of Cross Rolling on AISI 304 Stainless Steel: Prediction of Stress and Strain Fields	IIT Guwahati	IIT Guwahati, India
March 01-03, 2014	International Conference on Innovation in Design, Manufacturing and Concurrent Engineering (IDMC)	International	***Paper Presenter***: Numerical Simulation of Temperature Field of AISI 316L Stainless Steel during Cross Rolling	NIT Rourkela	NIT Rourkela, India

Feb. 12, 2014	Author Workshop	Local	***Participant***	Springer and IIT Kharagpur	IIT Kharagpur, India
June 06-08, 2011	5th International Conference on Advances in Mechanical Engineering (ICAME-2011)	International	***Paper Presenter***: Flow Behavior of Aluminum Alloy during Warm Upset Forming	S.V. National Institute of Technology, Surat	S.V. National Institute of Technology, Surat, 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
Associate Member (Life Member)	Institution of Engineers India (IEI)	AM1658061
Life Member	Electron Microscope Society of India (EMSI)	LM-1472

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)
Park, Jinheung, **Rout, Matruprasad**, Min, Kyung-Mun, Chen, Shuai-Feng, Lee, Myoung-Gyu	A fully coupled crystal plasticity-cellular automata model for predicting thermomechanical response with dynamic recrystallization in AISI 304LN stainless steel	*Mechanics of Materials*	167	104248	2022	4.137
Mahto, Raju Prasad, **Rout, Matruprasad**, Pal, Surjya K.	Mechanism of microstructure evolution and grain growth in friction stir welding of AA6061-T6 and AISI304 in air and water media	*Materials Chemistry and Physics*	273	125081	2021	4.778
Rout, Matruprasad, Singh, Shiv B., Pal, Surjya K.	Texture development in 304LN austenitic stainless steel during post-hot-axisymmetric compression	*Institute of Mechanical Engineers Part B: Journal of Engineering Manufacture*	235	1131-1143	2021	2.759
Rout, Matruprasad	Texture-tensile properties correlation of 304 austenitic stainless steel rolled with the change in rolling direction	*Materials Research Express*	7	016563	2020	2.025
Rout, Matruprasad,	Microstructure and texture	*International Journal of*	13	605-621	2020	2.378

Singh, Shiv B., Pal, Surjya K.	evolution in austenitic stainless steel during low strain rate deformation at elevated temperature	*Material Forming*				
Rout, Matruprasad, Biswas, Somjeet, Ranjan, Ravi, Pal, Surjya K., Singh, Shiv B.	Deformation behavior and evolution of microstructure and texture during hot compression of AISI 304LN stainless steel	*Metallurgical and Materials Transaction A*	49	864-880	2018	2.726
Rout, Matruprasad, Ranjan, Ravi, Pal, Surjya K., Singh, Shiv B.	EBSD study of microstructure evolution during axisymmetric hot compression of 304LN stainless steel	*Materials Science and Engineering A*	711	378-388	2018	6.044
Rout, Matruprasad, Pal, Surjya K., Singh, Shiv B.	Prediction of Edge Profile of the Plate during Hot Cross Rolling	*Journal of Manufacturing Processes*	31	301-309	2018	5.684
Rout, Matruprasad, Pal, Surjya K., Singh, Shiv B.,	Finite Element Simulation of a Cross Rolling Process	*Journal of Manufacturing Processes*	24	283-292	2016	5.684
Rout, Matruprasad, Pal, Surjya K., and Singh, Shiv B.	Finite Element Analysis of Cross Rolling on AISI 304 Stainless Steel: Prediction of Stress and Strain Fields	*Journal of the Institute of Engineers (India): Series C*	98	27-35	2017	

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Jinheung Park,	Multiscale	Asia Steel			Gyeongju,	2021

Matruprasad Rout, Kyung Mun Min, and Myoung-Gyu Lee	modeling for predicting dynamic recrystallization behavior of stainless steel under thermo-mechanical process	International Conference 2021			Korea	
Kumre, Abhishek Kumar, Shrivastava, Ashvin, Mishra, Mayank, **Rout, Matruprasad**	Neural network based flow curve modeling of high-nitrogen austenitic stainless steel	International Conference on Progressive Research in Industrial & Mechanical Engineering (PRIME)			National Institute of Technology Patna, India	2021
Jinheung Park, **Matruprasad Rout**, Kyung Mun Min, Shuaifeng Chen and Myoung-Gyu Lee	Modeling dynamic recrystallization of stainless steel in the coupled crystal plasticity and cellular automata approach	9th International Conference on Tube Hydroforming (TUBEHYDRO 2019)			Kaohsiung, Taiwan	2019
Rout, Matruprasad, Singh, Shiv B. and Pal, Surjya K.	Characterization of post-hot-deformation annealing twins developed in 304LN austenitic stainless steel	Asia Steel International Conference 2018			Bhubaneswar, India	2018
Rout, Matruprasad, Ranjan, Ravi, Pal, Surjya K. and Singh, Shiv B.	Study on Static Recrystallisation Behaviour of 304LN Stainless Steel by Two-Stage Compression Test	6th International and 27th All India Manufacturing Technology, Design and Research Conference (AIMTDR)	1007-1011		CoE, Pune, India	2016
Rout, Matruprasad,	Evolution of Microstructure	International Conference on	411-416		Hyderabad, India	2016

Pal, Surjya K., Singh, Shiv B. and Biswas, Somjeet	and Texture in 304 Austenitic Stainless Steel by Two Different Modes of Hot Rolling	Advances in Materials and Manufacturing, (ICAMM)				
Rout, Matruprasad, Krishna, K. Sai, Pal, Surjya K. and Singh, Shiv B.	Experimental study of plastic anisotropy in hot cross rolling	Iron & Steel Review	155-158		SAIL, RDCIS, Ranchi, India	2015
Rout, Matruprasad, Pal, Surjya K., and Singh, Shiv B.	Finite Element Analysis of Cross Rolling on AISI 304 Stainless Steel: Prediction of Stress and Strain Fields	5th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR)	487-1-487-6		IIT Guwahati, India	2014
Rout, Matruprasad, Pal, Surjya K., and Singh, Shiv B.	Numerical Simulation of Temperature Field of AISI 316L Stainless Steel during Cross Rolling	International Conference on Innovation in Design, Manufacturing and Concurrent Engineering (IDMC)	81-84		NIT Rourkela, India	2015
Rout, M. P., Sahoo, S. K., Patra, L.N., Behera, B. C. and Kanaujia, K. K.	Flow Behavior of Aluminum Alloy during Warm Upset Forming	5th International Conference on Advances in Mechanical Engineering (ICAME-2011)	631-635		S.V. National Institute of Technology, Surat, India	2011
Kanaujia, K. K, **Rout, M. P**, Behera, B. C., Sahoo, S. K. and Maharana B. K.	Optimization of Tensile Strength of AISI304 Stainless Steel and Copper using Nd:YAG Laser Welding	5th International Conference on Advances in Mechanical Engineering (ICAME-2011)	616-620		S.V. National Institute of Technology, Surat, India	2011

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
Murugabalaji, V., **Rout, Matruprasad**	*Chapter 2*- Introduction to Cross Rolling of Biomedical Alloys, **Book Title**: Advanced Materials for Biomechanical Applications	CRC Press, Boca Raton	2022	ISBN: 9781003286806 (ebook)
Murugabalaji, V., **Rout, Matruprasad**	*Chapter 10*- Tensile Properties and Anisotropy of Cross-Rolled Sheets, **Book Title**: Metal Forming Processes: Developments in Experimental and Numerical Approaches	CRC Press, Boca Raton	2022	ISBN: 9781003226703 (ebook)
Rout, Matruprasad, Singh, Shiv B., Ranjan, Ravi, Pal, Surjya K.	*Chapter 9*- Microstructure and texture study of high temperature upset forged 304LN stainless steel, **Book Title**: Recent Advances in Manufacturing Processes,	Springer Singapore	2021	Print ISBN: 978-981-16-3685-1 Online ISBN978-981-16-3686-8
Behera, Bikash C., **Rout, Matruprasad**, Mondal, Arpan Kumar,	*Chapter 20*- Assessment of bio-dielectric calophyllum inophyllum (polanga) oil in electro-discharge machining: A step toward sustainable machining, **Book Title**: Next Generation Materials and Processing Technologies.	Springer Singapore	2021	Print ISBN978-981-16-0181-1 Online ISBN: 978-981-16-0182-8
Rout, Matruprasad, Pal, Surjya K., Singh, Shiv B.	*Chapter 4*- Finite element modeling of hot rolling: steady and unsteady state analyses, **Boot Title**: Computational Methods and Production Engineering,	Wood Head (Elsevier), Cambridge	2017	Print ISBN: 978-0-85709-481-0 Online ISBN: 978-0-85709-482-7
Rout, Matruprasad, Pal, Surjya K., Singh, Shiv B.	*Chapter 2*- Cross Rolling: A Metal Forming Process, **Book Title**: Modern Manufacturing	Springer International Publishing, Switzerland	2015	Print ISBN978-3-319-20151-1 Online ISBN

	Engineering: Research, development and education			978-3-319-20152-8