

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

Curriculum Vitae



Dr. Prakash Kumar joined NIT Tiruchirappalli in May 2020 and presently working as an Assistant Professor in the Department of Production Engineering. Previously he was an Assistant Professor in the Department of Production Engineering BIT Mesra From January 2018 to May 2020. He holds a B.Tech in Production Engineering from BIT Sindri (2006-2010). He obtained his M.Tech and Ph.D. degree from Indian Institute of Technology Roorkee (IIT Roorkee) in 2010-2012 and 2013-18 respectively in the area of Machine Design.

His research interest includes Vibration and control, Nonlinear dynamics, Structural dynamics, Modelling of human induced force, Energy harvesting, Magnetorheological Elastomer/ damper, welding and casting. Dr. Kumar is an associate member of the Institution of Engineers (India) and a member of IAENG.

1. Name Dr. Prakash Kumar
2. Designation: Assistant Professor
3. Office Address: MTB-203, Department of Production Engineering, NIT Tiruchirappalli.
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Telephone : Extn (Optional):
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5. Email (Primary):prakashkumar@nitt.edu Email (Secondary) :pkiitr87@gmail.com
6. Field(s) of Specialization: Vibration and control, Nonlinear dynamics, Structural dynamics, Modelling of human induced force, Energy harvesting, welding

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Tiruchirappalli	26/05/2020	Till Date
Assistant Professor	BIT Mesra, Ranchi	02/01/2018	07/05/2020

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

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Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	IIT Roorkee	2018	--	Modelling of Human Induced Force on Structures
M.Tech	IIT Roorkee	2012	7.27	Machine Design
B.Tech	VBU Hazaribag	2010	1 st class with Distinction	Production Engineering
Intermediate	BIEC, Patna	2006	1 st	Hindi, English, Physics, Chemistry, Math
Secondary Examination	BSEB, Patna	2003	1 st	Hindi, English, Science, Social Science, Sanskrit, Math, Adv Math

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)
2010	GATE Fellowship	Ministry of Human Resource	July 2010	May 2012

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		Development (MHRD), India		
2013	Research fellowship	Ministry of Human Resource Development (MHRD), India	July 2013	December 2017

13. Details of Academic Work

(i) Curriculum Development

(ii) Courses taught at Postgraduate and Undergraduate levels

Design of Machine Element

Applied Mechanics

Engineering Graphics

Engineering Practice

(iii) Projects guided at Postgraduate level

“**Development & analysis of lean product development tools/techniques**” by Gopal Gupta (214220010)

“**Application of machine learning for prediction of disruptions/delays in supply chain**” by Aayush Modi (214220001)

“**Backorder prediction using machine learning techniques**” by Vrishabh Narendra Bhonde (214220009)

(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)

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Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

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
Human Structure Interaction	23 rd December 2021.	Department of Mechanical Engineering, NIT Rourkela,
A study on residual stress distribution in welded joint of P91 and SS304H steel plate	10 th to 12 th June, 2021	Department of Mechanical Engineering, SVNIT Surat

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Associate Member	The Institution of Engineers (India)	AM1807520
Member	International Association of Engineers	244419

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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)
Prakash Kumar , Anil Kumar, Vitomir Racic and Silvano Erlicher	Modelling vertical human walking forces using self-sustained oscillator	Mechanical Systems and Signal Processing	Vol. 99	pp: 345-363,	2018	5.005
Prakash Kumar , Anil Kumar and Silvano Erlicher	A nonlinear oscillator model to generate lateral walking force on a rigid flat surface	International Journal of structural stability and dynamics	Vol. 18, No. 2	1850020 (31 pages)	2018	2.156
Prakash Kumar , Anil Kumar and Silvano Erlicher	A modified hybrid Van der Pol-Duffing-Rayleigh oscillator for modelling the lateral walking force on a rigid floor	Physica D: Nonlinear Phenomena	Vol. 358	pp. 1-14	2017	1.810
Prakash Kumar , Anil Kumar and Vitomir Racic	Modelling of longitudinal human walking force using self-sustained oscillator	International Journal of Structural Stability and Dynamics	Vol. 18, No. 6	1850080 (29 pages)	2018	2.156
Vikas Verma, Prakash Kumar , Kamal Kumar Mittal, Sandeep Chauhan and P.C. Tewari	Microstructure and mechanical behavior characterization of Al-Al ₂ O ₃ MMC processed by DIMOX and Al-	International Journal of Materials Engineering Innovation	Vol. no. 7 (3/4),	pp. 219-235	2016	---

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	Al ₂ O ₃ /MnO ₂ MMC processed via stir casting route					
Chandan Pandey, Manas Mohan Mahapatra, Pradeep Kumar, Prakash Kumar and J. G. Thakare,	Characterization of weld fusion zone for TIG welded P91 and P92 steels	Archives of Metallurgy and Materials	Vol. no 63 (4)	pp. 1755-1761	2018	0.697
Chandan Pandey, M. M. Mahapatra, P. Kumar, N. Saini, J. G. Thakre and Prakash kumar,	Grain refinement of P91 steel using double austenitization treatment	Materials Performance and Characterization	Vol. no. 7 (1)	pp. 445-455	2018	---
Chandan Pandey, M. M. Mahapatra, P. Kumar, Prakash kumar, N. Saini, J. G. Thakre and S. Kumar	Study on effect of double austenitization treatment on fracture morphology tensile tested nuclear grade P92 steel	Engineering Failure Analysis	Vol. no. 96	pp. 114147	2019	2.203
C Pandey, JG Thakare, P Tharaphadar, P Kumar, A Gupta, S Sirohi	Characterization of the soft zone in dissimilar welds joint of 2.25 Cr-1Mo and lean duplex LDX2101 steel	Fusion Engineering and Design	Vol. no. 163	pp. 112147	2021	1.692
C. Pandey, Naveen Kumar, S. Sirohi, T. Rajasekaran, S. Kumar, and P. Kumar	Study on the Effect of the Grain Refinement on Mechanical Properties of the P92 Welded Joint	Journal of Materials Engineering and Performance	In Press	In Press	2022	1.819
S. Sirohi, A. Sauraw, A. Kumar, S. Kumar, T. Rajasekaran, P. Kumar, R. S. Vidyarthi, N. Kumar, and C. Pandey	Characterization of Microstructure and Mechanical Properties of Cr-Mo Grade P22/P91 Steel Dissimilar Welds for Super-Critical Power Plant Application	Journal of Materials Engineering and Performance	Accepted	Accepted	2022	1.819

(B) Conferences/Workshops/Symposia Proceedings

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Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Prakash Kumar and Anil Kumar	Modelling of Lateral Human Walking Force by Self-sustained Oscillator	Procedia Engineering, Vol-144	pp-945-952	12th International Conference on Vibration Problems (ICOVP-2015)	IIT Guwahati	2015
Manoj kumar Sethi, Prakash Kumar and Anil Kumar	Transient Vibration Reduction of a Powertrain Using MRE Based Adaptive Tuned Vibration Absorber	Procedia Engineering, Vol-144	pp-689-696	12th International Conference on Vibration Problems (ICOVP-2015)	IIT Guwahati	2015
Prakash Kumar and Anil Kumar	Materials for energy harvesting from Ambient Vibration: A literature review	<i>Processing and Fabrication of Advanced Materials: XXIII, Vol 2</i>	, pp-1216-1234	23rd International Conference on Processing and Fabrication of Advanced Materials: XXIII (PFAM-23 2014)	IIT Roorkee	2014
Manoj kumar Sethi, Prakash Kumar and Anil Kumar	MRE based Adaptive Tuned Vibration Absorber for power train transient vibration reduction	<i>Advances in Dynamics, Vibration and Control</i>	pp-111-116	International Conference on Advances in Dynamics, Vibration and Control (ICADVC-2016)	NIT Durgapur	2016
Prakash Kumar and Anil Kumar	Human induced vibration in structures	International Journal of Mechanical Engineering and Robotics Research, Special Issue	, pp 44-54	National Conference on "Recent Advances in Mechanical Engineering" RAME – 2013	Roorkee	2013
Prakash Kumar , Anoop kumar Godara and Anil Kumar	Serviceability Analysis of a Footbridge Subjected to Pedestrian Walking	<i>Advances in Engineering Design</i>	pp-405-413	1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018)	Amity university Noida	2018
Shailesh Kumar Dewangan, Prakash Kumar , S. K. Jha	Optimization of Quality and Productivity of WEDM by Using L ₉ Orthogonal Array	<i>Advances in Industrial and Production Engineering</i> ,	pp-93-100	1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018)	Amity university Noida	2018
Prakash Kumar , Anil Kumar,	Materials for Energy Harvesting with	Materials Today: Proceeding	pp 5632-5637	2nd International Conference on Processing and	NIT Rourkela	2019

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Chandan Pandey, Shailesh Dewangan, Sanjay K. Jha	a Nonlinear Energy Sink: A Literature Review	Vol 33 (8)		Characterization of Materials (ICPCM-2019)		
Prakash Kumar , Shailesh Dewangan, Chandan Pandey	Analysis of surface integrity and dimensional accuracy in EDM	Materials Today: Proceeding Vol 33 (8)	pp 5378-5383	2nd International Conference on Processing and Characterization of Materials (ICPCM-2019)	NIT Rourkela	2019
Nitish Kaushik, Prakash Kumar , Joyjeet Ghose, Sanjay K Jha	Study of Mechanical Properties of Al2014-B4C-Gr Hybrid Nano Composite	Materials Today: Proceeding Vol 33 (8)	pp 5573-5576	2nd International Conference on Processing and Characterization of Materials (ICPCM-2019)	NIT Rourkela	2019
S.Sirohi, P.Kumar , A. Gupta, S.Kumar, C.Pandey	Role of Ni-based filler on charpy impact toughness of the P91 welds joint	Materials Today: Proceeding Vol 44 (8)	pp 1043-1049	International Conference on Materials Processing and Characterization,	IIT Indore	2021
Sachin Sirohi, P. K. Taraphdar, Prakash Kumar , Chandan Pandey	A study on residual stress distribution in welded joint of P91 and SS304H steel plate	Recent Advances in Manufacturing Processes and Systems	pp:1-10	2nd international conference on recent advances in manufacturing (RAM-2021)	SVNIT Surat	2021

(C) Books & Monographs

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