#### **Bio-Data**



Dr. Raghvendra Kumar Mishra, Associate Professor

Department of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra (Jammu & Kashmir)

Mobile: 91-8750413236, E-mail: <a href="mishrark\_kanpur@yahoo.com">mishrark\_kanpur@rediffmail.com</a> Personal Profile

Father's	Late Shri Vinod Kumar Mishra	Date of	11 <sup>th</sup> February	Sex	Male
name		birth	1972		
Nationality	Indian	Marital	Married		
	Status				
Address	Type VI, A-13, Gautam Buddha University, Greater Noida, Gautam Buddha Nagar -201310 (U.P)				

**Educational Qualifications** 

**Ph.D.** (2003-2007): Mechanical Engineering Department, Birla Institute of Technology, Mesra Ranchi (Jharkhand), Awarded on 18<sup>th</sup> March 2009

M. Tech (July1997-Jan1999): Mechanical Engineering Department, IIT Kharagpur (WB) INDIA, FIRST CLASS

B.E (1989-1993): Mechanical Engineering Department, Nagpur University (M.S) INDIA-FIRST CLASS.

M.E. Thesis:

Title: "Analysis of four bar mechanism using CAD package".

Supervisor: Prof. (Dr.) C. S. Kumar, Mechanical Engineering Deptt, IIT Kharagpur

Ph.D. Thesis:

Title: "Analysis of Mechanical Behavior of Composites using Multiquadric Radial Basis Function".

**Supervisor:** Prof. (Dr.), Ashok Misra, Mechanical Engineering Deptt, Birla Institute of Technology, Mesra Ranchi (Jharkhand), India

**Academic Experience** 

Position	Name of	Per	Period		Nature of work
held	Organization	From	То		
Associate Professor	Shri Mata Vaishno Devi University, Katra	1 <sup>st</sup> March 2017	Till Date	Associate Professor, (37400-67000)	Teaching, Research, lab development, guiding various M. Tech thesis,
				AGP 9000/-	coordinate M. Tech Programme and admn. Work
Assistant Professor	Gautam Buddha University, Gautam Buddha Nagar (U.P)	7 <sup>th</sup> December 2010	28 <sup>th</sup> February 2017	Assistant Professor, (15600-39100) AGP 8000/- Basic37400/-	Teaching, Research, lab development, guiding various M. Tech thesis, coordinate M. Tech Programme and admn. Work
Professor	KIIT University, Bhubaneswar (Orissa)	2 <sup>nd</sup> June 2009	1stDecember 2010	Professor (37400-67000 + 10000(AGP)	Teaching, Research, guiding B. Tech & M. Tech M. Tech thesis, coordinate M. Tech Programme

Reader	Birla Institute of	18th March	28th May	Reader	Teaching, 1	Resea	rch, guiding
	Technology,	2009	2009	(12000-18300)	B. Tech &	М. Те	ech M. Tech
	Mesra, Ranchi				thesis,		
Lecturer	Birla Institute of	11 <sup>th</sup> July	18th March	Lecturer	Teaching	&	Teaching,
	Technology,	2003	2009	(8000-13500)	Research		
	Mesra, Ranchi						
Lecturer	BITS, Pilani,	April 1999	September	Lecturer	Teaching	&	Teaching,
	Rajasthan		2001	(8000-13500)	Research		_

**Industrial Experience** 

Position Held	Position Held Name of Organization		1
		From	То
Production Engineer	Roto Pumps Ltd. Kanpur	July 1993	June 1997

#### **Research Experience**

- July 1998 Jan 1998, I.I.T. Kharagpur, "Analysis of four bar mechanism using CAD package".
- October 2001-June 2003 I. I. T, Delhi and University of Kaiserslautern, Germany, "Homogenization of composite materials".
- July 2003 May 2009 BIT, Mesra, Ranchi, Meshless Multiquadric radial basis function method for analysis of composite plates and laminates.

#### **Editor in Chief**

• Material Science, Engineering and Applications Journal (publishes original research articles on the latest developments in materials science and engineering) *Published by JVE International* 

# Workshop/ Conference/Seminar/FDP Participated

- ANSYS India Advanced workshop was held "between 29th November-2nd December 2005", in Bangalore.
- Workshop on personality development organized by Qualified Learning Systems Co. Inc., (USA) by SHIV KHERA held "29th to 31st Aug, 2006" in Ranchi.
- Seminar on "Finite Element Analysis-Application and trends" was held 1<sup>st</sup> -2<sup>nd</sup> June 2006 in IIT Kharagpur.
- Workshop on "Effective Teaching" organized by the Birla Institute of Technology, Mesra, Ranchi from 25-08-08 to 29-08-08.
- FEA Training Workshop organized by Altair Engg Pvt. Ltd. and School of Mechanical & Production Engineering, KIIT University, held 17 -18 July 2009.
- National Seminar on Industry Institute Interface organized by KIIT University was held 13<sup>th</sup> December 2009.
- 3<sup>rd</sup> International Conference on Materials Processing and Characterization was held 8<sup>th</sup> 9<sup>th</sup> March 2014 in Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad (AP).
- Two-day workshop on "Introduction to Robotics" conducted on 27<sup>th</sup> and 28<sup>th</sup> October, 2017 held at Bhargava College of Engineering and Technology, Samba.
- TEQIP-III sponsored Workshop on NBA Accreditation organized by The Institution of Engineers (India) from 08-10 December 2017.
- TEQIP-III sponsored Professional Development Training organized by IIM Raipur from January 29-February 02, 2018.
- Faculty Development Program on "Sustainable Design and Manufacturing" which was held on 12th Feb 2018-16th Feb 2018 in School of Mechanical Engineering, Shri Mata Vaishno Devi University.
- Faculty Development Program on "Best Manufacturing Practices in Industries" which was held on 17<sup>th</sup> Dec.2018-21<sup>st</sup> Dec.2018 in School of Mechanical Engineering, Shri Mata Vaishno Devi University.
- National workshop on Advances in Clean Energy Conversion Technologies and Materials for Energy Storage Application organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University Katra and Jawaharlal Nehru Technological University Hyderabad, sponsored by Department of Science

- and Technologies, Science and Engineering Research Board (SERB) and TEQIP-III on  $24^{th}$  and  $25^{th}$  January 2019.
- One week workshop on "Professional Ethics & Human Value-A Gandhian Perspective" organized by Faculty Development Centre in Shri Mata Vaishno Devi University, Katra on 11th -15th March 2019.
- Faculty Development Program on "Universal Human Value" from 21<sup>st</sup> June- 25<sup>th</sup> June 2021.

#### **Short term course**

- Short term course on design and development of Advance materials was held 23<sup>rd</sup> ---- 27<sup>th</sup> March 2009 in Birla Institute of Technology, Mesra, Ranchi.
- One week Training on Ultrasonic Testing Level-II organized by MSME-Technology Development Centre, Agra was held on 13/12/2017 to 17/12/2017 in School of Mechanical Engineering, SMVDU, Katra, Jammu & Kashmir State.
- AICTE Recognized Short Term Course on "Nanotechnology: Development and Challenges" Conducted by Applied Science Department from 27/05/2019 to 31/05/2019 (One Week) at NITTTR, Chandigarh.
- One week workshop on "Professional Ethics & Human Values-A Gandhi Perspective" was held 11<sup>th</sup> March-15<sup>th</sup> March 2019 in SMVDU, Katra, Jammu & Kashmir State.

# **Student activity Participation**

- EFFI CYCLE-2013, SAE India, Northern Section was held 5<sup>th</sup> 6<sup>th</sup> July 2013 in Jamia Millia Islamia University, New Delhi.
- Virtual Round of Eco-Kart 2014 was held in October 11, 2013 in Gautam Buddha University.
- EFFI CYCLE-2015, SAE India, Northern Section was held 4<sup>th</sup> 5<sup>th</sup> July 2015 in KIET, Ghaziabad.
- SAE-Baja-2018, SAE India, Northern Section was held 7<sup>th</sup>-11<sup>th</sup> March 2018, IIT Ropar, Punjab.

# Workshop/ Conference/Seminar Organized

- National Conference on "Innovative Trends in Mechanical Engineering -2017" in Department of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra 3-4 March, 2017.
- National Seminar on Mechanical Engineering- Research opportunities and Challenges organized by Department of Mechanical Engineering; Shri Mata Vaishno Devi University was held 8<sup>th</sup> April 2017.
- Member of the organizing team of Faculty Development Program on "Best Manufacturing Practices in Industries" which was held on 17th Dec.2018-21st Dec.2018 in School of Mechanical Engineering, Shri Mata Vaishno Devi University.
- Member of the INDO-U.S. Science and Technology Forum (IUSSTF) on "Next Generation Logistics Supply Chain & CEO Workshop which was held on 5<sup>th</sup> August, 2019 to 10<sup>th</sup> August 2019 in Shri Mata Vaishno Devi University.

# Sponsored Workshop/ Conference/Seminar

- TEQIP Workshop on Automobile Engineering Systems. Birla Institute of Technology, Mesra, Ranchi. Department of Mechanical Engineering. September 6-11, 2006 with the financial support **Rs.30,000/-.**
- TEQIP Workshop cum Training Programme on Automobile Engineering Systems (Under Service to Community). Birla Institute of Technology, Mesra, Ranchi. Department of Mechanical Engineering. June 4-6, 2007 with the financial support **Rs.30,000/-.**
- 2<sup>nd</sup> National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>–24<sup>th</sup> March- 2018 with the financial support **Rs.2,50,000/-**
- One Week Online AICTE-ISTE sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase I)" held online during March 18-24, 2021 with the financial support **Rs.93.000.00**

- One Week Online AICE- sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase II)" held online during April 15-21, 2021 with the financial support Rs.93,000.00
- One Week Online AICTE-ISTE sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase III)" held online during May 21-27, 2021 with the financial support Rs.93,000.00

### **Short Term Course Organized**

• Short Term Course on "Design and Analysis of Engineering Experiments" in School of Engineering, Gautam Buddha University, held 4–8 July, 2011.

#### **Session Chair in Conference**

- National Conference on "Innovative Trends in Mechanical Engineering -2017" in Department of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 3-4 March, 2017.
- 4<sup>th</sup> International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET-2017) in Shri Mata Vaishno Devi University, Katra, 3-4 November, 2017.
- 5<sup>th</sup> International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET-2018) in Shri Mata Vaishno Devi University, Katra, 25<sup>th</sup> ---- 26<sup>th</sup> October, 2018.
- TEQIP-III sponsored International Conference on Mechanical Engineering and Allied Sciences (ICMEAS-2018) in Shri Mata Vaishno Devi University, Katra, 14-15 September, 2018.
- 2<sup>nd</sup>International Conference on Computational & Experimental Methods in Mechanical Engineering (ICCEMME-2019) was held at Department of Mechanical Engineering, GLBITM Greater Noida on 3rd 5th May, 2019.
- 6<sup>th</sup> International Conference on Recent Trends and Advancements in Engineering and Technology was held at Department of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 17-18 January, 2020.

#### Chairman

- TEQIP-III sponsored International Conference on Mechanical Engineering and Allied Sciences (ICMEAS-2018) in Shri Mata Vaishno Devi University, Katra, 14-15 September, 2018.
- TEQIP-III sponsored Faculty Development Program on "Best Manufacturing Practices in Industries" which was held on 17th Dec.2018-21st Dec.2018 in School of Mechanical Engineering, Shri Mata Vaishno Devi University.
- National workshop on Advances in Clean Energy Conversion Technologies and Materials for Energy Storage Application organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University Katra and Jawaharlal Nehru Technological University Hyderabad, sponsored by Department of Science and Technologies, Science and Engineering Research Board (SERB) and TEQIP-III on 24th and 25th January 2019.
- TEQIP-III sponsored National Workshop on "3D Printing for New Product Development" on 13<sup>th</sup> September 2019 organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University Katra.

#### Convener

• 2<sup>nd</sup> National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup> – 24<sup>th</sup> March- 2018.

#### **Organizing Secretary**

• National workshop titled "Advances in clean energy conversion technologies & materials for energy storage applications" during 24<sup>th</sup> – 25<sup>th</sup> Jan. 2019 at SoME.

### **Nodal Officer**

• Nodal officer of the Indian society for technical education (ISTE) chapter in Shri Mata Vaishno Devi University, Katra.

# **Sanctioned Induction/Refresher Program**

• One-week AICTE-ISTE Induction/Refresher Programmes titled "Sustainable Product Design and Manufacturing". The total sanction budget is Rs.3,00,000/- for 40 participants (budget should not exceed to Rs.3,00,000/- under any circumstances)

# **MOOC Courses Development**

• Developing MOOCS for UG/PG subjects in the curriculum.

# **MOOC Courses**

S.	Date of	Course title	University /	Outcomes	Implications
No.	training		Institute		
1.	2020	Equipment Design:	IIT Roorkee,	89% completed, understand to design	For teaching
		Mechanical Aspects	NPTEL	the pressure and chemical vessel	UG /PG
				design	courses
				_	

#### **Books**

#### National

S.	TITLE with ISBN Number	Publisher	Year of	Remarks (Whether
No.			Publication	authored or edited)
1.	Proceedings of the 2 <sup>nd</sup> National	GUTENBERG	March 23-24,	edited
	Conference on Innovative Trends in		2018	
	Mechanical Engineering NCITME-2018			
	ISBN: 978-93-86240-24-8			

# **Book chapter**

# International

Sr.	<b>Author Name</b>	Title of Book with ISBN/ISSN	Title of the Book	Publi	Year of
No.		Number	Chapter	sher	Publication
1.	Apoorv Rathi,	Lecture Notes in Mechanical	Evaluation of	Sprin	2016
	Joy Banerjee,	Engineering, ISSN 2195-4356	Vibration of a	ger	
	Anurag Dixit,	ISSN 2195-4364 (electronic),	Crankshaft and a		
	R. K. Misra, H.	ISBN 978-981-10-5848-6 ISBN	Driveshaft Using		
	S. Mali	978-981-10-5849-3 (eBook)	FEM		
		https://doi.org/10.1007/978-981-			
		<u>10-5849-3</u>			
2.	Dixit S.,	(eds) Advances in Micro and	Numerical and	Sprin	2019
	Mishra R.K.,	Nano Manufacturing and	Experimental	ger,	
	Ganguli B.	Surface Engineering. Lecture	Analysis of		
		Notes on Multidisciplinary	Plasma Nitrided		
		Industrial Engineering.	XM-19 Stainless		
		Springer, Singapore	Steel. In:		
			Shunmugam M.,		
			Kanthababu M.		
3.	Vivudh Gupta,	Advance materials and	A critical		2020
	Balbir Singh,	manufacturing	assessment of		
	R. K. Mishra		electric discharge		
			machining		
			process: variants		
			and hybrid		
			approaches		

Patent/Copyright Filed/Case Study Filed or Accepted [Please Specify, with documentary proof]

1. Name of Inventor (Main Contact Person): Pawandeep Singh and R. K. Mishra Title of the Innovation: "Reinforced Aluminium Matrix Composites and Method of Preparation Thereof".

Application No: 202011052574.

### **Paper Publications (Journals / Conferences)**

#### **Journals**

- 1. R.K. Misra, K. Sandeep, Ashok Misra, *Analysis of Anisotropic Plate Using Multiquadric Radial Basis Function*, International Journal of Engineering Analysis with boundary Elements, 31(1), (2007), 28-34.
- 2. Sandeep Kumar, R. K. Misra, *Analysis of Banana Fibers Reinforced Low-density polyethylene/poly (ε-caprolactone) Composites*, International Journal of soft materials, 4, (2007), 1-13.
- 3. R. K. Misra, Ashok, Misra, K. Sandeep, *Analysis of Cross-ply Laminate using Multiquadric Radial Basis Function*, International Journal of Computational Methods in Engineering Science and Mechanics, 8, (2007),1–10.
- 4. Raghvendra Kumar Misra, Sandeep Kumar, Kumar Sandeep and Ashok Misra, *Dynamic Analysis of Banana Fibers Reinforced high-density Polyethylene/ Poly (C-caprolactone) Composites*, Journal of Mechanics of Materials and Structures, 3 (2008), 107-126.
- 5. R. K. Misra, Sandeep Kumar, K. Sandeep, Ashok Misra, *Some Experimental and Theoretical Investigations on fire retardant coir/epoxy micro-composites*, Journal of Thermoplastic Composite Materials, 21 (2008), 71-101.
- 6. R. K. Misra, Chandan Datta, *Mechanical behavior of unidirectional glass fibers reinforced Resol/VAC-EHA Composites at different volume fraction of fibers*. International Journal of soft materials, 6 (2008), 99–118.
- 7. R. K. Misra, Chandan Datta, *Mechanical Behavior of Polyethylene Fibers Reinforced Resol/VAC-EHA*, Journal of Macromolecular Science, Part A: Pure and Applied Chemistry, 46 (2009)1–13.
- 8. R. K. Misra, Sandeep Kumar, Static and dynamic mechanical analysis of chemically modified randomly distributed short banana fiber reinforced high-density Polyethylene/ Poly (*C-caprolactone*) Composites, Journal of Polymer Engineering. 29 (2009), 213-247.
- 9. R.K. Misra and Chandan Datta, *Analysis of jute fiber reinforced Epoxy/VAC-EHA/HMMM IPN composite plate*, Composites: Mechanics, Computations, Applications, An International Journal, 1(4), (2010), 353-360.
- 10. R.K. Misra, Sudhir Kumar Saw, Chandan Datta, *The influence of fiber treatment on the mechanical behavior of jute-coir reinforced epoxy resin hybrid composite plate*, Mechanics of Advanced Materials and Structures, 18(6), (2011), 431-445.
- 11. R.K. Misra, P. C. Mishra, Sandeep Kumar, *Analysis of short banana fiber reinforced HDPE/Poly (E-caprolactone) skew composite plate using multi quadric radial basis function method*, Composites: Mechanics, Computations, Applications, An International Journal, 2(3), (2011), 195-221.
- 12. R. K. Mishra and N.V. Rachchh, *Mechanical performance of coir fiber reinforced polyester composite*, International Journal of Advanced Materials Science, 1(1), (2011), 19–28.
- 13. N.V. Rachchh, R.K. Misra, P.K. Das, *Uses of Red Mud in Built Environment An Indian Perspective*, International Journal of Business and Engineering Research, (4), (2011), 1-6.
- 14. R.K. Misra and N.V. Rachchh, Comparative Analysis of Mechanical Behavior of Chemically Treated & Untreated Coir Fibers at Different Percentage of Coir Fibers, International Journal of Applied Engineering Research, 6(4), (2011), 433-443.
- 15. R.K. Misra, Mechanical behavior of short banana fiber reinforced epoxy composites using meshless multiquadric radial basis function method, International Journal of Mathematical Modeling, Simulation and Applications, 5(2), (2012), 150-172.
- 16. N. V. Rachchh & R. K. Misra, Failure Analysis of Rollers of Bloom Withdrawal Stand in Continuous Casting Machines at Visakhapatnam Steel Plant, International Journal of Management, IT and Engineering, 2(8), (2012), 82-102.
- 17. R. K. Misra, *Static and Dynamic analysis of rectangular isotropic plate using multiquadric radial basis function*, International Journal of Management, IT and Engineering, 2(8), (2012), 166-178.

- 18. R.K. Mishra, *Free vibration analysis of isotropic plate using multiquadric radial basis function*, International Journal of Science, Environment and Technology, 1(2), (2012), 99 107.
- 19. R.K. Mishra, *Vibration analysis of glass fiber reinforced composites*, International Journal of Computational Engineering Research, 2(3), (2012), 776-789.
- 20. R. K. Mishra, *Determine the Fatigue behavior of engine damper caps screw bolt*, International Journal of Computational Engineering Research, 2 (4), (2012), 981-990.
- 21. Ajay Kumar Maurya, Yogesh K. Chauhan, R. K. Mishra, Twinkle, *Fuel Cell Integrated with Five Level VSI for Industrial Pump Applications*, International Journal of Renewable Energy Research 3(2), (2013) 388-394.
- 22. Biren J. Saradava, Nikunj V. Rachchh, R. K. Misra, D. G. Roychowdhary, *Mechanical Characterization of Coir Fiber Reinforced Polymer Composite using Red Mud as Filler*, Journal of Information, Knowledge and Research in Mechanical Engineering.2(2), (2013),472-476.
- 23. Anurag Dixit, Harlal Singh Mali, R.K. Misra, *Unit cell model of woven fabric textile composite for multiscale analysis*, Procedia Engineering 68 (2013) 352 358.
- 24. R. K. Misra, and P. C. Mishra, *Utilization of waste coal dust of steel industry for power generation*, Int. J. Environment and Waste Management, 13(1), (2014) 50-66.
- 25. R. K. Misra and N. V. Rachchh, *Mechanical characterization and analysis of randomly distributed short banana fiber reinforced epoxy composites*, Iranian Journal of Materials Science & Engineering, 11(1), March 2014, 1-16.
- 26. Mayank Nirbhay, R. K. Misra, Anurag Dixit, *Finite element analysis of jute-coir fiber reinforced hybrid composite multi-panel plates*, Mechanics of Composite Materials.,51(4), September, (2015), 505-520.
- 27. R.K.Misra, Anurag Dixit, Harlal Singh Mali, Finite Element (FE) Shear Modeling of Woven Fabric Textile Composite, Procedia Materials Science 6, (2014), 1344-1350.
- 28. Anurag Dixit, R.K.Misra, Harlal Singh Mali, *Finite element compression modeling of 2x2 twill woven fabric textile composite*, Procedia Materials Science 6, (2014), 1143-1149.
- 29. N.V. Rachchha, P.S. Ujeniya and R. K. Misra, *Mechanical characterization of rattan fiber polyester composite*, Procedia Materials Science 6, (2014) ,1396-1404.
- 30. Mayank Nirbhay, Anurag Dixit, R.K. Misra, Harlal Singh Mali, *Tensile test simulation of CFRP test specimen using finite elements*, Procedia Materials Science, 5, (2014), 267-273.
- 31. Anurag Dixit, Harlal Singh Mali, R. K. Mishra, *A Micromechanical Unit Cell Model of 2×2 Twill Woven Fabric Textile Composite for Multi Scale Analysis*, Journal of the Institution of Engineers (India): Series E, Springer, 95(1), April 2014, 1-9.
- 32. R. K. Misra and Sushil Kumar, *Multiquadric Radial Basis Function Method for Boundary Value and Free Vibration Problems*, Indian Journal of Industrial and Applied Mathematics, Taylor and Francis 4(2), 2013, 138-141.
- 33. Neeraj Kumar Sharma, R. K. Misra and Satpal Sharma, *Thermal expansion behavior of Ni-Al<sub>2</sub>O<sub>3</sub> composites with particulate and interpenetrating phase structures: An analysis using finite element method,* Computational Materials Science, 90, July 2014, 130–136.
- 34. Shashi Prakash Dwivedi, Satpal Sharma, Raghvendra Kumar Mishra, *A356 Aluminum Alloy and applications- A Review*, Advance Materials Manufacturing & Characterization, 4(2), 2014, 81-86. Doi: <a href="http://dx.doi.org/10.11127/ijammc.2014.08.01">http://dx.doi.org/10.11127/ijammc.2014.08.01</a>
- 35. Anurag Dixit, R. K. Misra, Harlal Singh Mali, Compression modeling of plain weave textile fabric using finite elements (Druckmodellierung von flächigen Textilgewebestrukturen mit Finiten Elementen), Mat. Wiss. U. Werkstofftech. 45(7), 2014, 1-11.
- 36. R.K. Misra and Sushil Kumar, *Analysis of fourth order partial differential equations using multiquadric radial basis function*, Mathematical Forum, 26, 2014.
- 37. Anurag Dixit, Harlal Singh Mali, R.K. Misra, *Investigation of the thermo mechanical behavior of a 2* × 2 *twill weave fabric advanced textile composite*, Mechanics of Composite Materials, 51(2), 2015, 253-264.
- 38. Shashi Prakash Dwivedi, Satpal Sharma, Raghvendra Kumar Mishra, *Electromagnetic Stir Casting and its Process Parameters for the Fabrication and Refined the Grain Structure of Metal Matrix Composites— A Review*, International Journal of Advance Research and Innovation, 2(3),2014, 639-649.

- 39. Mayank Nirbhay, Sagar Juneja, Anurag Dixit, R.K. Misra, Satpal Sharma, *Finite Element Analysis of All Composite CNG Cylinders*, Procedia Materials Science, (10), 2015, 507 512.
- 40. Srishti Mishra, Ajay Kumar, R K Mishra, Shristi Sharma, Sashwat Singh, *Structural health monitoring and Propagation of lamb waves to identification of crack*, Materials Today: :Proceedings, 2(4-5),2015, 1833-1840.
- 41. Nitin Jauhari, Raghvendra Mishra, Harischchandra Thakur, *Natural Fiber Reinforced Composite Laminates- A Review*, Materials Today: Proceedings, 2(4-5), 2015, 2868-2877.
- 42. Ajay kumar, Pradeep Kumar, Sristhi Mishra, R K Mishra, Tushar Srivastav, Sachin Mishra, Rajeev Kumar, *Experimental process of tungsten inert gas welding of a stainless-steel plate*, Materials Today: Proceedings, 2(4-5), 2015,3260-3267.
- 43. Akash Chaudhary Raghuvanshi, Tushar Srivastav, Raghvendra Kumar Mishra, *Design and Development of Foldable Kart Chassis*, Materials Today: Proceedings, 2(4-5), 2015,1707-1713.
- 44. Arjit Kumar Saxena, Raghvendra Kumar Misra, Anurag Dixit, *Numerical Analysis of Hip Joint Implant*, Materials Today: Proceedings, 2(4-5), 2015,1649-1656.
- 45. Nikunj V Rachchh, R.K. Misra, D.G. Roychowdhary, B.J. Saradava, *Effect of Red Mud Filler on Mechanical and Buckling Characteristics of Coir Fiber Reinforced Polymer Composites*, Iranian Polymer Journal, 24(3), 2015,253-265.
- 46. Satpal Sharma, R.K. Pandey, R.K. Mishra, Anurag Dixit, *Wear resistance study of thermal sprayed coating*, Powder Metallurgy and Metal Ceramics, Springer 54(11),2016,672-678.
- 47. R.K. Misra, Analysis of the jute/glass fiber reinforced hybrid composites using combined radial basis function method, Polymer Composites, Wiley, 38(9),2017, 1890–1901
- 48. A. Dixit, R. K. Misra, H. S. Mali, Finite element analysis of quasi-static indentation of woven fabric textile composites using different nose shape indenters, Mat. -wiss. U. Werkstofftech, 46(9), 2015, 1-15.
- 49. R. K. Misra and Aditi Chauhan, *Six Sigma Approach for Reducing Rejection of In-house Cast Component*, International Journal of Six Sigma and Competitive Advantage, Inderscience, 9(2/3/4), 2015,208-221.
- 50. Nitin Jauhari, Raghvendra Mishra and Harischandra Thakur, *Stress analysis in FRP composites*, Perspectives in Science, 8, 2016, 50–52.
- 51. Nitin Jauhari, Raghvendra Mishra and Harischandra Thakur, *Failure analysis of fiber-reinforced composite laminates*, Materials Today: Proceedings, 4, 2017, 2851–2860.
- 52. Neeraj Kumar Sharma, Raghvendra Kumar Mishra and Satpal Sharma, 3D micromechanical analysis of thermo-mechanical behavior of Al2O3/Al metal matrix composites, Computational Materials Science, 115, 2016, 192-201.
- 53. R.K.Misra, Sandeep Kumar, Vineeta Nigam, *Analysis of the high performance PTSA doped Polyaniline Speek Nano Composite*, Mechanics of Composite Materials, 52(1), 2016, 113-126.
- 54. Srishti Mishra, Ajay Kumar, Shashank Mishra, R K Mishra, Asit Sen, Rajeev Kumar, *Optimization of Process Parameter of TIG Welding of Stainless-Steel Plate Using Taguchi method*, Materials Today: Proceedings (accepted)
- 55. Shashi Prakash Dwivedi, Satpal Sharma, Raghvendra Kumar Mishra, Synthesis and Mechanical Behavior of Green Metal Matrix Composites using Waste Eggshells Reinforcement Material, Green Processing and Synthesis (GREENPS) 5(3), 2016, 275–282.
- 56. Apoorv Rathi, Raghvendra Mishra, Anurag Dixit, Nitin Kumar Sharma, *Studies on shear behavior of cortical bone using Iosipescu test and FEM*, Materials Today: Proceedings, 2 (2016), 1616–1620.
- 57. Akash chaudhary Raghuvanshi, Akhilendra singh, Mohit Kumar, Abhishek Pandey, Raghvendra Kumar Misra, *Effects on four-layer composite material by changing their orders*, Materials Today: Proceedings, 4 (2017) 7189–7193
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- 68. Shashi Prakash Dwivedi, Satpal Sharma, Raghvendra Kumar Mishra, *Characterization of waste eggshells and CaCO3reinforced AA2014 green metal matrix composites: A green approach in the synthesis of composites*, International Journal of Precision Engineering and Manufacturing, 17(10), 2016, pp 1383–1393.
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- 86. Suraj Kumar Singh, Jimmy Karloopia, Sabah Khan, Raghvendra Kumar Mishra, *Processing and characterization of hemp nanofiber thermoset polymer composite*, *Materials Today: Proceedings* 46(2), 2021, 1341-1348.
- 87. Pawandeep Singh, R.K. Mishra Balbir Singh, *Microstructural and mechanical characterization of lamb bone ash and boron carbide reinforced ZA-27 hybrid metal matrix composites*, Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications (accepted). <a href="https://doi.org/10.1177/14644207211007506">https://doi.org/10.1177/14644207211007506</a>
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- 90. Pawandeep Singh, R.K. Mishra Balbir Singh, *Mechanical characterization of eggshell ash and boron carbide reinforced ZA-27 hybrid metal matrix composites*, Journal of Mechanical Engineering Science (accepted).
- 91. Pawandeep Singh, R.K. Mishra Balbir Singh, *Tribological behavior of eggshell ash and boron carbide reinforced ZA-27 hybrid metal matrix composites under dry sliding conditions*, Surface Topography: Metrology and Properties (accepted).
- 92. Pawandeep Singh, R.K. Mishra Balbir Singh, *Tribological behaviour of lamb bone ash and boron carbide reinforced ZA-27 hybrid metal matrix composites under dry sliding conditions*, Surface Topography: Metrology and Properties (accepted).

#### **International Conferences**

- 1. Sandeep Kumar and R. K. Misra, *Meshless Method for Deflection Analysis of Polymeric Composites*, "2<sup>nd</sup> International Congress on Computational Mechanics and Simulation", Indian Institute of Technology Guwahati, December 8-10, 2006.
- 2. R. K. Misra and N. V. Rachchh, *Comparative Analysis of mechanical behavior of chemically treated & untreated coir fibers at different percentage of coir fibers*, "Emerging Trends In Mechanical Engineering (ICETME 2011)", February 24-26, 2011, organized by Department of Mechanical Engineering, Thapar University, Patiala (Punjab) 147004, India.

- 3. Prashant Gill, R.K Mishra and S. S. Ragit, *Performance and exhaust emission analysis of Rubber seed methyl ester and its blends with diesel in a direct injection compression ignition engine*, "International Conference on Advances in Mechanical Engineering (ICAME-2012)", March 12-14, 2012, Amrutvahini College of Engineering, Sangamner 422 608, Maharashtra, India.
- 4. R.K. Misra and Sushil Kumar, *Multiquadric radial basis function method for boundary value and free vibration problems*, "11th Biennial Conference of the Indian Society of Industrial and Applied Mathematics, Emerging Mathematical Methods, Models and Algorithms for Science and Technology, on 15-16 Dec. 2012, The National Mathematics Year 2012 to Commemorate the 125th Birth Year of Srinivasan Ramanujan", organized by Gautam Buddha University, Gautam Budh Nagar, National Capital Region, India.
- 5. Anurag Dixit, Harlal Singh Mali, R.K. Misra, *Unit cell model of woven fabric textile composite for multiscale analysis*, "Malaysian International Tribology Conference (MITC2013)", November 18-20,2013, organized by Malaysian Tribology Society, Department of Mechanical Engineering, Universiti Malaya, 50603 Kuala Lumpur, Malaysia.
- 6. Shashi Prakash Dwivedi, Satpal Sharma, Raghvendra Kumar Mishra, *Investigation of defects in metal matrix composites beyond the range of process parameters in electromagnetic stir casting method*, "2<sup>nd</sup> International Conference on Technological and Management Advances in the New Age Economy: An Industry Perspective", held March, 01, 2014, pp.1280-1288, ISBN: 978-93-5156-340-2, organized by Mangalmay Institute of Engineering & Technology, Mangalmay Institute of Management & Technology, Greater Noida, Delhi, NCR(India).
- 7. Hridesh Kumar Nishad, Shashi Prakash Dwivedi, Raghvendra Mishra, *Simulation of mechanical stir casting for the fabrication of metal matrix composite*, "2<sup>nd</sup> International Conference on Technological and Management Advances in the New Age Economy: An Industry Perspective", held March, 01, 2014,pp.1289-1296, ISBN: 978-93-5156-340-2, organized by Mangalmay Institute of Engineering & Technology, Mangalmay Institute of Management & Technology, Greater Noida, Delhi, NCR(India).
- 8. R.K.Misra, Anurag Dixit , Harlal Singh Mali, *Finite Element (FE) Shear Modeling of Woven Fabric Textile Composite*, "3<sup>rd</sup> International Conference on Materials Processing and Characterization (ICMPC 2014)", held during March 08-09, 2014, Organized by Department of Mechanical Engineering, at GRIET Hyderabad, India.
- 9. Ajay Kumar, Rohit Saini, R.K. Mishra, Product Lifecycle Management, "International Conference on "Science and Technology (ICST-2K14)" held during February 21-22,2014, Organized by S. B. Patil College of Engineering, Gate No: 58, Village Vangali, Pune-Sholapur highway, Indapur, Pune, Maharashtra, India.
- 10. Nitin Jauharia, Raghvendra Mishra, Harischandra Thakur, Stress analysis in FRP composites, "International conference on recent trends in engineering and material sciences (Icems-2016) March 17-19, 2016, Jaipur National University, Jaipur, India.
- 11. Bhanumati Panda, Renu Kumari, Sushil Kumar, and R. K. Misra, Numerical dispersion in mildly curved channel using multiquadric radial basis function (MQRBF) method, published by the American Institute of Physics "International Conference on Recent Advances in Mathematical Sciences and its Applications (December 08-10, 2016) Organized by Department of Mathematics Jaypee Institute of Information Technology A/10, Sector-62, Noida, U.P., India-201307.
- 12. Narendra Kumar Verma, Sunil Chanderia, Rishabh Kumar Singh, Raghvendra Kumar Mishra, Finite Element Analysis of a composite material sheet that behaves as a cantilever, International Conference on Innovative Research in "Mechanical, Material, Industrial, Automotive, Aeronautical and Nano- Technology" (MIANT-2016) Organized by Krishi Sanskriti on 18<sup>th</sup>December, 2016 in Jawaharlal Nehru University, New Delhi-110067. Published by the American Institute of Physics.
- 13. R.K.Mishra, Gaurav, Analysis of the Glass Fiber/Chicken Feathers Reinforced Hybrid Composite, "International Conference on Composite Materials and Structures- ICCMS 2017, Organized by IIT Hyderabad, 27-29<sup>th</sup> December 2017.
- 14. Vivudh Gupta, Balbir Singh, R.K. Mishra, Study of Latest Trends in Hybrid Electric Discharge Machining Process- A Review, "4<sup>th</sup> International Conference on Industrial Engineering ICIE 2017, Organized by Department of Mechanical Engineering, S. V. National Institute of Technology, Surat in Association with Indian Institution of Industrial Engineering (IIIE), NHQ-Mumbai, December 21–23, 2017.

- 15. Shivanshu Dixit, Ragvendra Kumar Mishra, Impact Damage and Ballistic Response on Metal to Metal & Carbon/Epoxy Composites Laminates with Stacking [90/-45/0/45] Ns / [0/90] Ns Cross Stacking Sequence, 1st International and 18th ISME Conference (ISME 18), Organized by NIT Warangal, Warangal, February 23rd 25th, 2017.
- 16. Apoorv Rathi, Joy Banerjee, Anurag Dixit, R. K. Misra, H. S. Mali, Evaluation of Vibration of a Crankshaft and a Driveshaft Using FEM, Proceedings of the International Conference on Modern Research in Aerospace Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore, Organized by Amity, Noida, pp 241-254, Print ISBN 978-981-10-5848-6 and Online ISBN 978-981-10-5849-3, DOI https://doi.org/10.1007/978-981-10-5849-3\_25. First Online: 10 February 2016.
- 17. Suraj Kumar Singh, Sabah Khan, R. K. Mishra, Arvind Kumar, Ajay Kumar and Dharamvir Mangal, Computational combustion analysis of biodiesel blends, 3<sup>rd</sup> International Conference on nanotechnology for instrumentation & measurement workshop, organized by electrical engineering department, school of engineering & IEEE-GBU SB, Gautam Buddha University, greater Noida, Uttar Pradesh-201312 on 16<sup>th</sup> 17<sup>th</sup> November 2017.
- 18. Vivudh Gupta, Balbir Singh, R.K. Mishra, Study of tool materials in electric discharge machining process: A review, TEQIP-III sponsored international conference on mechanical engineering and allied sciences, organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 14<sup>th</sup>-15<sup>th</sup> September, 2018.
- 19. Pawandeep Singh, R. K. Mishra, Balbir Singh, Structural health monitoring of different welded joints using various NDT techniques: A review, TEQIP-III sponsored international conference on mechanical engineering and allied sciences, organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 14<sup>th</sup>-15<sup>th</sup> September, 2018.
- 20. Pranav Kumar, R. K. Mishra, Study on aluminum alloy 6xxx series & effect of reinforcement ZrO<sub>2</sub> on aluminum: A review, TEQIP-III sponsored international conference on mechanical engineering and allied sciences, organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 14<sup>th</sup>-15<sup>th</sup> September, 2018.
- 21. Pawandeep Singh, Vivudh Gupta, R.K. Mishra and Balbir Singh, "Effect of micro filler reinforcement on mechanical and wear characteristics of metal matrix composite: A Review", International Conference on advances in mechanical engineering and nanotechnology, organized by Department of Mechanical Engineering, Manipal University Jaipur, India on March 08-09, 2019. (Paper Id: MSE2205)
- 22. Vivudh Gupta, Pawandeep Singh, Balbir Singh and R. K. Mishra, "Wear behavior of AA7075 based Composites: A state of the art survey", International Conference on advances in mechanical engineering and nanotechnology, organized by Department of Mechanical Engineering, Manipal University Jaipur, India on March 08-09, 2019. (Paper Id- MSE2209). 1st International Conference on Advances in Mechanical Engineering and Nanotechnology (ICAMEN 2019) AIP Conf. Proc. 2148, 030013-1–030013-8; https://doi.org/10.1063/1.5123935
- 23. R. K. Mishra, "Study the Effect of Pre-corrosion on Mechanical Properties and Fatigue Life of Aluminium Alloy 8011", 2<sup>nd</sup>International Conference on Computational & Experimental Methods in Mechanical Engineering (ICCEMME-2019) was held at Department of Mechanical Engineering, GLBITM Greater Noida on 3<sup>rd</sup> 5<sup>th</sup> May, 2019. (Paper Id-17)
- 24. R. K. Mishra, Mechanical properties of epoxy hybrid composites reinforced with agave fiber and zinc powder, "ICAAMM-2020", organized by Department of Aeronautical & Mechanical engineering, held on 24th & 25th July 2020 at MLR Institute of Technology, Hyderabad.

# Papers Published in National Seminar

1. R. K. Mishra, *Application of Multiquadric radial basis function to structure analysis problems*, National Seminar on Achieving Technological Excellence in the New Millennium, Organized by Department of Mechanical engineering, Birla Institute of Technology, Mesra, Ranchi, January 23-24, 2007.

#### Papers Published in National Conference

1. Prashant Gill, R.K.Mishra,S.S Bhati, K.Kundu, An experimental investigation on the performance and exhaust emission of a CI engine using rubber seed methyl ester and its blends as an alternative fuel, National Conference on Excellence in new technology, Organized by Department of Mechanical Engineering, IIMT

- College of Engineering, Knowledge Park-III,Plot No.-A-20, Greater Noida-201308 (U.P),India, 31<sup>st</sup> August 2013.
- 2. Prashant Gill, R.K.Mishra,S.S Bhati, S.S. Ragit, *Biodiesel production from used frying oil and its properties as an alternative fuel*, National Conference on Excellence in new technology, Organized by Department of Mechanical Engineering, IIMT College of Engineering, Knowledge Park-III,Plot No.-A-20, Greater Noida-201308 (U.P),India, 31<sup>st</sup> August 2013.
- 3. Nitin Johari, Raghvendra Kumar Mishra, Harischchandra Thakur, *Fracture mechanics basics & analysis*, National Conference on Emerging Trends in Engineering & Sciences (ETES-2013) FET, Organized by Gurukul Kangari (GKV), Haridwar (Uttarakhand) 9-10 November 2013.
- 4. Prashant Gill, R.K.Mishra,S.K.Soni, S.S. Ragit,K.Kundu, *Transesterification of Mahua Biodiesel: different production methods*, National Conference on Advancements and Futuristic Trends in Mechanical Engineering (AFTME-17-18 Oct 2014), Department of Mechanical Engineering, PEC University of Technology (Formerly Punjab Engineering College), Chandigarh.
- 5. Shalok Bharti, RK Mishra, A Review on Ultrasonic Testing Technique for the Detection of Cracks in Various Welded Structures, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>–24<sup>th</sup> March-2018.
- 6. Pranav Kumar, R.K Mishra, The Applications & The Properties of the Metal Matrix Composites (MMC) –A Review Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>– 24<sup>th</sup> March- 2018.
- 7. Vivudh Gupta, Balbir Singh, R.K. Mishra, Modeling and Optimization of Hybrid Electric Discharge Machining Processes using Response Surface Methodology, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup> 24<sup>th</sup> March- 2018.
- 8. Pawandeep Singh, R.K. Mishra, Balbir Singh, To Study the Effects of Welding Parameters On Sound Joint in MIG Welding: A Review, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup> 24<sup>th</sup> March- 2018.
- 9. Nitin Johri, Raghvendra Mishra, Harishchandra Thakur, Hardness analysis of a Jute-CFF reinforced polymeric hybrid composite, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>–24<sup>th</sup> March-2018.
- 10. Jasbeer Singh, Raghvendra Kumar Mishra, A review of recent studies in Aluminum matrix composites, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup> 24<sup>th</sup> March-2018.
- 11. R.K. Mishra, Kiran Ahirwar, SCM Functioning of Retailing and The Behaviour of Consumer Towards the Private Label, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>– 24<sup>th</sup> March- 2018.
- 12. Shalok Bharti, Dr. Balbir Singh, Dr.R.K. Mishra, A Review on Nano Technology and Nano Fabrication, Proceedings of the 2nd National Conference on Innovative Trends in Mechanical Engineering NCITME-2018 Sponsored by TEQIP-III and Organized by School of Mechanical Engineering, Shri Mata Vaishno Devi University, Katra, 23<sup>rd</sup>– 24<sup>th</sup> March- 2018.
- 13. R. K. Mishra, Prediction of the performance of a diesel engine using jatropha based biodiesel blended with diesel at different ratios, National conference on renewable energy and sustainable environment: challenges and remedies, School of Energy Management, Shri Mata Vaishno Devi University, Katra, 24-25 April- 2018.

#### **Area of Interests and Research:**

Specialization of the research areas are following:

a. Composite Plates and Laminates

- b. Natural fibers and glass fibers reinforced compositesc. Meshless methods (Multiquadric Radial Basis Function)
- d. Hybrid radial basis function
- e. Bio-diesel

# Theses and Projects Supervising/supervised

# PhD Thesis

Sr.	Name of the		Year	Title of Thesis	Supervisor/	
No.	student	Registra tion date	Completed		Co- Supervisor	Pro of
1.	Anurag Dixit Registration Number: Ph.D./ENGG/119	2011	15-07-2015 (awarded)	Experimental and Numerical Investigation on the Mechanical Behavior of Woven Fabric Carbon/Epoxy Composites	Supervisor	Yes
2.	Nikunj. V. Raccha Registration Number: ME1101	16.02.20 11	07-08-2017 (awarded)	Experimental and Numerical Investigations of Red Mud Filled Polyester Composites	Co- supervisor	Yes
3.	Shashi Prakash Dwivedi <b>Registration</b> <b>Number:</b> 13/PhD/Engg/022	21.03.20 15	01-09-2017 (awarded)	Synthesis and Characterization of Hybrid Metal Matrix Composites Reinforced with Eggshells and SIC for Enhanced Tribo-Mechanical Properties	Co- supervisor	Yes
4.	Neeraj Sharma Registration Number: 13/PhD/ENGG. /018	21.03.20	06-11-2017 (awarded)	Synthesis and characterization of Boron Carbide Reinforced MMC by FEA	Co- supervisor	Yes
5.	Bhanumati Panda <b>Registration</b> <b>Number:</b> 2011/VSAS/MAW 05	26.07.20 13	22-02-2018 (awarded)	Dispersion in Curved Channel Flow using Multiquadric Radial Basis Function Method	Co- supervisor	Yes
6.	Nitin Johri Registration Number: 11/Ph. D/Engg. /121	20.03.20	15-03-2019 (awarded)	Synthesis and Characterization of Jute— Chicken Fiber Reinforced Polymeric Hybrid Composites	Co- supervisor	Yes
7.	Suraj Kumar Singh	11/11/20 16		Processing and characterization of Agaves Nano Fibers Reinforced Thermoset Polymer composites	Co- supervisor	Yes
8.	Pawandeep Singh 17DME002	10/08/20 18	2021, Submitted	Mechanical and Tribological Characterization of Eggshell Ash/B4C and Bone Ash/B4C Particulates Reinforced ZA- 27 Composites	Supervisor	Yes

9	٠.	Vivudh Gupta	10/08/20	2021,	Machining of advance	Co-	Yes	
		17DME001	18	Submitted	material using EDM	supervisor		

# Master's Theses

Sr.	Name of the	Date and	Title of Thesis
Sr.	student	Year	
1.	V.Vital.Rao (IE/Mech/24/2005)	5/5/2006	Failure analysis of continuous casting bloom withdrawal rollers (A case study of the Visakhapatnam steel plant)
2.	B. Balamurugan (IE/Mech/1022/06)	28/11/2007	Utilization of waste coal dust of steel industry for power generation
3.	K.C. Dudeja (IE/ME/1021/07)	8/5/2009	Determine the fatigue strength of engine damper caps screw bolt and observe the stress concentration due to various notches on a round bar
4.	J.C. Tak (IE/ME/1002/08)	15/5/ 2009	Predict the mechanical and thermal behavior of HE Ammunition shell at different loading conditions using finite element method
5.	Sunil Kumar (12/PIE/004)	22/5/2014	Application of Six Sigma Methodology In Private Engineering Colleges In NCR (India)
6.	Upendra Pratap Singh (12/PIE/003)	22/5/2014	Improvement of the quality using $\overline{X}$ , R and U control charts in automobile industry
7.	Aanchal Yadav (10/IME/001)	21/5/2015	Computational Investigation of Effect of Vortex Generator on Hatchback Type Car and Varying Nose Shape on Bullet Trains
8.	Himant Sirohi (10/IME/022)	22/5/2015	Optimization of Wire Electric Discharge Machining Process using Response Surface Methodology on D-3 HCHCr Die Steel
9.	Gagneet Khurana (10/IME/020)	23/5/2015	Contact Stress Analysis, Life Determination and Optimum Design of Ball Bearings
10.	Vivek Kumar Gupta (10/IME/059)	23/5/2015	Experimental Investigation of Mechanical Properties of Glass- Bagasse Reinforced Epoxy Composite
11.	Pooja Rawal (10/IME/067)	21/5/2015	Analysis of Aerodynamics structure using Computational Fluid Dynamics
12.	Adarsh Kumar (10/IME/005)	22/5/2015	Failure Modes and Effect Analysis of Four-Wheeler Fuel Level Sensor Assembly Using Extended Vikor Methodology
13.	Kiran Ahirwar (10/IME/026)	20/5/2015	SCM Functioning of Retailing and the Behaviour of Consumer Towards the Private Label
14.	Arjit Kumar Saxena (10/IME/063)	23/5/2015	Experimental Studies of Glass Fibre Reinforced and Human Hair- Glass Fibre Reinforced Epoxy Resin Hybrid Composite
15.	Prashant Tripathi (10/IME/040)	23/5/2015	Development and Characterization of Low-Cost Jute Glass Fiber Based Hybrid Epoxy Composites
16.	Aditi Chauhan (13/PIE/001)	20/5/2015	Quality Improvement of a Manufacturing Process Using Six Sigma
17.	Sumit Bhati (10/IME/055)	19/5/2015	Vibration Analysis of Rolling Elements Bearing Defects
18.	Pradeep Kumar (10/IME/037)	21/5/2015	A Bio-Inspired Precision Air-Drop system
19.	Shivam Gupta (10/IME/050)	20/5/2015	Implementation of Weibull Distribution in Defect Data Analysis
20.	Manish Tomar (10/IME/029)	22/5/2015	Validation and Effectiveness of a Four-Wheel Steering in Comparison with Two Wheel Steering of Car using MSC's Adams Software

analysis of particulate filled iffuser and its application as of a simplified car model ration of composite from a boo sawdust robial leather with enhanced a fabric and human hair
iffuser and its application as s of a simplified car model ration of composite from a boo sawdust robial leather with enhanced a fabric and human hair
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properties of water-soluble razing joints
of truck-trailer
and dynamic mechanical
le manufacturing system
of hybrid joints of stainless
Circuit simulator
late in Active Phased Array
Jute/Human Hair Fiber
Corrosion and Mechanical 1 304
Issues in Indian Fertilizer  Modelling Approach
ass Fibre Reinforced Epoxy
eathers Reinforced Hybrid
d (SPION) Probes for early
signing of Francis Turbine
r Vehicle Frontal Bumper
Stresses in Rail Steel
Cortical Bone using Small
Fibre Reinforced Polyester

45.	Mayank Agarwal	5/06/2016	Experimental and Comparative Study of Glass Fibre/Sawdust
	(11/IME/060)		Reinforced Epoxy Resin Hybrid Composite
46.	Jasbeer Singh	2018	Development of waste egg shell and rice husk powder reinforced
	16MMA002		aluminum metal-matrix composite for aerospace industry
47.	Pranav Kumar	2019	Experimental Investigation of Rice Husk Ash (RHA) & Zirconium
	17MMA009		Dioxide (ZrO2) Reinforced in Aluminium Alloy 6082 Hybrid Metal
			Matrix Composite

Projects (Prepared / Submitted/Ongoing)

Completed

PI: Dr. Purna Chandra Mishra

Co-PI: Dr. Raghvendra Kumar Misra, Dr. Bharat Chandra Routra, Prof. Ashok Kumar Sahoo

Sr.	Recog nition	Title of Project	Year of funding	Sponsor ing Organiz ation	Amount of Grant (In Lacs)	Co- Investigators (if any)	Institut e
1.	Co-PI	"Development of an Experimental Facility to Investigate Thermal Characteristics and Process Optimization of Spray Impingement Cooling of Composites during Machining". 2010-2013	15 <sup>th</sup> Nov. 2010	DST	Rs. 18,52,000/-	Dr. Raghvendra Kumar Misra, Dr. Bharat Chandra Routra, and Prof. Ashok Kumar Sahoo	Universi

# **Project Submitted**

**1.** FIST- PROJECT (Level-1) ------281 Lakhs

# **Professional Societies and Services**

- 1. Member (Life), International Association of Engineers (IAENG). IAENG membership number is 108493.
- 2. Member, SAE INDIA, The Engineering Society for Advancing Mobility Land Sea Air and Space, Chennai, Membership No. is 7130310565

**Computer Experience** 

	C, C++ and MATLAB	CAD Software package	Pro/e
<b>Programming Language</b>			
<b>Operating Systems</b>	Windows (98, 2000, XP, NT)	FEA Software package	ANSYS

**Administrative Experience** 

Period		Organization	Designation	Responsibilities		
From	To					
28/12/2010	Feb 2017	Gautam Buddha	Faculty In-charge School	Look after maintenance black		
		University.	Stores and Assets,	board, white board, projector, AC		
		-	School of Engineering	etc. work. Maintain supply chalk,		
				marker & attendance. Any		
				maintenance work related to school		
				of Engg.		
07-01-2011	Feb 2017	Gautam Buddha	Members for technical	Opening of Technical bids of		
		University	scrutiny of technical bids	tenders for engineering workshop.		
14-08-2012	2013	Gautam Buddha	Coordinator, PhD	Conduct SRC & RDC in School of		
		University.	Programme	Engineering.		
13-12-2012	Feb 2017	Gautam Buddha	Member central purchase	Taking Part on decision matters		
		University.	committee	regarding purchase.		
29-07-2013	Feb 2017	Gautam Buddha	Member of the anti-	To control ragging in campus		

	University	ragging committee	
2014	·		To remove General Proficiency
2011			marks from the course curriculum
Ian 2017			Prepare Time Table of School of
Jan 2017			Engineering
	Omversity.		Lingineering
Ech 2017	Coutom Duddho		To complete maintenance work in
reb 2017			To complete maintenance work in
F.1.2017	•		School of Engineering
Feb 2017			To maintain the discipline
F.1.2017	•		II
Feb 2017			How to increase the NIRF ranking
	·		of the university
			To prepare and document for
	•		Accreditation
10/10/2018		Chairman of B. Tech / B.	Admission committee will
	Vaishno Devi	Arch. Admission	complete the B.Tech /B.Arch
	University	committee	related process
1st April	Shri Mata	Member of the	Committee is empowered to take
2021	Vaishno Devi	University admission	all decision regarding admission
	University	Committee	process /advertisement in the
			newspaper & other medium for
			UG, PG and PhD programs.
September	Shri Mata	Warden of the	Warden has to look after the
-			welfare of the students, to check
2020		v may acriar 110 sec.	the room and visit the students at
			any time.
			Warden is custodian and in-charge
			of all the hostel properties. Warden
			has to verify the stock periodically.
April 2021	Shri Moto	Mombor of the	
April 2021			
		1 *	
	University		DOME relating to research,
		1 *	consultancy and PhD program.
mul 1	G1 13.5		
Till date			Member of the committee for
			handling matters repair of non-
	University	-	working laboratory equipments
		* *	
Till date	Shri Mata		Implementation of the IPR policy
	Vaishno Devi	Management Standing	of SMVDU
	University	Committee	
Till date	Shri Mata	Member of the	Member of the committee to
	Vaishno Devi	Committee to review e-	review e-mail /net facility in the
	University	mail /net facility in the	campus
		campus	_
Till date	Shri Mata		Purchase the items for school of
Till date	Shri Mata Vaishno Devi	Member, School Purchase Committee	
Till date		Member, School	Purchase the items for school of Mechanical Engineering
	September 2020  April 2021  Till date	Jan 2017 Gautam Buddha University.  Feb 2017 Gautam Buddha University.  Feb 2017 Gautam Buddha University  Feb 2017 Gautam Buddha University  Feb 2017 Gautam Buddha University  Feb Gautam Buddha University  10/10/2018 Shri Mata Vaishno Devi University  1st April Shri Mata Vaishno Devi University  September Shri Mata Vaishno Devi University  September Shri Mata Vaishno Devi University  Till date Shri Mata Vaishno Devi University	Gautam Buddha University   Committee

		Vaishno Devi	Mechanical Engineering	academic and administrative
		University		activity
13.11.2019	Till Date	Shri Mata	The National Innovation	Member of the committee
		Vaishno Devi	and startup policy 2019	
		University	for students and faculty	
			of Higher Education	
			Institutions.	
23.09.2019	Till Date	Shri Mata	Committee for auction of	Member of the committee
		Vaishno Devi	scrap	
		University	material/items/equipment	
28.11.2019	Till Date	Shri Mata	TEQIP-III Expert	As an Expert
		Vaishno Devi	Committee Meeting to	
		University	review available	
			Swayam/MOOC courses	

#### **Additional work**

#### In GBU

- Development of Mechanical workshop.
- Incharge of Dynamics of Machine Lab / Mechanical Vibration
- Involvement in M. Tech counseling held 26<sup>th</sup> June, 2011 in Gautam Buddha University
- Involvement in the counseling of integrated dual degree B. Tech / M. Tech + M.B.A counseling held 5-8<sup>th</sup> July, 2011, in Gautam Buddha University.
- As a Coordinator in Engineering Mechanics Subject in Gautam Buddha University.
- Preparation of machine dynamics lab specifications and experiments.
- Preparation of Applied Thermodynamics lab specifications and experiments.
- As a Observer in GPTU 2012-2016 examinations
- Preparation of Mechanical vibration lab specifications and experiments.
- Helping make virtual round of "Eco Kart-2014" a Success was held in October 11, 2013 in Gautam Buddha University.
- Represented **GBU Team** in SAEINDIA northern section EFFI-CYCLE 2013 virtual round hosted at Jamia Millia Islamia from 5 to 6<sup>th</sup> July 2013.
- Represented **Team Desert Eagle** from GBU in SAEINDIA northern section EFFI-CYCLE 2015 virtual round hosted at KIET Ghaziabad from 4-5 July, 2015.

# **Technical evaluation of bidding process**

- Fluid Mechanics laboratory on 22<sup>nd</sup> June, 2011 in Gautam Buddha University.
- Machine Dynamics laboratory, 2011 in Gautam Buddha University.

#### Academic

- Summer course for back students in BIT Mesra, Ranchi on strength of materials subject.
- Summer course for back/repeat students in Gautam Buddha University, on engineering graphics subject in 2011

### **Course Curriculum Preparation**

- Syllabus Preparation of M. Tech Design in Department of Mechanical Engineering, Gautam Buddha University on 18.01.2014.
- Conducted BOS on 8<sup>th</sup> September 2018 in School of Mechanical Engineering in Shri Mata Vaishno Devi University and Prepared course structure and syllabus of 2018-19 Batches.

#### **Edited Course**

Undergraduate									
Sr. No.	Subject	Year	L-T-P	Credit	Institute				
1.	Kinematics of Machines	2011	2-0-0	2	Gautam Buddha University				
2.	Material Science	2011	2-0-0	2	Gautam Buddha University				
3.	Internal Combustion Engine & Gas turbine	2012	3-1-0	4	Gautam Buddha University				
4.	Dynamics of Machines	2012	3-1-0	4	Gautam Buddha University				
5.	Mechanical Vibrations	2012	3-1-0	4	Gautam Buddha University				

	Postgraduate									
Sr. No.	Subject	Year	L-T-P	Credit	Institute					
1.	Experimental Stress Analysis	2013	3-0-0	3	Gautam Buddha University					
2.	Design of Pressure Vessels and Piping	2014	3-0-0	3	Gautam Buddha University					
3.	Bearings and Rotor-dynamics	2014	3-0-0	3	Gautam Buddha University					
4.	Mechanical Behavior of Materials	2014	3-0-0	3	Gautam Buddha University					
5.	Design of Hydraulic and Pneumatic Systems	2014	3-0-0	3	Gautam Buddha University					
6.	Design of Material Handling Equipments	2014	3-0-0	3	Gautam Buddha University					
7.	Vibration Engineering	2014	3-0-0	3	Gautam Buddha University					
8.	Mechatronics System Design	2014	3-0-0	3	Gautam Buddha University					
9.	Design of Automotive Components	2014	3-0-0	3	Gautam Buddha University					
10.	Engineering Fracture Mechanics	2014	3-0-0	3	Gautam Buddha University					
11.	Theory of Elasticity	2014	3-0-0	3	Gautam Buddha University					
12.	Theory of Plates and Shells	2014	3-0-0	3	Gautam Buddha University					
13.	Analysis and Synthesis of Mechanisms	2014	3-0-0	3	Gautam Buddha University					
14.	Reliability in Engineering Design	2014	3-0-0	3	Gautam Buddha University					
15.	Advanced Mechanics of Solids	2014	3-0-0	3	Gautam Buddha University					
16.	Design of Process Equipments	2014	3-0-0	3	Gautam Buddha University					

#### Reviewer

- Journal of sound and vibration, Elsevier Publication
- Engineering analysis with boundary elements, Elsevier Publication
- Journal of Surface Science and Technology, Indian Society for Surface Science and Technology, Department of Chemistry, Jadavpur University, Kolkata 700 032, W. B., INDIA
- Journal of Engineering and Technology
- International Journal of Energy research
- Composite Science and Technology

#### **Invited Lectures in International Conference, Guest/Invited Lectures**

- 1. Invited lecture on 'Analysis of composite using Meshless multi-quadric radial basis function method' in International Conference & Exhibition on cutting Edge Technological Challenges in Mechanical Engineering Organized by Department of Mechanical Engineering, Noida Institute of Engineering and Technology (NIET) knowledge park-II, institutional Area, Greater Noida-201 306 U.P. (India) on 21<sup>st</sup> & 22<sup>nd</sup> March, 2015.
- 2. Delivered guest lecture on "composite materials: synthesis and applications" 11<sup>th</sup> November, 2009 in DRIEMS (Dhaneswar Rath Institute of Engineering & Management Studies), CUTTACK, ORISSA.
- 3. Invited lecturer on "Analysis of the Natural Fiber Reinforced Composite Plates and Laminates Using Various Meshless Radial Basis Function Methods" in ISTE sponsored one-week short term training program "Modeling and Simulation for Mechanical Engineering System-MSMES-2016" conducted between 06.06.2016 to 10.06.2016 by Department of Mechanical Engineering, in Noida Institute of Engineering and Technology (NIET) knowledge park-II, institutional Area, Greater Noida-201 306 U.P. (India).

- 4. Invited Guest Lecturer on "Innovation in Design Engineering" held on 29 September, 2016 in Mechanical Engineering Department, G.L. Bajaj Institute of Technology & Management, Greater Noida.
- 5. Invited lecture on "Manufacturing of Polymer composite" topic in Faculty Development Program on "Sustainable Design and Manufacturing" which was held on 12th Feb 2018-16th Feb 2018 in School of Mechanical Engineering, Shri Mata Vaishno Devi University.
- 6. Invited lecture on "Two weeks winter School for Engineering Stream as a Resource Person organized by Faculty Development Centre-HRDC SMVD University in March 2019.
- 7. Invited Lecture on "Solve the differential equations using Multi quadric radial basis function method" in Two-week short-term course (17<sup>th</sup>-29<sup>th</sup> Dec., 2018) on "Tools and Techniques for Modelling & Simulation (TTMS-2018)" on 24<sup>th</sup> December, 2018 in the Department of Instrumentation & Control Engineering at Netaji Subhas University of Technology, New Delhi.
- 8. Invited lecture on "**Predict the performance of Diesel Engine using Jatropha as a Biofuel**" topic in Faculty Development Program on Energy & Power Systems which was held on 5<sup>th</sup> to 9<sup>th</sup> August 2019 in School of Energy Management, Shri Mata Vaishno Devi University.
- 9. Invited lecture on "Analysis of the composite structure using meshless methods" in One Week Online Short-Term Course on "Tribology for Sustainable Development" held online 20th-24th July,2020 hosted by Shri Mata Vaishno Devi University, Katra, Jammu and Kashmir.
- 10. Invited lecture on "Analysis of the Glass Fiber/Chicken Feathers Reinforced Hybrid Composite" topic in One Week Online AICTE-ISTE sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase I)" held online during March 18-24, 2021
- 11. Invited lecture on "Plastics recycling: challenges and opportunities" topic in One Week Online AICTE-ISTE sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase II)" held online during April 15-21, 2021
- 12. Invited lecture on "Introduction to nano materials" topic in One Week Online AICTE-ISTE sponsored Induction/Refresher program on "Sustainable Product Design and Manufacturing (Phase III)" held online during May 21-27, 2021.

# Experimental Projects: Name of the lab where experimental project added

#### A. Mechanical Vibration lab

Sr.	Institute	Year	Period	Manuals	Details of the project
No.					
	~ ~	2017	_		
1.	Gautam Buddha	2015	Jan-	Yes	Experiment on Simple Pendulum & Compound Pendulum
	University,		May	(Soft	Aim of the experiment:
	Greater Noida			copy in	Validation of simple pendulum theory.
	(U.P)			PDF)	Determine the value of gravitational acceleration, g.
					Validation of compound pendulum theory by
					determining the value of radius of gyration k, and value
					of gravitational acceleration, g.
2.	Gautam Buddha	2015	Jan-	Yes	Multi degree of freedom
	University,		May	(Soft	Aim: To verify the laws of multi–Degree of Freedom and
	Greater Noida			copy)	find out the equation of motion of given system (two-
					degree freedom system).
3.	Gautam Buddha	2015	Jan-	Yes	Natural Frequency
	University,		May	(soft	Aim: The Natural Frequency of spring mass system
	Greater Noida			copy)	without damping.
					• Determine the spring constant (k).
					• Determine the natural frequency (f).
4.	Gautam Buddha	2015	Jan-	Yes	Experiment on Pendulum Waves
	University,		May	(Soft	Aim of the experiment: Determining the frequency of each
	Greater Noida			copy)	pendulum.

5.	Gautam Buddha	2015	Jan-	Yes	Inclined spring mass system
	University,		May	(Soft	• Aim: To find out the expansion of the springs made of
	Greater Noida			copy)	different materials by varying the load at different angles
6.	Gautam Buddha	2015	Jan-	Yes	Experiment on Torsional Vibration
	University,		May	(Soft	Aim of the experiment: To study the Torsional Vibration
	Greater Noida			copy)	(undamped) of single Rotor Shaft system.
7.	Gautam Buddha	2015	Jan-	Yes	Spring mass system
	University,		May	(Soft	Aim: To study and verify the law of stiffness in case of
	Greater Noida			copy)	parallel and series arrangement of spring mass system.
8.	Gautam Buddha	2015	Jan-	Yes	Spring mass system
	University,		May	(Soft	Aim:
	Greater Noida			copy)	Verification of the simple mass theory
					• Determine the value of gravitational acceleration, g

#### M Tech/PhD thesis Examiner

• 14<sup>th</sup> May, 2012 visited BIT, Mesra, Ranchi as an external examiner for Master of Engineering (Design of Mech.Equipment) project viva voce examination.

# **Contributions (teaching) to Continuing Education Programmes**

- Delivered lecture in National Thermal Corporation Ltd. (NTPC) through BITS, Pilani.
- Spent 6 month as a faculty in Indian Railway Institute of Electrical and Mechanical Engineering, (IRIEME) Jamalpur through BIT, Mesra.

**Courses Taught** 

	es laugnt		1		_
Sr.	Subject	L-T-P	Credit	Level	Number of
No.				(UG/PG)	Times
1.	Manufacturing Process (MP)	3-0-0	3	UG	3
2.	Mechanics of solids/ Strength of materials (SOM-I)	3-1-0	4	UG	6
3.	Machine Design –I (MD-I)	3-1-0	4	UG	4
4.	Machine Design –II(MD-II)	3-1-0	4	UG	2
5.	Automobiles Engg (AE)	3-0-0	3	UG	8
6.	Workshop practice (WP)	3-0-0	3	UG	5
7.	Thermodynamics (TD)	3-1-0	4	UG	4
8.	Finite Element (FEM)	3-1-0	4	UG	1
9.	Fluid mechanics (FM)	3-1-0	4	UG	3
10.	Principal of mechanical Engg. Science (PMES)	3-0-0	3	UG	2
11.	Dynamics of Machines (DOME)	3-1-0	4	UG	4
12.	Mechanical Vibration (MV)	3-1-0	4	UG	2
13.	Material Science (MS)	2-0-0	2	UG	1
14.	Engineering Mechanics (EM)	2-1-0	3	UG	2
15.	Engineering Drawing (ED)/Engg Graphics	0-0-3	2	UG	4
16.	IC Engine & Gas Turbine (ICGT)	3-1-0	4	UG	2
17.	Advance Mechanics of Solids (AMOS)	3-1-0	4	PG	4
18.	Experimental Stress Analysis (ESA)	3-1-0	4	PG	4
19.	Composite Material (CM)	3-1-0	4	PG	2
20.	Foundry Technology	3-0-0	3	PG	1

#### Awards & achievements

- HAL (Koraput division) selected as a design engineer
- Associate Professor, Hindustan University, Chennai
- Associate Professor, Mody University, Sikar
- Awarded DAAD Scholarship

# References

Sr.	Designation	Name	Institute	Departmental Address	Phone No &	E-mail
No					Fax	
1.	Professor	Dr.	IIT (BHU)	Department of Mechanical	Mobile:	sandeepkumar333
		Sandeep	Varanasi	Engineering, Institute of	9616464864	@yahoo.com
		Kumar		Technology, Banaras Hindu	/9452761925	
				University, Varanasi, 221005		
2.	Professor	Dr.	BIT Mesra	Department of Mechanical	Mobile:	arbindkumar@bit
		Arvind	Ranchi	Engg, Birla Institute of	9431382609	mesra.ac.in
		Kumar		Technology, Mesra-835215,	Fax: 0651-	
				Ranchi, Jharkhand, India	2275401	
					/2275868	
3.	Professor	Dr.	BIT Mesra	Department of Mechanical	Mobile:	dr_ashok_misra@
	Emeritus	Ashok	Ranchi	Engg, Birla Institute of	09973142400	reddiffmail.com
		Misra,		Technology, Mesra-835215,	(M), Fax:	
				Ranchi, Jharkhand, India	0651-2275401	
					/ 2275868	