

# Curriculum Vitae

**Name & Designation:** Bhanu Kumar Mishra, Professor

**Date & Place of Birth:** July 28, 1962, Darbhanga, Bihar

**Nationality:** Indian

**Present post:** Professor, Department of Mechanical and Industrial Engineering,

**Institution:** Indian Institute of Technology, Roorkee

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## Academic Qualifications:

Degree	Specialization	Year	Division	Grade	Institution	Distinction/ Scholarship
B. Tech.	Mechanical Engineering	1982	Ist	8.67	Banaras Hindu University	Honors
M. Tech.	Mechanical Engineering	1985	-	8.74	I. I. T. Kanpur	-
Ph. D.	Mechanical Engineering	1990	-	-	Banaras Hindu University	-

## Teaching / Professional / Research Employment:

Employer	Post Held	Pay Scale	Basic Pay	Period of Employment		Work
				From	To	
IIT Roorkee	Professor	18400 - 20000	19900	June 25, 2007	Date	Teaching and Research
IIT Roorkee	Associate Professor	16400 - 20000	18200	June 25, 2001	June 25, 2007	Teaching and Research
U.O.R, Roorkee	Assistant Professor	12000 - 18300	14100	April 9, 1996	June 25, 2001	Teaching and Research
U.O.R, Roorkee	Lecturer	3000 -5000	3600	January 8, 1990	April 9, 1996	Teaching and Research

## SUMMARY OF PERFORMANCE

### (a) Teaching Experience

	From	To	Total
Under Graduate	January 1990	Till Date	19 years
Post Graduate			

### (b) Publications: TOTAL = Published + Accepted = 74

Publication	Published	Accepted	Communicated
1. Research Publication in Refereed Journals	33	3	-
2. Papers in Conference	36	2	-

**(c) Number of thesis supervised:**

Theses	Awarded	Submitted	In Progress
1. Ph.D.	6	3	2
2. M. Tech.	43	-	4

**(d) Number of Sponsored and Consultancy Projects:**

Projects	Completed	In Progress
1. Sponsored	4	3
2. Consultancy	1	-

**(e) Foreign Visits / Assignments / Projects**

1. Research Associate, Texas A & M University, USA, April 1994 – April 1995.

**(f) Conferences Organized**

1. International Conference on Advances in Mechanical and Industrial Engineering, as Joint Organizing Secretary, February 1997.
2. First International & 22<sup>nd</sup> All India Manufacturing Design & Research (AIMTDR) Conference, as Joint Organizing Secretary, December 2006.

**(g) Institute Administrative Duties**

1. Associate Dean, Sponsored Research & Industrial Consultancy

**(h) Department Administrative Duties**

1. OC, CAE laboratory
2. Member, DRC

**THESES SUPERVISED**

***Ph.D. Thesis***

1. Investigation of the Effect of Inertia Forces on Elastothermodynamic Damping in Composite Materials by S. K. Srivastava, *Co-supervisor – Prof. S. C. Jain*, 2001.
2. Investigation of Process Parameters Affecting the Quality of Holes Drilled in Alumina Based Ceramics by Ultrasonic Machining by R. S. Jadoun, *Co-supervisor – Prof. Pradeep Kumar & Dr. R. C. S. Mehta*, 2005.
3. Effect of Process Variables on Castings Produced by Ceramic Shell Investment Casting Process by Balwinder Singh, *Co-supervisor – Prof. Pradeep Kumar*, 2007.
4. Deformation Behaviour of Gradient Materials Based on Al- Al<sub>2</sub>O<sub>3</sub> Particulate Composite by K. K. S. Mer, *Co-supervisor – Prof. S. Ray*, 2007.
5. Shape and Vibration Control of Smart Structure by Rajeev Kumar, *Co-supervisor – Prof. S. C. Jain*, 2007.
6. Process Modeling of Twin Wire Submerged Arc Welding by Abhay Sharma, *Co-supervisor – Dr. Navneet Arora*, 2008.
7. Ultrasonic NDE Modeling for Prediction of Flaw Response in Polycrystalline Metals by K. S. Aprameya, *Co-supervisor – Prof. R. S. Anand*, 2009 (*Submitted*).

8. Vibration Based Damage Detection in Structural Systems using Genetic Algorithm by S. K. Panigrahi, *Co-supervisor – Prof. S Chakraverty*, 2009 (Submitted).
9. Dynamic Characteristics of Inflated space structures by Ashish Srivastava, *Co-supervisor – Prof. S. C. Jain*, 2009 (Submitted).

#### ***M.E. Dissertation***

1. Prediction of Tire Tread Wear Life by V. L. Sulapani, *Co-Supervisor – Prof. V. K. Goel*, 1990.
2. Hygroscopic Effects on the Natural Frequency of Composite Plates by Virendra Kumar, 1992.
3. Hygroscopic Effects on the Buckling Behaviour of Composite Laminated Plates by H. Thajudeen, 1993.
4. Dynamic Response of an Adhesive Bonded Lap-Joint Connecting Two Composite Beams by Anurag Sharma, 1993.
5. Investigation of End Effects in Composite Plates by Gaurav Gupta, 1994.
6. Optimal Selection of FRP Constituents for Structural Application by Parveen Kumar Beri, *Co-supervisor – Prof. D. P. Shukla*, 1996.
7. Knowledge Based System for Design of Tall Pressure Vessel by Pankaj E. Dahad, *Co-supervisor – Prof. S. C. Jain*, 1996.
8. Crack-Tip Opening Displacement of a Griffith Crack at a Bimaterial Interface by P. V. Srikanth, 1997.
9. Elastothermodynamic Damping in Metal-Matrix Composites with Spherical Reinforcement by G. Padmanaban, 1997.
10. Elastothermodynamic Damping Analysis of a Griffith Crack using FEM by A.K. Gupta, 1998.
11. Propagation of Lamb Waves in Thin Orthotropic Plates by K. Balaji, *Co-supervisor – Dr. Narendra Singh*, 1998.
12. Propagation of Lamb Waves in Composite Laminates by P. L. R. Suresh Babu, *Co-supervisor – Dr. Narendra Singh*, 1999.
13. Design of Aluminium Weld Joints subjected to Static and Dynamic loading by B. Aruna Prasad, *Co-supervisor – Dr. P. K. Ghosh*, 1999.
14. Computer Aided Optimization Approach to Piston Design Based on Genetic Adaptive Search by Praveen Kumar Verma, *Co-supervisor – Dr. Pradeep Kumar*, 2000.
15. Studies on Design of Aluminum Butt Weld Joint Using Finite Element Analysis by Ritesh Kumar Saini, *Co-supervisor – Dr. P. K. Ghosh*, 2000.
16. Application of Finite Element Method in Analysing Generator Barrel Foundation by Uma Shankar Vidyarthi, *Co-supervisor – Dr. B. N. Ashthana & Dr. Gopal Chauhan*, 2001.
17. Effect of Valley Slope on Performance of Earth and Rockfill Dams by Debasis Deb, *Co-supervisor – Dr. B. N. Ashthana & Dr. R. P. Singh*, 2001.
18. Modeling of Material Removal in Abrasive Flow Machining by Satyendra Kumar Sharma, *Co-supervisor – Dr. Pradeep Kumar*, 2002.
19. Analytical Study of Shear Actuation Mechanism in a Sandwich Beam by K. K. Bhairam 2002.

20. Theoretical Modeling of a Plate with Induced Strain actuation by Ram Gyan Singh, 2002.
21. FEM modeling of a Smart Beam by Ashok Gupta, *Co-supervisor – Dr. S. P. Nigam*, 2003.
22. Modeling of Mechanism of Material Removal in Ultrasonic Drilling using Finite Element Method by J. Bala Chandra Sekhar, *Co-supervisor – Dr. Pradeep Kumar*, 2003.
23. Finite Element Modeling of Casting Fluidity by A. Sofwan F.A., *Co-supervisor – Dr. S. Ray*, 2003.
24. Three Dimensional Stress Analysis of Radial Gate using FEM (ANSYS Software) by Manoj K. Sharma, *Co-supervisor – Dr. B. N. Ashthana & Prof. Gopal Chauhan*, 2004.
25. Modeling and Control of Active Aperture Antenna by Ashwin M. Dhoke, 2004.
26. Structural Health Monitoring using Optical Fibre by Jagdish B. Dhunde, 2004.
27. Modeling of Mechanism of Material Removal in EDM using Finite Element Method by Amit K. Sharma, *Co-supervisor – Dr. Pradeep Kumar*, 2004.
28. Finite Element Analysis of High Strain Rate Material Deformation by Sudhanshu Sharma, *Co-supervisor Mr. V. M. Chavan, BARC*, 2005.
29. Stress Analysis of a Fixed Wheel Vertical–Lift Gate by Md. Abdul Wahab, *Co-supervisor –Prof. Gopal Chauhan*, 2005.
30. Static Analysis of Inflatable Torus using Piezoelectric Actuators by G. Sowjanya, 2005.
31. Pattern Tooling and Finite Element Modeling of Investment Casting Process by P. B. S. Raju, *Co-supervisor – Dr. Pradeep Kumar*, 2005.
32. Dynamic Response of Structure containing Cracks by Neeraj K. Gupta, 2006.
33. Penetration / Perforation of a Plate by a Projectile by Ashish Pandey, 2006.
34. Simulation of Solidification of Ceramic Shell Investment Castings using FEM by Ashwani K. Jaiswal, *Co-supervisor – Dr. Pradeep Kumar*, 2006.
35. Residual stress analysis in a butt welded plate and pipe joint by Sachin Jadhav, *Co-supervisor – Dr. P. K. Ghosh*, 2006.
36. Damage detection in a smart beam through its vibratory response by H. K. Chauthiya, *Co-supervisor – Dr. S. C. Jain*, 2007.
37. Active vibration control of cantilever beam by J. R. Mevada, *Co-supervisor – Dr. S. C. Jain*, 2007.
38. Shape control of deployment system for space based Antenna by G. Daggaupati, *Co-supervisor – Dr. S. C. Jain*, 2007.
39. Meshfree Methods for Thermo-Mechanical Problems by S. K. Mittal, *Co-supervisor – Dr. K. M. Singh*, 2008.
40. Dynamic Response of Inflatable Parabolic Shells, by Aditi Das, 2008.
41. Vibration Analysis of Reflector Antenna by Parag Ashok Gumaste, 2008.

42. Active Vibration Control of Piezo-Laminated Circular Plate by Mohammad Arif, *Co-supervisor – Dr. V. H. Saran*, 2009.
43. Active Nonlinear Vibration Control by Abhijeet Pandey, *Co-supervisor – Dr. V. H. Saran*, 2009.

### **LIST OF SPONSORED & CONSULTANCY PROJECTS**

#### ***List of Sponsored Projects***

1. FEM Modeling and Process Parameter Optimization of Ultrasonic Drilling Process, AICTE, New Delhi, Rs. 5 Lakhs, 2 years (**completed**)
2. Effect of Asymmetric Heating of Fuel Pins on Fuel Bundle Integrity, BRNS, Mumbai, Rs. 5 Lakhs, 2 years (**completed**)
3. Pattern Tooling and Quality Optimization for Investment Castings, MHRD, New Delhi, Rs. 8 Lakhs, 3 years (**completed**)
4. Near Net Shape Manufacturing of Metal Matrix Composite through Investment Casting Process, MHRD New Delhi, Rs. 14 Lakhs, 3 years (**completed**)
5. Active Vibration Control of Laminated Shells, SAC, ISRO, Ahmedabad, Rs. 16 Lakhs, 2 years (**ongoing**)
6. Development of Elasto-Plastic Element Free Galerkin Code, BRRNS, Mumbai, 17 Lakhs, 3 Years (**ongoing**)
7. Numerical and Experimental Investigations of Dynamic Characteristics, Shape Changing and Vibration Control of Smart Structures with Piezomaterials, DST, New Delhi, 2 years (**ongoing**)

#### ***List of Consultancy Projects***

1. Development of Smart/Intelligent Systems for Use in Spacecraft Antenna Reflector, Department of Space, Space Application Centre, Ahmedabad, Rs. 0.50 lakhs, (**completed**)

### **LIST OF PUBLICATIONS**

#### **Journals**

1. **B. K. Mishra** and P. C. Upadhyay, On the Dynamic Response of Fluid-Filled Buried Pipelines, *Journal of Sound and Vibration*, Vol. 117(1), pp. 59-67, **1987**.
2. P. C. Upadhyay and **B. K. Mishra**, Non-Axisymmetric Dynamic Response of Buried Orthotropic Cylindrical Shells, *Journal of Sound and Vibration*, Vol. 121(1), pp. 149-160, **1988**.
3. P. C. Upadhyay and **B. K. Mishra**, Non-Axisymmetric Dynamic Response of a Buried Orthotropic Cylindrical Shell due to Incident Shear Waves, *Journal of Sound and Vibration*, Vol. 125(2), pp. 227-239, **1988**.
4. **B. K. Mishra** and P. C. Upadhyay, Dynamic Response of Fluid-Filled Buried Orthotropic Cylindrical Shells, *Journal of Engineering Mechanics*, ASCE, Vol.116(7), pp. 1511-1523, **1990**.
5. **B. K. Mishra** and P. C. Upadhyay, Dynamic Response of Buried Pipelines—An Elasticity Solution, *Journal of Pressure Vessel Technology*, Vol. 112, pp. 291-295, **1990**.
6. J. P. Dwivedi, **B. K. Mishra** and P. C. Upadhyay, Non-Axisymmetric Dynamic Response of Imperfectly Bonded Buried Orthotropic Pipelines due to Incident Shear Wave, *Journal of Sound and Vibration*, Vol. 157(1), pp. 81-92, **1992**.

7. J. P. Dwivedi, **B. K. Mishra** and P. C. Upadhyay, Non-Axisymmetric Dynamic Response of Imperfectly Bonded Buried Orthotropic Pipelines due to Incident Shear Waves (SH- Wave), *Journal of Sound and Vibration*, Vol. 157(1), pp. 177-182, **1992**.
8. J. P. Dwivedi, **B. K. Mishra** and P. C. Upadhyay, Non-Axisymmetric Dynamic Response of Imperfectly Bonded Buried Orthotropic Pipelines, *Journal of Structural Engineering and Mechanics*, Vol. 6(3), pp. 291-304, **1998**.
9. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, Dynamic Effects in Elastothermodynamic Damping of Metal-Matrix Composites with Spherical Reinforcement, *ASME Journal of Vibration and Acoustics*, Vol. 121(4), pp. 476-481, **1999**.
10. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, Effect of Imperfect Interfaces on Elastothermodynamic Damping of Particulate Metal-Matrix Composites, *Journal of Reinforced Plastics and Composites*, Vol. 20(1), pp. 37-51, **2001**.
11. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, Effect of Inertia Forces in Elastothermodynamic Damping of Fibre-Reinforced Metal-Matrix Composites, *Journal of Reinforced Plastics and Composites*, Vol. 20(18), pp. 1601-1616, **2001**.
12. P. K. Ghosh, **B. K. Mishra** and B. Aruna Prasad, Finite Element Analysis of Stress Distribution in Fillet Weld of High Strength Aluminium Alloy, *International Journal for the Joining of Materials*, Vol. 17(1), pp. 19-26, **2005**.
13. R. S. Jadoun, Pradeep Kumar, **B. K. Mishra**, Manufacturing process optimization for tool wear rate in ultrasonic drilling (USD) of engineering ceramics using the Taguchi method, *International Journal of Machining and Machinability of Materials*, Vol. 1(1), pp. 94-114, **2006**.
14. Balwinder Singh, Pradeep Kumar, **B. K. Mishra**, "Parametric Optimization of Slurry Composition used in Ceramic Shell Investment Casting Process through Taguchi Method" *Indian Foundry Journal*, Vol. 52, No.10, pp. 25-33, **2006**.
15. Balwinder Singh, Pradeep Kumar, **B. K. Mishra**, "Experimental Investigation of wax Blends in Investment Casting Process", *Indian Foundry Journal*, Vol. 52, No.3, pp. 29-36, **2006**.
16. R. S. Jadoun, Pradeep Kumar, **B. K. Mishra**, "Manufacturing process optimization for tool wear rate in ultrasonic drilling (USD) of engineering ceramics using the Taguchi method", *International Journal of Machining and Machinability of Materials*, Vol. 1. No.1, pp 94-114, **2006**.
17. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, Shape control of laminated antenna reflector using piezoelectric actuator, *International Journal of COMADEM*, Vol. 10 (1), pp. 18-29, **2007**.
18. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, Thermo-electro-mechanical model of general smart shell, *International Journal of Automation and Control*, Vol. 1 (2/3), pp. 233-259, **2007**.
19. R. S. Jadoun, Pradeep Kumar, **B. K. Mishra**, "Optimization of MRR in ultrasonic drilling (USD) based on Taguchi's robust design methodology", *Int. J. Machining and Machinability of Materials*, Vol.1, No. 4, pp.445-462, **2007**.
20. R. S. Jadoun, Pradeep Kumar, **B. K. Mishra**, Optimization of process parameters for ultrasonic drilling (USD) of advanced engineering ceramics using Taguchi approach, *International Journal of Engineering Optimization*, Vol. 38, pp 771-787, **2007**.
21. S. K. Panigrahi, S. Chakraverty and **B. K. Mishra**, "Damage identification in structural members with variable thickness using genetic algorithm", *International Journal of Engineering Simulation*, Vol. 8, pp. 3-10, **2007**.

22. Abhay Sharma, Navneet Arora, **B. K. Mishra**, Modified Mathematical Models for Melting Rate during Submerged Arc Welding', *Indian welding Journal*, Vol. 40, 21-32, **2007**.
23. Abhay Sharma, Navneet Arora, **B. K. Mishra**, Artificial Neural Network Modelling of Deposition Rate during Twin-Wire Welding' *Australasian Welding Journal*, Vol. 52, 39-48, **2007**.
24. Abhay Sharma, Navneet Arora, **B. K. Mishra**, Mathematical Modeling of Flux Consumption during Twin-wire Welding', *International Journal of Advanced Manufacturing, Technology*, Springer London, Vol. 38, (11-12), 2008, 1114-1124, **2008**.
25. Abhay Sharma, Navneet Arora, **B. K. Mishra**, A Practical Approach towards Mathematical Modeling of Deposition Rate during Twin-Wire Submerged Arc Welding, *International Journal of Advanced Manufacturing, Technology*, Vol. 36, 463-474, **2008**.
26. Abhay Sharma, Navneet Arora, **B. K. Mishra**, Impact of process modelling on current direction of welding research and future targets, *Indian Welding Journal*, Vol. 41, 43-50, **2008**.
27. S. K. Panigrahi, S. Chakraverty and **B. K. Mishra**, "Application of genetic algorithm for damage identification of non-homogeneous tapered beam, *Journal of Computer Methods in Material Science*, Vol. 8, pp. 93-102, **2008**.
28. Ashish Srivastava, **B. K. Mishra** and S. C. Jain, Effect of enclosed fluid on the dynamic response of inflated torous, *Journal of Sound and Vibration*, Vol. 309, 320-329, **2008**.
29. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, Vibration control of smart composite laminated spherical shell using neural network, *Journal of Intelligent Material System and Structures*, Vol. 19, No. 8, 947-957, **2008**.
30. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, Static and dynamic analysis of smart cylindrical shell, *Finite Elements in Analysis and Design*, Vol. 45, pp. 13-24, **2008**.
31. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, Thermally induced vibration control of cylindrical shell using piezoelectric sensor and actuator, *International Journal of Advanced Manufacturing Technology*, Vol. 38, 2051-2063, **2008**.
32. Balwinder Singh, Pradeep Kumar, **B. K. Mishra**, "Effect of Slurry Composition on Plate Weight in Ceramic Shell Investment Casting" *Journal of Materials Engineering & Performance*, Vol. 17, pp 489-498, **2008**.
33. Abhay Sharma, Navneet Arora, **B. K. Mishra**, Statistical Modelling of Deposition Rate in Twin-wire Submerged Arc Welding, *Journal of Engineering Manufacture, IMECHE Part-B*, Vol. 223, pp. 851-863, **2009**.
34. I. V. Singh, **B. K. Mishra** and Mohit Pant, An Modified Intrinsic Enriched EFGM for Multiple Cracks Simulation, *Materials and Design* **2009**, (Available Online).
35. K. S. Aprameya, R. S. Anand, **B. K. Mishra**, and S. Ahmed, Prediction of flaw response in polycrystalline metals for an ultrasonic pulse echo simulation using Born approximation, *Journal of Nondestructive Testing and Evaluation*, (Available Online)
36. S. K. Panigrahi, S. Chakraverty and **B. K. Mishra**, Vibration based damage detection in a uniform strength beam using genetic algorithm, *Meccanica* (Available Online)

### Conferences

1. B. P. Singh, **B. K. Mishra** and B. D. Agarwal, *Finite Element Prediction of Fracture Toughness of Composite Laminates through J-Integral Approach*, 19<sup>th</sup> Symposium on Fracture Mechanics, San Antonio, Texas, USA, **1986**.

2. P. C. Upadhyay and **B. K. Mishra**, *Non-Axisymmetric Dynamic Response of Buried Orthotropic Cylindrical Shells*, 20<sup>th</sup> Midwest Conference, Purdue University, USA, **1987**.
3. P. V. Srikanth and **B. K. Mishra**, *Crack-Tip Opening Displacement of a Griffith Crack at a Bi - Material Interface*, International Conference on Advances in Mechanical and Industrial Engineering (ICAMIE), Roorkee, India, **1997**.
4. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, *Elastothermodynamic Damping: A review*, proceeding of 11th ISME Conference on Mechanical Engineering, New Delhi, pp. 104-111, **1999**.
5. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, *A Study on the Effects of Inclusion Size and Volume Fraction on ETD of Particulate Composites Including Inertia Forces*, 6<sup>th</sup> International Congress on Sound and Vibration, Denmark, **1999**.
6. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, *Effects of Fibre Size and Volume Fraction on Elastothermodynamic Damping of Metal-Matrix Composites*, 4<sup>th</sup> International Conference on Vibration Problems, Jadavpur University, Calcutta, **1999**.
7. S. K. Srivastava, **B. K. Mishra** and S. C. Jain, *Effects of Inertia Forces on Elastothermodynamic Damping of Hollow Particle Reinforced Metal-Matrix Composites*, Proceedings of 16<sup>th</sup> Convention of Mechanical Engineers, University of Roorkee, Roorkee, India, **2000**.
8. A. Hari Saranya, R. S. Jadoun, Pradeep Kumar, **B. K. Mishra** and R. C. S. Mehta, *Investigation of the Effect of Process Parameters on the Oversize of Hole Drilled by Ultrasonic Machining*, INCARF, IIT Delhi, **2003**.
9. J. Bala Chandra Sekhar, R. S. Jadoun, Pradeep Kumar, **B. K. Mishra** and R. C. S. Mehta, *Stress Analysis in Ultrasonic Machining using FEM*, INCARF, IIT Delhi, **2003**.
10. Rajeev Kumar, Ashish Srivastava, **B. K. Mishra**, S. C. Jain, *Finite Element formulation and Active Vibration Control using real coded Genetic algorithm*, International Conference on Mechanical Engineering, Dhaka, Bangladesh, December 26-28, **2003**.
11. Ashish Srivastava, **B. K. Mishra** and S. C. Jain, *Recent Developments in Deployable Inflated Space Structures*, ISME, IIT Roorkee, December 30-31, **2003**.
12. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Smart Material and Structure—a Review*, ISME, IIT Roorkee, December 30-31, **2003**.
13. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Active Vibration Control of Smart Paraboloidal Shell*, ICTACEM, IIT Kharagpur, December 28-30, **2004**.
14. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Thermally Induced Shape Distortion Control of Antenna Reflector with Piezoelectric Patches*, ISSS 2005, IISc Bangalore, July 28-30, **2005**.
15. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Thermally induced vibration suppression of antenna reflector with piezoelectric sensors and actuators*, ISSS 2005, IISc Bangalore, July 28-30, **2005**.
16. Ashish Srivastava, **B. K. Mishra** and S. C. Jain, *Effect of Enclosed Gases on the Dynamics of Inflated Torus*, SEC-2005, IISc Bangalore, December 14-16, **2005**.
17. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Piezoelectric Induced Deflection of Laminated Composite Shells using Finite Element Method*, SEC-2005, IISc Bangalore, December 14-16, **2005**.



18. Balwinder Singh, Pradeep Kumar and **B. K. Mishra**, *Experimental Investigation of Wax Blends for Dimensional Accuracy of the Pattern Used in Investment Casting Process*, All India Seminar on Advances in Production Engineering: Vision 2020, MNIT, Jaipur, December 30-31, **2005**.
19. Balwinder Singh, Pradeep Kumar, and **B. K. Mishra**, *Effect of raw materials and their processing on the ceramic shell moulds used in investment casting*, Advancements & Futuristic Trends in Mechanical & Materials Engineering (AFTMME'06), Bathinda, Punjab, October 13-14, **2006**.
20. H. D. Rama, Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Active vibration control of plate with integrated sensors and actuators*, National conference on Smart Structures systems for Aerospace Applications, Research Center Imarat, Hyderabad, November 23-24, **2006**.
21. Balwinder Singh, Pradeep Kumar, **B. K. Mishra**, *Parametric optimization and surface characterization of wax patterns to be used in ceramic shell investment casting*, International Conference on Advances in Mechanical Engineering (AME2006), Fatehgarh Sahib, Punjab, December 1-3, **2006**.
22. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Thermally induced vibration control of cylindrical shell using piezoelectric sensors and actuators*, First International & 22<sup>nd</sup> All India Manufacturing Technology Design and Research Conference, 22<sup>nd</sup> AIMTDR, IIT Roorkee, December 21-23, **2006**.
23. Balwinder Singh, Pradeep Kumar, and **B. K. Mishra**, *Investigations of the Effect of Injection Parameters on the Dimensional Accuracy of the Wax Patterns Used in Investment Casting*, 22<sup>nd</sup> AIMTDR conference IIT Roorkee, December 21-23, **2006**.
24. Balwinder Singh, Pradeep Kumar, and **B. K. Mishra**, *Optimization Of Injection Parameters For Making Wax Patterns To Be Used In Ceramic Shell Investment Casting*, Asian Symposium on Materials and Processing, ASMP 2006, Thailand, **2006**.
25. Abhay Sharma, Navneet Arora, **B.K. Mishra**, 'Application of Computational Intelligence in Welding', RDFTME, NIT Hamirpur, December 3-5, 281-291, **2006**.
26. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Modeling trends in smart structure with piezoelectric sensor and actuator*, National Conference on Design, Dynamics and Manufacturing, Department of Mechanical Engineering, Sant Longowal Institute of Engg. & Tech. pp. 16-17, March, **2007**.
27. Rajeev Kumar, **B. K. Mishra** and S. C. Jain, *Vibration Control of smart composite laminated paraboloid shell using Neural Network*, ASME International Mechanical Engineering Congress and Exposition, Seattle, Washington, USA, November 11-15, **2007**.
28. **B. K. Mishra**, and I. V. Singh, Thermo-elastic damping in metal matrix composite material, *Indo-Russian Workshop on Topical Problems in Solid Mechanics*, BITS Pilani Goa Center, Goa, India, November 11-14, pp. 413-419, **2008**.
29. I. V. Singh, **B. K. Mishra**, and Sumit Kumar, Numerical Simulation of Edge Crack Problems Using X-FEM, *Indo-Russian Workshop on Topical Problems in Solid Mechanics*, BITS Pilani Goa Center, Goa, India, November 11-14, pp. 318-326, **2008**.
30. Mohit Pant, I. V. Singh, **B. K. Mishra**, Crack Interactions under Thermo-mechanical loading Using EFGM, *Proceedings of The 53<sup>rd</sup> Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)*, Osmania University, Hyderabad, India, pp. 20-26, December 27-29, **2008**.
31. Sumit Kumar, I. V. Singh, **B. K. Mishra**, Extended Finite Element Method for The Simulation of Edge Cracks Under Thermal Loadings, *53<sup>rd</sup> Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)*, Osmania University, Hyderabad, India, pp. 50-55, December 27-29, **2008**.

32. Ch.Raghuveer, Mohit Pant, I.V. Singh, **B. K. Mishra**, V. Bhasin, Kamal Sharma, I.A. Khan, Application of Element Free Galerkin Method for the Simulation of Bi-Materials, Proceedings of National Conference on Advances in Mechanical Engineering, RJIT, Mumbai, pp. 104-108, January 15- 16, **2009**.
33. Mohit Pant, I.V. Singh, **B. K. Mishra**, Vivek Bhasin, Kamal Sharma and I.A. Khan: Numerical Simulation of 2-D Crack Problems Under Mode-I Loading Using Mesh-Free Method, Proceedings of National Conference on Recent Advances in Mechanical and Production Engineering, G. B. Pant University of Agriculture & Technology, Pantnagar, pp. 19-25, February 12-14, **2009**.
34. Ch.Raghuveer, Mohit Pant, I.V. Singh, **B.K. Mishra**, V. Bhasin, Kamal Sharma, I.A. Khan, Numerical Simulation of Bi-Material Problems Using EFGM, International Conference on Computational & Experimental Engineering and Sciences (ICCES,09), Phuket, Thailand, April 8-13, **2009**.
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