

BIO-DATA

Name : **Dr. ANAND KUMAR**
Fathers' Name : Dr. Banarasi Lal
Designation : PROFESSOR
Department : Mechanical Engineering
University : HBTU, Kanpur
Teaching Experience : 31 years
Date of Birth : July 12, 1965
E-mail : kranandhbti@gmail.com



ACADEMIC QUALIFICATION

S.No	Examination Passed	Board/ University	Year	Percentage / OGPA	Division	Remarks
1	High School	U P Board	1981	83.8	First (Hons)	12 th Rank in U P
2	Intermediate	U P Board	1983	71.8	First	–
3	B.Tech. (Mech.Engg.)	Pant Univ., Pantnagar	1988	4.071	First	76.07 %
4	M.Tech. (Design & Prod.Engg.)	Pant Univ., Pantnagar	1991	4.718	First	85.77 %
5	Ph D (Mech.Engg.)	IIT, Kanpur	2011	8.500	–	85.00 %

PROFESSIONAL EXPERIENCE

S.No.	Designation	Organization	From	To	Scale
1	Assistant Professor	Pant Univ., Pantnagar	May31,1991	Oct.04,1999	Rs. 2200-4000
2	Assistant Professor	HBTI, Kanpur	Oct. 05, 1999	Dec.31,2005	Rs.12000- 18300
3	Associate Professor	HBTI, Kanpur	Jan. 01, 2006	Feb. 28, 2011	Rs. 37400-67000 AGP Rs. 9000=00
4	Professor	HBTI, Kanpur	March. 01, 2011	Till date	Rs. 37400-67000 AGP Rs. 10000=00

ADMINISTRATIVE EXPERIENCE

- Dean of Academic Affairs, Since Sept 21, 2021
- Co-coordinator, Admission Committee-2021
- Member Secretary, Academic Council, Oct., 2017 to Oct., 2019
- Dean of Academic Affairs, Oct., 2017 to Oct., 2019
- Co-coordinator, Admission Committee-2019
- Dean of Cont. Education & Internal Quality Assurance, Oct. 2016 to Oct., 2017
- Head, Dept. of Mechanical Engineering, Oct. 05, 2016 to Oct. 04, 2019
- Chief Vigilance Officer of the Institute, Jan. 2012- Feb. 2013
- Member, Institute OBC Scholarship Committee, 2010-till date
- PG Coordinator, Mechanical Engineering Department, 2008-10& 2011-12
- Member, House Allotment Committee, 2007-08
- Chief Proctor of the Institute, 2005-07
- Chairman, Institute Proctorial Board, 2005-07
- Member, Procurement Cell, TEQIP, World Bank, 2005-06
- Officer-in-Charge, Mechanical Maintenance, 2002-03& 2009-10
- Convener, Sports' Council, 2001-02

SHORT TERM COURSES/ WORKSHOPS / SEMINARS ORGANIZED

- Conference Coordinator, National Conference on *Innovations in Materials, Design & Manufacturing*, Department of Mechanical Engineering, **March 27-28, 2015**, HBTI, Kanpur.
- Programme Coordinator, Faculty Development Programme on *Engineering Education: Opportunities, Challenges & Future Directions*, Department of Mechanical Engineering, **March 7-12, 2014**, HBTI, Kanpur.
- Dy. Coordinator, Faculty Development Programme on *Simulation, Modeling & Analysis of Engineering Systems* in collaboration with Department of Computer Science & Engineering, **October 25-30, 2013**, HBTI, Kanpur.
- Coordinator, All India Seminar on *Advances in Materials & Material Selection in Design*, in collaboration with the Institution of Engineers' (India), Kanpur Local Chapter held at HBTI Kanpur during **August 24-25, 2012**.
- Coordinator, *Advances in Engineering Materials*, One Week Faculty Development Programme, Department of Mechanical Engineering, **March 16-21, 2009**, HBTI, Kanpur.
- Coordinator, *Composite Materials: Potential & Challenges*, A two day Refresher Course, Department of Mechanical Engineering, **December 28-29, 2007**, HBTI, Kanpur.
- Coordinator, *Advances in Materials & Material Selection in Design*, A two day Refresher Course, Department of Mechanical Engineering, **March 10-11, 2007**, HBTI, Kanpur.
- Member, Local Organizing Committee, *National Workshop on Smart Materials & Composite Structures* at IIT, Kanpur, **February 12-14, 2002**.

OTHER SIGNIFICANT CONTRIBUTIONS/AWARDS RECEIVED

- Foreign Countries Visited
 - I. To attend IV IPS Collaboration Symposium at Waseda University, Kitakyushi, Japan, **Nov. 17-19, 2010**

- II. To attend SPIE Conference on Smart Materials+ Nano- & Micro- Systems at RMIT University, Melbourne, Australia, **Dec. 8-12, 2008**
- Won second prize for poster presentation prize for research paper '*Structural health monitoring of composite laminate using smart magnetostrictive sensory layer*' at National Workshop on Advanced Functional Materials and Structures, MNIT, Allahabad, **July 12-14, 2012.**
 - Won best poster presentation prize for research paper '*Delamination detection in composite beam using magnetostrictive materials as sensor*' at International Conference on Recent Advances in Composite Materials, IT-BHU, **December, 2004.**

INVITED LECTURES

- *Basics of corrosion and its prevention*, Axis College of Engineering and Management, Kanpur, National Workshop on Recent Trends in Structures and Structural Materials, Sept., **2019.**
- *Smart and intelligent structures: Applications and future trends*, Axis College of Engineering and Management, Kanpur, National Workshop on Recent Trends in Structures and Structural Materials, Sept., **2019.**
- *Smart materials: concepts and future scope*, Allen House Institute of Engineering & Technology, Kanpur, April, **2018.**
- *Design and material issues in lightweight structures*, Allen House Institute of Engineering & Technology, Kanpur, April, **2018.**
- *Corrosion: Fundamentals and its mitigation*, G B Pant Univ., Pantnagar, June, **2016.**
- *Evaluation systems in technical education: Appraisal of learning or a tool of mechanical differentiation*, FDP on Essentials of Teaching - Learning Processes, KNIT Sultanpur, April, **2015.**
- *Absenteeism & mass bunking of classes: Causes, consequences and remedies*, FDP on Essentials of Teaching - Learning Processes, KNIT Sultanpur, April, **2015.**
- *Smart materials & structures: concepts and applications*, Dr. Bhimrao Ambedkar College of Engineering & Technology, Etawah, March, **2014.**
- *Engineering education in India*, FDP on Engineering Education: Opportunities, Challenges & Future Directions, HBTI, Kanpur, March, **2014.**
- *Global scenario in engineering education*, FDP on Engineering Education: Opportunities, Challenges & Future Directions, HBTI, Kanpur, March, **2014.**
- *Smart materials and their uses in structural health monitoring*, G B Pant Univ., Pantnagar, February, **2014.**
- *Smart materials & structures*, National Conference on Emerging Frontiers in Mechanical Engineering, HBTI, Kanpur, February, **2014.**
- *Mathematical representation of physical systems in engineering*, FDP on Simulation, Modeling & Analysis of Engineering Systems, HBTI, Kanpur, October, **2013.**
- *Evaluation system: Absolute percentage v/s grading system*, FDP on Curriculum Development & Evaluation System, HBTI, Kanpur, July, **2013.**
- *Strategies to prevent absenteeism and mass bunking*, FDP on Essentials of Teaching – Learning Process, HBTI, Kanpur, March, **2013.**

- *Dynamical representation of physical systems and their analysis*, Department of Mathematics, HBTI, Kanpur, September, **2012**.
- *Keynote address on Health and Usage Monitoring of Composite Structures*, BSA College of Engineering and Technology, Mathura, March, **2011**.
- *Structural Health Monitoring of Composite Structures using Smart Sensing and Actuation*, IV IPS Collaboration Symposium, Waseda University, Japan, November, 17-20, **2010**.
- *Health Monitoring of Composite Structures using Magnetostrictive Sensors* at SMDISA-2007, IIT, Kanpur, **March, 2007**.
- *Health Monitoring of Composites using Smart Materials with Special Emphasis on Magnetostrictive Materials*, B R Ambedkar Institute of Engineering, Etawah, March, **2006**.
- *Material Selection in Design*, B R Ambedkar Institute of Engineering, Etawah, March, **2006**.

REVIEWER OF JOURNALS / BOOKS

- Reviewed two chapters of a book on Mechanics of Solids for Cineage Publications, **2012**.
- Reviewer to the NPTEL course – Principles of Vibration Control prepared by faculty members of IIT, Kanpur, **2012**.
- Reviewer to the NPTEL course – Smart Materials, Structures and Systems prepared by faculty members of IIT, Kanpur, **2011**.
- Reviewed two research papers for Intl. Jl. of Material Science & Engineering A, **2007**.
- Reviewed a book on Machine Element Design for Pearson Publication, **2006**.

BOOKS PUBLISHED

- Chief Editor, Proceedings of *International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods*, Department of Mechanical Engineering, HBTI, Kanpur, March, **2017**, (546 pages), [ISBN: 978-93-66256-70-6].
- Editor, Proceedings of *National Conference on Innovations in Materials, Design & Manufacturing*, Department of Mechanical Engineering, HBTI, Kanpur, **March 27-28, 2015**, (400 pages), [ISBN:978-93-84869-47-2].
- Author of E-book on *Structural Health Monitoring* jointly with Dr. Bishakh Bhattacharya, Professor in Department of Mechanical Engineering, IIT, Kanpur under National Programme for Technology Enhancement Learning (NPTEL), IIT Kanpur, **2012**.
- Editor, Proceedings of *All India Seminar on Advances in Materials & Material Selection in Design* organized by IEI, Kanpur and Department of Mechanical Engineering, HBTI, Kanpur, August 24-25, **2012** (244 pages).
- Editor, *Advances in Engineering Materials*, Proceedings of a one week Faculty Development Programme (FDP) organized by Department of Mechanical Engineering, HBTI, Kanpur, March 16-21, **2009** (107 pages).
- Editor, *Composite Materials: Potential & Challenges*, Proceedings of a two day Refresher Course organized by Department of Mechanical Engineering, HBTI, Kanpur, December 28-29, **2007** (136 pages).

- Editor, *Advances in Materials & Material Selection in Design*, Proceedings of a two day Refresher Course organized by Department of Mechanical Engineering, HBTI, Kanpur, March 10-11, 2007 (153 pages).

RESEARCH WORK

- M Tech Thesis, *Wear Characteristics of Tin Bronzes with Varying Tin Percentages* submitted to Department of Mechanical Engineering, G B Pant University, Pantnagar, 1991.
- Ph D Thesis, *Structural Health Monitoring of Composites using Smart Actuation and Sensing* submitted to Department of Mechanical Engineering, IIT, Kanpur, 2011.

RESEARCH PROJECTS

SPONSORED PROJECTS: 05

1. *Design and Development of Utility Products using Recycled Waste Rubber*, Council of Science and Technology, UP, Three years,(2018-21)Grant amount Rs. 11.91 Lakhs.
2. *Development of a Setup for Producing Compacts for Bio-implants* under TEQIP-II, World Bank, One year, (2015-16),Grant amount Rs. 1.00 Lakhs.
3. *Study of Dynamic Response of Selected Seasonal Fruits during the Process of Ripening for Better Transportation, Storage and Improved Shelf Life* under TEQIP-II, World Bank, One year, (2014-15) Grant amount Rs. 1.20 Lakhs.
4. *Design and Material Modifications in Existing Yokes and Harnesses for Improved Performance* under Technical Education Quality Improvement Programme (TEQIP), World Bank, One year, (2007-08) Grant amount Rs. 0.72 Lakhs.
5. *Real Time Integrity Monitoring of Composite Structures using Magnetostrictive Materials* under Research Promotion Scheme of All India Council of Technical Education, New Delhi, Two years, (2003-04) Grant amount Rs.10.00 Lakhs.

CONSULTANCY PROJECTS

1. Process certification of Lamplig, 2006 for IEDS, Kanpur worth Rs.25,000=00
2. Inspection of Aluminum channel used as construction material, 2010 for KDA, Kanpur worth Rs.12,133=00
3. Inspection of Aluminum channel used as construction material, 2010 for KDA, Kanpur worth Rs.12,133=00
4. Inspection of Aluminum channel used as construction material, 2010 for KDA, Kanpur worth Rs.12, 133=00.

SHORT TERM COURSES ATTENDED

- Visiting Research Programme, TEQIP Incubation Centre, IIT Kanpur, May 10 to July 24, 2015 (10 weeks).
- Visiting Research Programme, TEQIP Incubation Centre, IIT Kanpur, December 7-27, 2014 (3 weeks).
- Mechanics in Physics, Department of Physics, IIT, Kanpur, February 22-23, 2014 (1 week).
- Management Development Programme on Enhancement of Leadership in Administrators at IIM, Lucknow (NOIDA Campus), January13-17, 2014.
- Processing, Characterization and Production of Advanced Engineering Materials, IIT, Kanpur, February 24-28, 2010 (1 week).

- Recent Trends in Advanced Composites at IIT, Kanpur, 2005, (1 week).
- FEM and its Advanced Applications at IIT, Kanpur, 2002 (1 week).
- Instrumentation & Data Analysis at IIT, Delhi, 1998 (2 weeks).
- Engineering Materials: Characteristics & Processing at MREC, Jaipur, 1996 (2 weeks).
- Recent Trends in Engineering Materials at MNREC, Allahabad, 1995 (2 weeks).

RESEARCH GUIDANCE

M. Tech. Students: **41** [Completed: 39; Pursuing: 02]

Ph D students: **04** [Completed: 01; Under progress: 03]

M.Tech. Supervision

S. No.	Name of student	Title of Thesis	University	Year
1	Gunjan Agrawal	Wear performance evaluation of aluminium bronzes	GBPUAT	1994
2	Manoj Kumar Verma	Computer aided design of axial turbine blade profile	UPTU	2002
3	Girish Chandra Verma	Computer aided design of vapour compression system and its optimization using genetic algorithm	UPTU	2003
4	Navneet Kumar Pandey	Erosive wear modelling	UPTU	2003
5	Rajendra Kumar Soni	Sensing of delamination of laminate composite beam using magnetostrictive material	UPTU	2003
6	Ajay Prasad Nigam	Analysis of failure through delamination of composite laminates using Terfenol-D layers	UPTU	2006
7	Shakti Singh Patel	Terfenol-D as potential sensing material in health monitoring of composite laminates	UPTU	2006
8	Pradeep Kumar	Studies on effectiveness of magnetostrictive layer in delamination sensing of composite laminates	UPTU	2007
9	Mahendra Shanker	Studies on tailoring of structural components using hybrid composites for aerospace and critical applications	UPTU	2010
10	Dinesh Kumar Pandey	Experimental modal analysis for health monitoring of composite structures using laser Doppler vibrometer	GBTU	2011
11	Anil Kumar Yadav	Mechanical and thermal characterization of aero grain polymethyl metha acrylate (PMMA) used in aircraft canopy	GBTU	2011
12	Mahipal Singh	Improvement in the strength of gun barrel by modifying autofretage regime	GBTU	2011
13	Prem Pal	A study of operation and maintenance of water supply and air-conditioning installations at Air Force Station, Kanpur	GBTU	2012
14	Ashish Awasthi	Experimental validation of strength properties of hybrid composite beam using ANSYS	GBTU	2012
15	Rashmi Rani Maheshwari	Damage prediction through modal analysis using laser Doppler vibrometer	GBTU	2012
16	Avanindra Nath Yadav	Buckling load analysis of laminated composite plates with different fibre orientations	GBTU	2012
17	Priyanka Katiyar	A study of damping characteristics of alumina filled epoxy nano composite	GBTU	2012
18	Ankit Saini	Development and performance evaluation of water resistant corrugated board of packaging	GBTU	2013
19	Arpit Kumar Srivastava	Failure analysis of laminated composite beam using narrow and wide beam criteria	GBTU	2013

20	Virendra Kumar Uttam	Mechanical characterization of coconut fibre and fibre powder reinforced epoxy composite	GBTU	2013
21	Aditya Kumar	Experimental study of mechanical properties and absorption behavior of coconut shell powder epoxy composite	GBTU	2013
22	Varun Kumar Singh	Theoretical and experimental performance evaluation of glass fibre composite leaf spring and conventional leaf spring	GBTU	2014
23	Kartikeya Dixit	Performance evaluation of aluminium honeycomb sandwich panels with different shell sizes	GBTU	2014
24	Arvind Kumar	Development and mechanical characterization of banana / coir powder epoxy composites	GBTU	2015
25	Shruti	Development and performance evaluation of rubber composite using recycled vulcanized rubber	GBTU	2015
26	Suraj Kalia	Experimental evaluation of mechanical properties of glass epoxy composites for different laminate orientations	AKTU	2016
27	Anubhau Shukla	Comparison of package cushioning materials to protect post harvest vibration damages to apples	AKTU	2016
28	Arun Kumar	Fabrication of bamboo fibers and coconut shell particles reinforced epoxy matrix composite	AKTU	2017
29	Arvind Kumar Yadav	Mechanical Behaviour of Coir and Glass Fiber Reinforced Epoxy Composite with SiC Filler Material	HBTU	2018
30	Husna Maqsood	Fabrication and Characterization of Particulate Reinforced Hypereutectic Aluminium-Silicon Alloy Composite	HBTU	2018
31	Vikrant Singh	Study of stiffness properties of unidirectional and woven carbon fiber reinforced polymer laminates	HBTU	2019
32	Rajendra Kumar Maurya	Repair of Glass fibre Composite Radome of Aircraft and study of its Mechanical Properties. (Dr. J.Bhaskar, Co-Supervisor)	HBTU	2019
33	Vipin Kumar Saroj	Design and development of railway sleepers using recycled waste tyre rubber. (Dr.V.P.Singh, Co-Supervisor)	HBTU	2019
34	Himanshu Gupta	Simulation and experimental study of electrical and mechanical behaviour of CFRP composites. (Dr. J.Bhaskar, Co-Supervisor)	HBTU	2019
35	Abhishek Kumar Gupta	Modelling and experimental analysis of scrap aluminium wire reinforced concrete. (Dr.V.P.Singh, Co-Supervisor)	HBTU	2020
36	Arpit Singh	Optimization of FDM Parameters for improved printing on fabrics	HBTU	2020
37	Pranjul Pal	Design and analysis of 3D printed soft actuators. (Dr. J.Bhaskar, Co-Supervisor)	HBTU	2021
38	Ritul Varrdhan	Modelling and analysis of auxetic structure for sports equipments. (Dr. J.Bhaskar, Co-Supervisor)	HBTU	2021
39	Sushrut Richa	Design and development of 3D printed orthopaedic cast for forearm rehabilitation. (Dr. J. Bhaskar, Co-Supervisor)	HBTU	2021

PhD Supervision

S. No.	Name of student	Title of Thesis	University	Year
1.	Mohit Katiyar	Polymer Composite based microwave absorbers	AKTU, Lucknow	2020

CONFERENCES / SEMINARS /SYMPOSIA / WORKSHOPS ATTENDED

- NAAC Manthan organized by AKTU, Lucknow and Raj Bhawan, April 4-5, 2022.
- National Workshop on ‘PadarthVigyan:NaiChunautiyanavamNaiDishayein’ at DMSRDE, Kanpur, February 04, 2016.
- UKIERI-AICTE Further Education Leadership Programme, NITTTR, Chandigarh, October 12-14, 2015.
- UKIERI-AICTE Further Education Leadership Programme, NITTTR, Chandigarh, March 2-4, 2015.
- UKIERI-AICTE Further Education Leadership Programme, NITTTR, Chandigarh, January 21-24, 2015.
- TEQIP-II Workshop on Curriculum Development in Material Science & Chemical Engineering at IIT, Kanpur, February 22-23, 2014.
- National Workshop on Advanced Functional Materials and Structures at MNIT, Allahabad, July 12-14, 2012.
- One day Workshop on Virtual Instrumentation and Data Acquisition by National Instruments at Kanpur, May 8, 2012.
- Recent Advances in Mechanical Engineering, BSA College of Engineering and Technology, Mathura, March, 2011.
- IV IPS Collaboration Symposium, Waseda Univ., Japan, Nov.17-20, 2010.
- Workshop on Natural Gas Processing and Natural Gas / LPG Pipeline Transportation, GAIL (India) Ltd., NOIDA, June 29- July 01, 2009.
- SPIE Conference on Smart Materials+ Nano- & Micro- Systems, Melbourne, Australia, December 8-12, 2008.
- National Conference on‘PadarthVigyan - Nai Chunautiyan’ at DMSRDE, Kanpur, February, 2008.
- International Conference on Recent Developments in Mechanical Engineering. SUSCET, Tangori, Mohali, Punjab, January, 2008.
- National Conference STEM-2007, College of Technology, G.B.Pant University, Pantnagar, October, 2007.
- National Symposium SMDISA, IIT, Kanpur, March, 2007.
- International Conference on Recent Advances in Composite Materials, India Habitat Centre, New Delhi, February, 2007.
- International & INCCOM-6 Conference on Future Trends in Composite Materials & Processing, IIT Kanpur, December, 2007.
- International Conference on Advances in Mechanical Engineering, BBSBEC, Punjab, December, 2006.
- One day Workshop on Intellectual Property Rights and Patents at SSI, Kanpur, 2006.
- International Workshop on Recent Advances in Biometric Systems at IIT, Kanpur, March, 2005.
- International Symposium on Advanced Materials and Processing at IIT, Kharagpur, December, 2004.
- International Conference on Recent Advances in Composite Materials at IT-BHU, December, 2004.

LIST OF PUBLICATIONS

INTERNATIONAL JOURNALS: 15

1. Sushrut Richa, Jitendra Bhaskar and **Anand Kumar**, *A review on 3D printed orthopedic cast for improved forearm rehabilitation*, International Journal for Research in Applied Science and Engineering (IJRASET), Vol. 9, Issue XI, Nov, 2021. ISSN:2321-9653; (available at www.ijraset.com).
2. Arjun Diwakar, Vinay Pratap Singh and **Anand Kumar**, *Mechanical properties evaluation of concrete with crumb rubber particles used as fine aggregates*, Journal of Engineering Sciences, Usak University, Vol. 4(1), p28-41, June, 2021. [DOI:10.47137 / uujes. 824515].
3. Arpit Singh, Pradeep Kumar Yadav, Kamal Singh, Jitendra Bhaskar, **Anand Kumar**, *Design of 3-D printing fabric for fashion and functional application*, Lecture notes in Mechanical Engineering, p 729-735, Springer Nature Singapore Pte. Ltd., 2021.[https://doi.org/10.1007/978-981-15-8542-5_63].
4. Arpit Singh, Pradeep Kumar Yadav, Jitendra Bhaskar and **Anand Kumar**, *Experimental evaluation of adhesion strength of 3-D printing on cotton fabric in shear mode*, International Journal of Advanced Production and Industrial Engineering (IJAPIE), Vol. 5, Issue 5, 2020.
5. Arpit Singh and **Anand Kumar**, *Effect of fill angle on adhesion strength of 3D print on cotton fabric in shear mode*, International Journal of Advance Research and Innovation (IJARI), Vol 8, Issue 4, 2020.
6. Arjun Diwakar, VinayPratap Singh and **Anand Kuamr**, *Mechanical properties of concrete with crumb rubber particles used as fine aggregates*, Journal of Composite Science, MDPI, 2020 (Withdrawn).
7. Abhishek Gupta, **Anand Kumar** and Vinay Pratap Singh, *FEM analysis of scrap aluminum wire reinforced concrete*, International Journal of Advances in Engineering and Management, Vol. 2, Issue 1, p457-461, July, 2020 [ISSN: 2395-5252 DOI: 10.35629 / 5252-4512232323]
8. Himanshu Gupta, **Anand Kumar** and Jitendra Bhaskar, *Numerical simulation of electrical conductivity for carbon fiber reinforced polymer composite*, International Journal of Engineering Research in Mechanical and Civil Engineering, Vol. 4, Issue 5, May 2019. ISSN (online) 2456-1290.
9. Aditya Kumar and **Anand Kumar**, *Fabrication and mechanical characterization of rigid cellular epoxy material for core application in sandwich panels*, International Journal of Advance and Innovative Research, Vol. 6, Issue 4, **2019**.
10. Mohit Katiyar and **Anand Kumar**, *Development of low density, heat resistant and broadband microwave absorbing materials (MAMs) for stealth applications*, Silicon (Springer), Vol. 10, Issue 5, p1831-39, **2018**.
11. Mohit Katiyar and **Anand Kumar**, *Study and characterization of E M absorbing properties of EPDM ferrite composite containing manganese zinc ferrite*, Journal of Reinforced Composites, Vol. 36, Issue 10, p754-65, **2017**.

12. Jitendra Bhaskar, **Anand Kumar** and Bishakh Bhattacharya, *Dynamic response of selected fruits using Laser Doppler Vibrometer*, ELK Asia- Pacific Journal- Special Issue for Proceedings of International Conference ARIMPIE-2015, ITS Engineering College, Greater Noida, April 10-11, **2015** (ISBN 978-81-930411-4-7).
13. A K Jaiswal, **Anand Kumar** and Bishakh Bhattacharya, *Structural health monitoring of ribbon reinforced composite laminate using piezoelectric sensory layer*, Journal of COMADEM, 11(1), p 9-17, **2008**, ISSN:1363-7681.
14. **Anand Kumar**, and Bishakh Bhattacharya, *Delamination sensing of composite laminate using magnetostrictive sensory layer*, International Journal of Nano- Systems Technology, Electrical Engineering and Electronics Systems, 1(1), p 49-55, **2008**.
15. **Anand Kumar**, *Tribological performance evaluation of tin bronzes with varying tin percentages*, International Journal of Material Research, Electronics and Electrical Systems, 2(1-2), p1-9, Jan., **2009**, ISSN; 0974-6978.

NATIONAL JOURNALS: 05

1. Arjun Diwakar, Vinay Pratap Singh and **Anand Kumar**, *Effect of crumb rubber on the mechanical properties of concrete and future possibilities in building materials*, Vol. 7, Issue 11, GSJ Journal Publication, Nov., **2019**.
2. Himanshu Gupta, **Anand Kumar** and Jitendra Bhaskar, *Analysis of electrical conductivity for carbon fiber reinforced polymer composites*, Journal of Material science and Mechanical Engineering, Vol. 6, Issue 3, p218-223, **2019**. E-ISSN 2393-9109.
3. Vipin Kumar, **Anand Kumar** and V P Singh, *Design and development of railway sleepers using recycled waste tyre rubber*, Journal of Basic and Applied Engineering Research, Vol. 6, Issue 5, p309-312, **2019**.
4. Vipin Kumar, **Anand Kumar** and V P Singh, *Compressive and flexural strength study of railway sleepers using recycled waste tyre rubber*, Journal of Basic and Applied Engineering Research, Vol. 6, Issue 5, p313-318, **2019**.
5. Priyanka Katiyar and **Anand Kumar**, *Characterization of damping behavior of alumina filled nano-composites*, Journal of the Institution of Engineers (India) Part C DOI 10.1007/s40032-016-0241-1May, **2016**.

INTERNATIONAL CONFERENCES: 24

1. Ritul Varrdhan, Jitendra Bhaskar and Anand Kumar, *Static structural analysis for auxetic sports' equipments*, International Conference on Innovation Manufacturing and Mechatronics Forum, Sept, 2021 (iM3F-2021),LNME, Malaysia.
2. Abhishek Gupta, **Anand Kumar** and Vinay Pratap Singh, *Study of important techniques and processes for the management of waste electrical wires*, Second International Conference on Future Learning Aspects of Mechanical Engineering, Amity University, 2020.
3. Arpit Singh, Pradeep Kumar Yadav, Jitendra Bhaskar, **Anand Kumar**, *Design of 3-D printing fabric for fashion and functional application*, Fourth International Conference on Advanced Production and Industrial Engineering (ICAPIE-19), 2019

4. Ashish Awasthi, **Anand Kumar** and S B Yadaw, *Impact strength of polymer matrix composites*, Proceedings of International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods, p4-8 [ISBN: 978-93-66256-70-6], March, **2017**.
5. Ankit Singh and **Anand Kumar**, *Damage detection in composite laminate with eight mats using experimental modal analysis*, Proceedings of International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods, p44-50 [ISBN: 978-93-66256-70-6], March, **2017**.
6. Anubhav Shukla and **Anand Kumar**, *Comparison of package cushioning materials to protect post-harvest vibration damages to apples*, Proceedings of International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods, p79-86 [ISBN: 978-93-66256-70-6], March, **2017**.
7. Husna Maqsood, Mukul Srivastava and **Anand Kumar**, *Study of different reinforcements in aluminum metal matrix composites: a review*, Proceedings of International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods, p217-220 [ISBN: 978-93-66256-70-6], March, **2017**.
8. Mohit Katiyar and **Anand Kumar**, *Study and characterization of microwave absorbing composite using free space measurement system in X-band*, Proceedings of International Conference on Design, Materials and Manufacturing Concerns in Production of Quality Engineering Goods, p104-110 [ISBN: 978-93-66256-70-6], March, **2017**.
9. **Anand Kumar** and Priyanka Katiyar, *A study on damping characteristics of alumina filled epoxy nano-composites*, Proceedings of SPIE International Conference on Smart Materials, Nano- and Micro- Smart Systems, San Diego, USA, **2013**. doi:10.1117/12.2012150.
10. Arpit Kumar Srivastava and **Anand Kumar**, *Comparative studies on laminated composite beam using narrow and wide beam criterion*, Proceedings of International Conference on Research and Innovation in Mechanical Engineering, GNDREC, Ludhiana, October, **2013**.
11. Ankit Saini and **Anand Kumar**, *Development and performance evaluation of water resistant corrugated board for packaging*, Proceedings of International Conference on Research and Innovation in Mechanical Engineering, GNDREC, Ludhiana, October, **2013**.
12. **Anand Kumar**, Peter J Fleming and Bishakh Bhattacharya, *Vibration suppression and damage detection in smart composite laminate using high precision finite element*, Proceedings of SPIE International Conference on Smart Structures and Materials + Nondestructive Evaluation and Health Monitoring, paper no. 7982-41, San Diego, USA, **2011**, doi: 10.1117/12.880351.
13. **Anand Kumar**, *Structural health monitoring of composite plate using experimental modal analysis on Laser Doppler Vibrometer*, IVth IPS International Collaboration Symposium, Waseda University, Japan, 17-19 Nov., **2010**.
14. **Anand Kumar** and Bishakh Bhattacharya, *Real time integrity monitoring of composite laminates with magnetostrictive sensory layer*, Proceedings of SPIE International Conference on Smart Materials, Nano- and Micro- Smart Systems, paper no. 7268-24, Melbourne, Australia, **2008**. doi: 10.1117/12.810614.

15. **Anand Kumar** and Bishakh Bhattacharya, *Delamination sensing in composite laminates using magnetostrictive sensory layer*, International Symposium on Procession and Fabrication of Advanced Materials – XVII, paper no. AC-028, IIT Delhi, pp600-614, **2008**.
16. **Anand Kumar** and Bishakh Bhattacharya, *Health and usage monitoring of composite structures with smart magnetostrictive sensory layer*, Proceedings of ISRS-2008, IIT. Madras, **2008**.
17. J Bhaskar, **Anand, Kumar** and Vinay Pratap Singh, *Non-uniform rational B-Spline (NURBS) for object modeling*, ICRDME 2008, pp 644-649, SUSCET, Mohali, Punjab, Jan **2008**.
18. **Anand Kumar** and Bishakh Bhattacharya, *Studies on effectiveness of magnetostrictive sensors in delamination sensing of laminated composites*, Proceedings of International & INCCOM-6 Conference on Future Trends in Composite Materials and Processing, IIT, Kanpur, **2007**.
19. Ajai Prasad Nigam and **Anand Kumar**, *Analysis of failure through delamination in composite laminate using Terfenol-D layer*, Proceedings of International & INCCOM-6 Conference on Future Trends in Composite Materials and Processing, IIT, Kanpur, **2007**.
20. **Anand Kumar** and Bishakh Bhattacharya, *Structural health monitoring of composite laminate with embedded smart magnetostrictive sensors*, International Conference on Recent Advances in Composite Materials, India Habitat Centre, New Delhi, pp571-574, Feb., **2007**, ISBN:81-8424-175-5.
21. **Anand Kumar** and Bishakh Bhattacharya, *Failure prediction of composite laminate with embedded smart magnetostrictive sensors*, Proceedings of International Conference on Advances in Mechanical Engineering, BBSB Engineering College, Punjab, pp227-232, Dec, **2006**.
22. **Anand Kumar**, *Integrity monitoring of composite structures using Terfenol-D*, International Conference on Recent Advances in Composite Materials, IT-BHU, Dec., **2004**.
23. **Anand Kumar** and B. Bhattacharya, *Delamination detection in composite beam using magnetostrictive materials as sensor*, International Conference on Recent Advances in Composite Materials, IT-BHU, Dec., **2004**. (Awarded best poster presentation prize).
24. **Anand Kumar** and B. Bhattacharya, *Delamination sensing of composite laminates using magnetostrictive materials as distributed sensor*, International Symposium on Advanced Materials and Processing, IIT, Kharagpur, vol. 2, pp 1602-1613, Dec., **2004**.

NATIONAL CONFERENCES: 20

1. Ankit Saini, **Anand Kumar** and S B Yadaw, *Development of aluminum foil corrugate board for packaging*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p3-9, **2015**, ISBN:978-93-84869-47-2.
2. Ankit Singh and **Anand Kumar**, *Damage detection in composite laminate using experimental modal analysis*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p56-68, **2015**, ISBN:978-93-84869-47-2.
3. Ashish Awasthi, **Anand Kumar** and S B Yadaw, *Strength properties of polymer matrix composites and its validation through ANSYS*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p115-133, **2015**, ISBN:978-93-84869-47-2.
4. MohitKatiyar, J N Srivastava, **Anand Kumar** and R K Singh, *Study of mechanical and microwave absorption properties of rubber-ferrite composites*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p181-190, **2015**, ISBN:978-93-84869-47-2.
5. Kartikeya Dixit and **Anand Kumar**, *Performance evaluation of aluminum honeycomb sandwich panels with different cell sizes*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p234-244, **2015**, ISBN: 978-93-84869-47-2.
6. Varun Kumar Singh and **Anand Kumar**, *Analytical and experimental performance evaluation of glass fiber composite and conventional steel leaf spring*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p255-265, **2015**, ISBN: 978-93-84869-47-2.
7. A P Sharma and **Anand Kumar**, *Improvement in wear resistance of M-35 HSS hob cutter by plasma nitriding*, Proceedings of National Conference on Innovations in Materials, Design & Manufacturing, HBTI Kanpur, p321-325, **2015**, ISBN: 978-93-84869-47-2.
8. Arpit Kumar Srivastava, Arpit Srivastava, Yastuti Rao Gautum and **Anand Kumar**, *Design optimization of recuperator for micro turbine*, Proceedings of National Conference on Technological Development in Mechanical Engineering, SRM College of Engineering & Technology, April, **2014**.
9. Kartikeya Dixit and **Anand Kumar**, *A review on sandwich and honeycomb panel composites for structural usages*, Proceedings of National Conference on Emerging Frontiers in Mechanical Engineering, HBTI, Kanpur, February, **2014**.
10. AvanindraNathYadav and **Anand Kumar**, *Buckling load analysis of laminated composite plates with different fiber orientations*, Proceedings of All India Seminar on Advances in Materials & Material Selection in Design HBTI, Kanpur, p191-200, August 24-25, **2012**.
11. Mahipal Singh and **Anand Kumar**, *Improvement in the strength of gun barrel by modified autofrettage regime*, Proceedings of All India Seminar on Advances in Materials & Material Selection in Design HBTI, Kanpur, p201-213, August 24-25, **2012**.

12. Anil Kumar Yadav and **Anand Kumar**, *Thermal and mechanical characterization of aero-grade PMMA for cockpit windscreen*, Proceedings of All India Seminar on Advances in Materials & Material Selection in Design HBTI, Kanpur, p183-190, August 24-25, **2012**.
13. Rashmi Rani Maheshwari and **Anand Kumar**, *Damage prediction through modal analysis using Laser Doppler Vibrometer*, Proceedings of All India Seminar on Advances in Materials & Material Selection in Design HBTI, Kanpur, p231-2238, August 24-25, **2012**.
14. Dinesh Kumar Pandey and **Anand Kumar**, *Experimental modal analysis for health monitoring of composite structures using Laser Doppler Vibrometer*, Proceedings of All India Seminar on Advances in Materials & Material Selection in Design HBTI, Kanpur, p50-58, August 24-25, **2012**.
15. **Anand Kumar**, *Structural health monitoring of composite laminate using smart magnetostrictive sensory layer*, National Workshop on Advanced Functional Materials and Structures, MNIT, Allahabad, July 12-14, **2012** (Won second prize in poster presentation).
16. **Anand Kumar**, *Real time structural integrity monitoring using piezo-ceramics*, National Workshop on Appropriate Technologies and Equipments for Non Destructive Testing of Industrial Products, G.B. Pant University, April, **2003**.
17. **Anand Kumar**, *Effect of operating variables on tribological behavior of aluminum and tin bronzes*, Proceedings of 11th ISME Conference, IIT, Delhi, **1999**.
18. **Anand Kumar**, *Evaluation of wear performance of commercial brass and muntz metal*, Proceedings of Recent Advances in Mechanical Engineering, REC, Kurukshetra, pp 9-14, **1997**.
19. **Anand Kumar**, *Tin bronzes as bearing materials: A tribological study*, Proceedings of 10th ISME Conference, Delhi College of Engineering, pp 1-107-113, **1996**.
20. **Anand Kumar**, *Tribological behavior of tin bronzes against mild steel*, Proceedings of 9th ISME Conference, University of Roorkee, vol. 2, pp 1019-1022, **1994**.

MEMBERSHIP OF SCIENTIFIC / PROFESSIONAL BODIES

- Fellow, Institution of Engineer's (India)
- Executive Member, Institution of Engineer's (India) for 4 terms
- Member, SPIE (International Society of Optics and Photonics), 2008-09
- Member, Indian Science Congress, 2010
- Life Member, IIT Kanpur Alumni Association

OTHER IMPORTANT ASSIGNMENTS

- Member, Selection Committee for Technical Personnel at IIT Kanpur
- Technical Expert / Advisor, Public Service Commission, U P
- Technical Expert / Advisor, Public Service Commission, M P
- Technical Expert / Advisor, Public Service Commission, Uttarakhand
- Member, Selection Committee, GCTI, Kanpur for CAS promotions
- Expert Member, AICTE Visits for Evaluation of Technical Institutes
- Member, Course Curriculum Committee, IRDT, Kanpur
- Member, Course Curriculum Committee, CSJM, Kanpur
- Project Evaluator and Supervisor, The Institution of Engineers (India)
- Member, Enquiry Committee, CSJM, Kanpur
- Elected Vice-President, HBTI Teachers' Association, 2008-09
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Updated: April 21, 2022