



Apurbba Kumar Sharma, Ph.D.

**Associate Professor,
Mechanical and Industrial Engineering
Indian Institute of Technology Roorkee
Roorkee – 247 667**



General

Apurbba Kumar Sharma, currently an Associate Professor in the Department of Mechanical and Industrial Engineering at the Indian Institute of Technology Roorkee, Roorkee – 247 667, India, can be reached at +91-1332-285421, 9411100286 (e-mail: akshafme@iitr.ernet.in, akshafme@gmail.com). Presently, he is also Associate Dean, Academic Studies.

Born to **Smt. Bidhu Bala Devi** and **Shri Rajat Chandra Sharma** in Nalbari district of Assam, India, Shri Sharma possesses a simple personality and has deep interest in teaching and research. Trained in the Laboratory of **Professor R. Krishnamurthy** of IIT Madras, Shri Sharma adores nature and is a firm believer of human values. Apurbba Kumar Sharma resides in the A-103, Canal View Apartments, I I T Roorkee campus with lovely daughters- **Natasha** (16), **Ruchira** (9) and wife **Himadri** who is working as an Assistant Professor in the School of Management, COER, Roorkee.

Education

| Degree/ Dip. | Discipline / Specialisation | Division / Grade | Year | University/ Institute |
|--------------|---|------------------|------|-----------------------|
| B.E. | Mechanical Engg. | First | 1988 | Dibrugarh University |
| P.G.DIP. | Instrumentation | First | 1989 | Gauhati University |
| M. Tech. | Computer Integrated Manufacturing (CIM) | 8.27 (CGPA) | 1996 | IIT Madras |
| Ph. D. | Manufacturing (Surface Engg.) | -- | 2003 | IIT Madras |

BRIEF RESUME

Dr. Apurbba Kumar Sharma is currently an Associate Professor in the Department of Mechanical and Industrial Engineering at IIT Roorkee, India. Currently, he is also holding the posts of Associate Dean, Academic Studies in this Institute and Chairman, Institute Academic Performance Evaluation Committee, IIT Roorkee.

He has obtained his Bachelor degree from Dibrugarh University, Assam. He has subsequently obtained his Masters and Ph D degrees from IIT Madras.

Research interests of Dr Sharma include:

1. Advance Manufacturing Methods, Hybrid Processes
2. Microwave Material Processing (in particular - Microwave Drilling, Microwave Casting, Microwave joining, Microwave Cladding)
3. Surface Engineering

Dr. Sharma has five Indian Patents to his credit.

He has published more than 90 research papers in International Journals. He has also presented/published more than 110 research papers in various International and National Conferences.

Dr. Sharma is also a reviewer of several reputed international journals including – Journal of Manufacturing Processes, Journal of Advanced Manufacturing Technology, Proceedings of the IMechE Part B: Journal of Engineering Manufacture, Proceedings of the IMechE Part E: Journal of Process Mechanical Engineering and Surface and Coatings Technology, Surface Engineering and *Kovové Materiály*-Metallic Materials. He has also edited one International Conference Proceedings.

He has developed a Full Web-based Video Course on “Advanced Manufacturing Processes” under the NPTEL Programme of the Government of India. He has also developed a course as the Principal Developer on “Principles of Industrial Engineering” for undergraduate students under the Pilot Phase of the National Mission Project on Pedagogic Development, Sponsored by the Ministry of Human Resources Development (MHRD), Govt. of India.

Dr. Sharma has advised/supervised **TEN** Ph. D. programs and FIVE others are in-progress. He has also supervised Thirty Eight Masters Dissertations and Twenty Five Bachelor Dissertations.

He was working as a DAAD (Germany) Fellow in the Pulsed Power and Microwave Technique (IHM), Karlsruhe Institute of Technology (KIT), Germany.

He has completed three funded research projects, and two other projects funded by CSIR, and BRNS, Govt of India are in progress. He has also completed few consultancy works.

Dr. Sharma is associated with several professional bodies which include- Fellow of the Institution of Engineers (India), Member of American Society of Mechanical Engineers, USA, Member of Society of Manufacturing Engineers (SME), USA, Member of Global Science and Technology Forum (GSTF), Singapore, Member of Materials Research Society of India, Member of the Indian Institute of Industrial Engineers and a member of ISTE, New Delhi.

He has organized SEVEN AICTE (QIP) sponsored Short Term Courses, Four AICTE Sponsored Workshops and Two self-sponsored Courses.

Dr. Sharma is also representing IIT Roorkee as the Principal Member in the Pneumatic Tools Sectional Committee, PGD08 of Production and General Engineering Department at the Bureau of Indian Standards, New Delhi.

In addition to his normal duties, Dr. Sharma is currently holding the position of Associate Dean, Academic Studies and Chairman, Institute Academic Performance Evaluation Committee of IIT Roorkee and is instrumental in formulating and implementing the new Programme Structures for UG and PG Programmes at IIT Roorkee. He is also a member of Board of Studies of other universities as well.

Dr. Apurbba Kumar Sharma has chaired several Technical Sessions in prestigious International Conferences including in ASME sponsored Manufacturing Science and Engineering Conference (MSEC) in the USA.

Dr. Sharma has delivered several Expert / Invited Lectures in several institutions of repute.

Patent Obtained

| Sl No | Title of the Patent | Investigators | Patent Number and Year | Brief Description |
|-------|--|--|--|---|
| 1. | Articles of Glazed Ceramic Composites on Metal Substrates and Method of Manufacture Thereof. | Apurbba Kumar Sharma and R. Krishnamurthy | Indian Patent No.199106 (563/MAS/2001) Year: 2006 | A new technique for glazing of plasma sprayed ceramic composite surfaces by controlled exposure of microwave radiation. Glazed surfaces reveal annihilation of spraying defects and improvement in functional properties of the deposits. The technique is considerably fast and considered as a green material processing technique. |
| 2. | A method of joining of bulk metallic materials by microwave hybrid heating. | Dr A K Sharma M S Srinath Dr Pradeep Kumar | Indian Patent Application No. 1994/DEL/2009 Year: 2009 | A new technique for joining of bulk metallic materials by controlled exposure of microwave radiation. |
| 3. | A method of developing metallic cladding/ coating on metallic substrates by microwave irradiation. | Dr A K Sharma Dheeraj Gupta | Indian Patent Application No. 527/DEL/2010 Date: 09.03.2010 | A new technique for developing cladding / coating of metallic / non-metallic materials on metallic surfaces by controlled exposure of microwave radiation. |
| 4. | A natural polymer abrasive media for the abrasive flow machining and a process for preparation thereof | Dr. A K Sharma Rajesha S G Venkatesh Dr Pradeep Kumar | Indian Patent Application No. 1349/DEL/2011 Date: 09.05.2011 | A new product in the form of semi-solid natural polymer, which will be used as an abrasive carrier for Abrasive Flow Machining Process. It acts as a deformable stone and has good thermal stability. |
| 5. | An improved ultrasonic abrasive flow machining and a device therefor | Dr. A. K. Sharma Dr Pradeep Kumar Rajesha S | Indian Patent Application No. 3578/Del/2011 Date: 09.12.2011 | This invention relates to a development of new hybrid process. The developed process is capable of enhancing the performance many folds while compared with traditional AFM process. Developed process is capable of finishing advance materials efficiently and yields reduction in the process cost. |
| 6. | A method of micro-drilling with microwaves through metallic concentrator | Apurbba Kumar Sharma , Shantanu Das, Nitin Kumar Lautre, Titto John George, Rajesh Kumar and Pradeep Kumar, | Application No.: 201621004759, February 10, 2016. | A new technology for micro-hole drilling with microwave energy. A metallic concentrator is used as the tool. The process is fast (a 02 mm thick glass plate can be drilled within 4 seconds, suitable for micro-fabrication. |
| 7. | In-situ microwave casting | Dr. A. K. Sharma Mohit Choudhury Saurabh Puri | Applied For (2013) | A new technology for casting process that has higher yield per unit processing time. |
| 8. | A device for multiple operations in ultrasonic machining. | Akshay Dvivedi, Manjot Singh Cheema and Apurbba Kumar Sharma | Applied For (2014) | A novel device that enables multiple operations like Turning, Drilling, Thread cutting in a conventional Ultrasonic Machine. |

Fellowship/Scholarship Awarded

A. International

1. **DAAD Research Fellowship** under Faculty Exchange Programme 2011, Federal Republic of Germany.

B. National

1. **National Merit Scholarship**, Govt. of India.

Outline of the Self Ph. D. Work

Dr. Apurbba Kumar Sharma was involved in a Full-Time Research Program in the Mechanical Engineering Department of Indian Institute of Technology Madras, Chennai, leading to the Ph.D. Thesis on '**Microwave Glazing of Plasma Sprayed Ceramic Composite Coatings and Their Characterisation**'. The research is concerned with application of Microwave Energy for processing of ceramics/ ceramic composites. Two major aspects have been addressed- characterisation of plasma spray deposited alumina-titania ceramic composites including defects characterisation, and microwave glazing of plasma sprayed ceramic composites for defect annihilation and performance enhancement. A new approach, called MICROWAVE GLAZING has been proposed for post processing of plasma sprayed coatings. Multidisciplinary characterisation techniques have been used to characterize the coatings. Both Materials and Mechanical aspects have been explored during characterization through Structural, Chemical, Mechanical, Physical and Functional evaluation techniques. Structure-property correlation has been highlighted. The research work yielded the following:

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| a. Indian Patent | : | One |
| b. Paper published in Journals | : | Eight |
| c. Papers presented/published in Conferences | : | Eighteen. |

Research Interests

1. Advanced Manufacturing Methods, Hybrid Finishing Processes
2. Microwave Material Processing (Microwave Joining of Similar and Dissimilar Materials, Microwave Cladding/ Coating)
3. Surface Engineering

Summary of Research Publications *(Details on page 22)*

| SI No | Patent | Total | Present Status | |
|-------|---------------|--------------------|----------------|------------|
| | | | Awarded | Registered |
| 1. | Indian Patent | 06+02 (A/F) | 01 | 05 |

| SI No | Journal / Conference | Total | Present Status | |
|-------|---------------------------|-----------|----------------|---------------------|
| | | | Published | In-press / Accepted |
| 2. | Journal Papers | 94 | 94 | -- |
| 3. | International Conferences | 76 | 76 | -- |
| 4. | National Conferences | 34 | 34 | -- |

Publication Metrics

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|----|-------------------------------|--------------|
| 1. | Citations (Google Scholar) | 746 |
| 2. | h-index (Google Scholar) | 17 |
| 3. | i10-index (Google Scholar) | 25 |
| 4. | RG Score (Research Gate) | 30.84 |
| 5. | Impact Points (Research Gate) | 94.09 |

Research Guidance

[A] Ph. D. Thesis Supervision (10+05)

| SI No | Title/Area of research | Name of scholar | Co supervisor, if any | Status |
|-------|--|--|-----------------------|-----------------------------|
| 1. | Microwave drilling of metal-based materials | Gaurav Kumar (July, 2015 -) | -- | In-progress |
| 2. | An Ultrasonic Micro Machining Approach to Fabricate Microchannels on Glass | Dungali Sreehari (January, 2015 -) | -- | In-progress |
| 3. | Development and characterisation of in-situ microwave casting process | Radha Raman Mishra (July, 2014 -) | -- | In-progress |
| 4. | Investigations on Retreading Tyre Supply Chain | Lokesh Saxena (March, 2015 -) | Dr. P K Jain | In-progress |
| 5. | Development of nano cladding for wear resistance | Sunny Zafar (July, 2013 -) | -- | Defended (Aug 12, 2016) |
| 6. | Some Studies on performance enhancement of ECDM process using rotary tools | Mudimallana Goud (July, 2013 -) | -- | In-progress |
| 7. | Investigations on Microwave drilling of Characteristically different materials | Nitin Kumar Lautre (July, 2012 – Sept, 2015) | Dr. Pradeep Kumar | Defended (Sept 20, 2016) |

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|-----|---|---|--------------------|--------------------------------|
| 8. | Performance Analysis of Ultrasonic Assisted Abrasive Flow Machining Process | Gudipadu Venkatesh (Jan, 2012 – May, 2015) | Dr. Pradeep Kumar | Defended (Sept 11, 2015) |
| 9. | An Ultrasonic Micro Machining Approach to Fabricate Microchannels on Glass | Manjot Singh Cheema (July, 2011 – June, 2015) | Dr. Akshay Dvivedi | Defended (Sept 08, 2015) |
| 10. | Fusion Joining of Advanced Materials using Microwave Hybrid Heating | Amit Bansal (July, 2011 – Dec, 2014) | Dr. Pradeep Kumar | Defended (May 04, 2015) |
| 11. | Parametric studies on Micro ECDM of Optical glass and Ceramics | C. S. Jawalkar (July, 2010 – July, 2013) | Dr. Pradeep Kumar | Defended (January 31, 2014) |
| 12. | Some Studies on Development of Microchannels Using Micro Ultrasonic Machining | Vivek Jain (July, 2010 – April, 2012) | Dr. Pradeep Kumar | Defended (June 09, 2012) |
| 13. | Microwave Cladding of Metal-based Materials and their Characterisation | Dheeraj Gupta (Jan, 2009 – Jan, 2012) | -- | Defended (May 22, 2012) |
| 14. | Joining and Characterisation of Metallic Materials through Microwave Hybrid Heating | M S Srinath (July, 2009 – May, 2011) | Dr. Pradeep Kumar | Defended (Oct. 17, 2011) |
| 15. | Some Studies to Enhance the Capabilities of Abrasive Flow Machining Process | Rajasha S (July, 2009 – Feb, 2011) | Dr. Pradeep Kumar | Defended (May 27, 2011) |

[B] Masters Thesis Supervision (Total : 42 + 03)

| SI No | Title /Area of research | Name of scholar | Co supervisor, if any | Status |
|-------|---|-----------------------------|-----------------------|--------------------------|
| 1. | A New Design and Fabrication of Flute | Dhruv Narayan | Dr. Akshay Dvivedi | In-Progress (2016–17) |
| 2. | Joining of pipes by Microwave Energy | Dheerendra Gamit | -- | Awarded (2015–16) |
| 3. | Some studies on ECDM of MMCs | Debabrata Naskar | Dr. Akshay Dvivedi | In-Progress (2015–16) |
| 4. | Study of Concentrator in Microwave Machining of Materials | Parvej | -- | Awarded (2015–16) |
| 5. | Machining of Silicon Wafers using Ultrasonic Machining | Shailesh Kumar Gupta | -- | Awarded (2015–16) |
| 6. | Microwave curing of Natural fiber reinforced PMCs | Gaurav Kumar | Dr. Inderdeep Singh | In-Progress (2015–16) |
| 7. | Machining of hard to cut materials using ECDM | Sachin Baghel | Dr. Inderdeep Singh | Awarded (2014–15) |
| 8. | Comparative Analysis of Polymer Matrix Composites Processed by Microwaves and Compression Molding | Prag Sharma | Dr. Inderdeep Singh | Awarded (2014–15) |

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|-----|---|----------------------------------|---------------------|-------------------|
| 9. | Parametric Investigations on Electrochemical Discharge Form Machining | Khandelwal Gaurav Prakash | Dr. Akshay Dvivedi | Awarded (2014–15) |
| 10. | Some Studies on Weldability Aspects of Nitronic Steels | Naveen Kumar | Dr. Navneet Arora | Awarded (2014–15) |
| 11. | Fabrication of closed microchannel using USM | Saurav Acharya | -- | Awarded (2013–14) |
| 12. | Processing of industrial wastes using microwaves | Vaibhav Bist | Dr. Pradeep Kumar | Awarded (2013–14) |
| 13. | Machining of Al-alloy using USM | Dungali Sreehari | Dr. Akshay Dvivedi | Awarded (2013–14) |
| 14. | Microwave joining of MMCs | Jeevan Bist | Dr. Akshay Dvivedi | Awarded (2013–14) |
| 15. | Some studies in Rotary ECDM | Faraz Ansari | Dr. D B Karunakar | Awarded (2013–14) |
| 16. | Investigation on effect of process parameters for enhancing capabilities of micro USM | Sunil Kumar Maddeshia | Dr. Pradeep Kumar | Awarded (2012–13) |
| 17. | Investigation on Finishing of External surfaces using abrasive Flow Machining | Tarlochan Singh | Dr. Akshay Dvivedi | Awarded (2012–13) |
| 18. | Characterisation of MMCs developed using different moulding materials | Ramesh Babu Ningala | Dr. P K Jha | Awarded (2012–13) |
| 19. | Investigations on dry-sliding and erosion wear of microwave induced wear resistant surfaces | Sunny Zafar | Dr. Navneet Arora | Awarded (2012–13) |
| 20. | Development and characterisation of sustainable polymeric composites using microwaves | Mali Akshay Atul | Dr. Inderdeep Singh | Awarded (2012–13) |
| 21. | Studies on Fabrication of Microchannels | Saurabh Swain | Dr. Pradeep Kumar | Awarded (2011–12) |
| 22. | Modeling and simulation of Ultrasonic Assisted AFM process | Gaurav Arora | Dr. Pradeep Kumar | Awarded (2011–12) |
| 23. | Modeling and simulation of Microwave Joining process | John George Tito | Dr. Pradeep Kumar | Awarded (2011–12) |
| 24. | Development of Green Composites using Microwave energy | Sabir Ali | Dr. Inderdeep Singh | Awarded (2011–12) |
| 25. | Characterisation of sustainable composites | Anil Sharma | Dr. Inderdeep Singh | Awarded (2011–12) |
| 26. | Finishing of EDMed Inconel 718 Surface through Abrasive Flow Machining | Pramod Kumar Patnaik | Dr. Pradeep Kumar | Awarded (2010–11) |
| 27. | Experimental Investigation of Various Process Parameters While Machining Glass Through Micro- USM | Vineet Chak | Dr. Pradeep Kumar | Awarded (2010–11) |
| 28. | Modeling and Simulation of Microwave Metal Interaction and its Validation | P. Suryanarayana Murthy | Dr. Pradeep Kumar | Awarded (2010–11) |
| 29. | Development and | Prabhakar M. Bhovi | Dr. Sushanta | Awarded |

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|-----|---|-----------------------------------|---------------------|-------------------|
| | Characterization of Jet Slurry Erosion Resistant Metallic Cladding on Austenitic Stainless Steel | | Dutta | (2010–11) |
| 30. | Development of New Polymer Media for Abrasive Flow Machining | G Venkatesh | Dr. Pradeep Kumar | Awarded (2009–10) |
| 31. | Optimization of Process Parameters in Microwave Joining of Metallic Materials in a Multimode Microwave Applicator | Chintam Suresh Kumar | Dr. Pradeep Kumar | Awarded (2009–10) |
| 32. | Theoretical Studies on the Material Grain Development during Severe Plastic Deformation (SPD) Process | Venkata Subbarayudu Pesala | -- | Awarded (2009–10) |
| 33. | Behaviour of Closed-Cell Aluminium Foam under Impact Loading as Energy Absorber | Vaidya Sudarshan Vishnurao | Dr. Inderdeep Singh | Awarded (2009–10) |
| 34. | Investigation on Influence of Process Parameters of Electro Discharge Machining of Al 7075 SiC Composite | Kunal Nawasagare | Dr. D B Karunakar | Awarded (2009–11) |
| 35. | Numerical Simulation of ballistic impact on polymer matrix composite material | Sunil Kumar | Dr. Inderdeep Singh | Awarded (2008-09) |
| 36. | Maintenance prevention Design and equipment planning for OEE implementation | Sanjit Singh | Dr. Dinesh Kumar | Awarded (2008-09) |
| 37. | Electrochemical honing of helical gears | Joy Prakash Mishra | Dr. N. K. Jain | Awarded (2008-09) |
| 38. | FE analysis of honeycomb structures | Milind Gharge | Dr. Inderdeep Singh | Awarded (2008-09) |
| 39. | Numerical simulation of low velocity and Ballistic impact on polymer composite Laminated structures | Durga Shankar Gupta | Dr. Inderdeep Singh | Awarded (2007-08) |
| 40. | Design and analysis of Insertion mechanism and trajectory control for in-vivo robot for stomach biopsy | Sreenath Reddy | Dr. P. M. Pathak | Awarded (2007-08) |
| 41. | Development of Electrochemical Honing for finish machining of spur gears | Ramlal Naik | Dr. N. K. Jain | Awarded (2007-08) |
| 42. | Maintenance strategy selection | Uday Devekar | Dr. Dinesh Kumar | Awarded (2007-08) |
| 43. | Modeling and dynamic analysis of biocompatible robotic arm | Chandekar Bhupendra Gopal | Dr. P. M. Pathak | Awarded (2006-07) |
| 44. | Diamond grinding of Thermal spray deposits | L. Deshpandulal | -- | Awarded (2006-07) |
| 45. | Some studies on effect of process parameters on process performance in hybrid abrasive flow machining | K. Malla Reddy | Dr. Pradeep Kumar | Awarded (2006-07) |

[C] Undergraduate (B. Tech.) Dissertation Supervision (Total : 28 = 01)

| Sl. No. | Degree | Title of Dissertation | Name of student | Co supervisor, if any | Year |
|---------|------------------------------------|---|---|-----------------------|------------------------|
| 1. | B.Tech. (Indl. &Prod. Engg.) | Development of a customer-bid based model for pricing cab fare. | Apurv Maheshwari Utkarsh Narayan Yash Gupta | -- | In-progress 2016–17 |
| 2. | -do- | Analysis of Manufacturing Systems using Predictive Decision Model | Tanmay Jain Nikhil Guria Diksha Meena | -- | 2015–16 |
| 3. | -do- | Analysis of Facilities in the MIED, IIT Roorkee | Varun Pallav Jain | -- | 2015–16 |
| 4. | -do- | DSS for Site Selection | Ashish Taneja Mohit Hemrajani Rohit Pathak | -- | 2014–15 |
| 5. | -do- | Processing of Materials with Microwaves for Joining Applications | Akash Chaudhury Mahipat Shahi Rahul Jain | -- | 2014–15 |
| 6. | - Do - | Characterisation of microwave cast. | Revti Raman Suman Kumar Suman Manu Mrinal | -- | 2013–14 |
| 7. | - Do - | Development of microwave casting. | Mohit Chaudhary Sourabh Puri | -- | 2012–13 |
| 8. | - Do - | Characterisation of microwave sintered mechanical elements. | Abhay Jain Anuj Gang Bhartendu Sirohi | -- | 2012–13 |
| 9. | - Do - | Microwave processing of green composites | Aniket Modi Himanshu Sharma | Dr. Inderdeep Singh | 2012–13 |
| 10. | - Do - | Development and characterisation of Microwave cladding of Inconel on stainless steel. | Archana Singh Manisha Rana | -- | 2011–12 |
| 11. | - Do - | Modeling and Simulation of Hybrid Abrasive Flow Machining (AFM) | Prateek Rai | -- | 2010–11 |
| 12. | - Do - | Automation of motion control system for Micro USM | Anant Saxena Lalit Mohan Singh Meena Lokesh Gulati Manoj Meena | -- | 2010–11 |
| 13. | - Do - | Design and Fabrication of Abrasive Jet Machine with emphasis on Nozzle Design | Rohit Srivastava Sharwan Ram Kumhar Shashank Shekhar | -- | 2009–10 |
| 14. | - Do - | Development of Copper Coating on Graphite using Microwave Field | Anshul Meshram Sameer Kumar Mandal Satya Pal Singh | -- | 2009–10 |

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|-----|---------------------|---|---|-------------------|---------|
| 15. | - Do - | Assessment of HAZ in EDMed surface | Samrat Maji Tuhin Harit Rohitash Kumar (M.E.) | -- | 2008-09 |
| 16. | - Do - | Index of Agility in Indian Two Wheeler Manufacturing Industry | V. Chabra, V. Jain | -- | 2006-07 |
| 17. | - Do - | Fabrication and Testing of thin CFRP | Kumar Pritom S. Sharma A. Agarwal | Dr. I. Singh | 2006-07 |
| 18. | B. E. (Mech. Engg.) | Adaptive Slicing for Effective Rapid Prototyping | S. Mohan N. Chakravarthy B. Das | -- | 2005 |
| 19. | - Do - | PC-Based Automatic Check Gate Operation System | D.Nath P.P. Bora P.P. Dutta | -- | 2005 |
| 20. | - Do - | Design of a Bamboo Shoot Peeling Cutter | Indra Mohan Das Ekbal Hussain Prodhani Saurabh Bikas Borah Pallab Kumar Kalita | Dr. Plabon Kakoti | 2005 |
| 21. | - Do - | A Study on Rapid Prototyping Processes With Special Emphasis on Three-Dimensional Deposition Method | B. Goswami B. Sharma P. P. Maut | -- | 2004 |
| 22. | - Do - | Study of CNC Systems and development of a CNC Integrated Software | K. Churanjit B. Gogoi A. Chakraborty | -- | 2004 |
| 23. | - Do - | Design and Fabrication of a Low Cost Solar Electric Hybrid Dryer for Mushroom | Rajib Kr. Singh | -- | 1999 |
| 24. | - Do - | Design and Fabrication of a Mechanised Device for Surface Finishing | A. K. Sharma M. K. Agarwal | -- | 1998 |
| 25. | - Do - | Design and Fabrication of a Walking Robot | Rana Saikia | -- | 1998 |
| 26. | - Do - | Development of a Computerised Parts coding System : A Group Technology Approach | I. Haque D. Singh T. Deka Agha J. Khan | -- | 1997 |
| 27. | - Do - | Microstructure Study of a few Common Mechanical Elements Subjected to Dynamic Thermal Load | J. Devi L.Rajkhowa | -- | 1997 |
| 28. | - Do - | Robotic Engineering : An Overview with Solution of Direct Kinematics Problem involved in Robot | Mohan K. Taye B. Deka P. Deori | Dr S M Hazarika | 1994 |

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|-----|--------|---|------------------|----|------|
| | | Manipulator | | | |
| 29. | - Do - | Design Considerations of an Orifice Meter | D. Chetri | -- | 1993 |

Ph. D. Examiner

| SI No | Title of the Thesis | Name of scholar (Date of Exam) | Supervisor(s) | Institute/ University |
|-------|--|--------------------------------------|---|--|
| 1. | Performance Assessment of Vegetable Oil based Nano Cutting Fluids in Turning AISI 1040 Steel | Smt. Padmini R (11.07.2016) | Dr. P. Vamsi Krishna (NIT, Warangal) & Dr. K G Krishna Rao (JNTU) | Jawaharlal Technological University, Hyderabad |
| 2. | Investigations on Tribological and Machining Characteristics of Aluminium Rice Husk Ash Composite | S D Saravanan (05.12.2015) | Dr. Senthil Kumar (PSG College, Coimbatore) | Anna University, TN |
| 3. | Improving the surface properties of superalloys by electrical discharge machining process. | Anoop Kumar Singh (24.09.2015) | Dr. Sanjiv Kumar Dr. V P Singh | PEC University of Technology Chandigarh, India |
| 4. | Surface alloying by electrical discharge machining process using powder metallurgy electrodes | Amoljit Singh Gill (24.09.2015) | Dr. Sanjiv Kumar | PEC University of Technology Chandigarh, India |
| 5. | A Study on Tribological Behaviour of Composite Materials | Sudarashanrao K (26.08.2015) | Dr. Y S Varadarajan (NIE, Mysuru) | VTU, Belgaum |
| 6. | Studies on Grindability of Inconel 751 with various Cooling Strategies | A S S Balan (11.07.2014) | Professor L. Vijayaraghavan | I.I.T. Madras |
| 7. | Parametric Investigations in ECDM | S. Sathisha (07.11.2014) | Dr. Somashekhar Hiremath (IITM) | VTU, Belgaum |
| 8. | Study of Machinability properties of Zinc-Aluminium (ZA43) alloy reinforced with SiC particulate metal matrix composites | Rajaneesh N. Marigoudar | Professor K Sadashivappa | Visveswaraya Technological University, Belgaum, Karnataka. (Bapuji Institute of Technology, Karnataka) |
| 9. | Analysis of Bidirectional Fiber Reinforced Composites | V V Sridhara Raju (Thesis Evaluated) | Dr. V Bala Krishna Murthy Dr. J. Suresh Kumar | JNTU, Hyderabad |
| 10. | Analysis of composite | T. Dharma Raju | Dr. V Bala | JNTU, Hyderabad |

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| | laminated plates using higher order theories with zig-zag function | (Thesis Evaluated) | Krishna Murthy Dr. J. Suresh Kumar | |
| 11. | Tribo-performance Evaluation of Fiber Reinforced and Nano filled Composites Friction Materials | Tej Singh (Thesis Evaluated) | Dr. Amar Patnaik and Dr. B.K. Satapathy | NIT, Hamirpur |
| 12. | Some investigations into Cylindrical Electrochemical Abrasive Machining Process | Judal Kesarabhai Bhikhabhai (29.08.2013) | Professor Vinod Yadava | NIT, Allahabad. |
| 13. | Optimization of welding parameters for chromium base hardfacing alloy using various processes and some comparative studies on wear characteristics | K.M. KENCHI REDDY (21.06.2013) | Dr. C. T. Jayadeva | Visveswaraya Technological University, Belgaum, Karnataka. (Adichunchanagiri Institute of Technology Chikmagalur -577102, Karnataka, India) |
| 14. | Optimal path planning for mobile robots in off-line & on-line situations | P. Raja (02.10.2012) | Dr. S. Pugazhenth | SASTRA University, Thanjavur, Tamil Nadu – 613 401, India |
| 15. | Optimization of operation sequencing in computer aided process planning using hybrid S-GENSAT algorithm | Nallakumarasamy G. (03.01.2012) | Dr. P. S. Srinivasan | Anna University, Chennai, Tamil Nadu – 613 401, India |
| 16. | Optimization of work piece location and machining parameters for hexapod machine tool | S. Muruganandam (21.09.2009) | Dr. S. Pugazhenth | SASTRA University, Thanjavur, Tamil Nadu – 613 401, India |

International Journal Reviewer / Editorial Board Member

| A. | Reviewer (Journal) |
|----|---|
| 1. | Journal of Manufacturing Processes, SME |
| 2. | Tribology Transactions |
| 3. | Kovové Materiály - Metallic Materials |
| 4. | Surface Engineering |
| 5. | Proceedings of the IMechE Part B: Journal of Engineering Manufacture |
| 6. | Proceedings of the ImechE Part E: Journal of Process Mechanical Engineering |
| 7. | International Journal of Advanced Manufacturing Technology |
| 8. | Surface & Coatings Technology |
| 9. | Sadhna |
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| B. | Editorial Board Member (International Conference Proceedings) |
| 1. | Jointly Edited the Proceedings of the First International and 22 nd AIMTDR Conference held at IIT Roorkee, 2006 |

Other International Recognition

| | |
|-----------|---|
| A. | Who's Who |
| 1. | Selected as one of the Biographees of The Marquis Who's Who in the World in the 27 th Edition (2010). |

Session Chair

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| 1. | Chaired a Technical Session on Non-Traditional Processing of Advanced Material Processing Track in the ASME 2013 International Manufacturing Science and Engineering Conference (MSEC2013) , June 10-14, 2013, Madison, Wisconsin, USA. |
| 2. | Chaired a Parallel Technical Session in the International Conference on Processing and Fabrication of Advanced Materials (PFAM-2014) organised by the Department of Mechanical and Industrial Engineering, IIT Roorkee, Roorkee, India on December 05, 2015. |
| 3. | Co-chaired a Plenary session in the International Conference on Advanced Materials and Processing (ICAMP – 2011) held at the R M K Engineering College, Chennai (TN) with Professor L. Vijayaraghavan, Mechanical Engineering Department, IIT Madras, Chennai, India on December 19, 2011. |
| 4. | Chaired a Parallel Session in the National Conference on Emerging Challenges for Sustainable Business – 2012 organised by the Department of Management Studies, IIT Roorkee, Roorkee, India on June 01, 2012. |

Research Papers Presented Outside India

| Sl No. | Title of the Research Paper | Programme | Date (Duration) | Venue |
|--------|---|---|---------------------|--|
| 1. | An ANN Approach for Prediction of Wear Behaviour of WC-12Co Nanostructured Microwave Clad | International Tribology Conference (ITC 2015) | Sept. 16 – 20, 2015 | Tokyo University of Science, Tokyo, Japan |
| 2. | Experimental investigations on micro channeling through ECDM using | ASME 2013 International Manufacturing | June 10-14, 2013 | Madison Convention Centre, Wisconsin, organized by |

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| | different electrolytes | Science and Engineering Conference (MSEC2013) | | University of Wisconsin at Madison, USA. |
| 3. | Investigations on microstructural characterization of microwave composite clads on austenitic stainless steel | 2 nd Annual International Conference on Materials Science, Metal & Manufacturing (M3 2012) | November 19-20, 2012 | Hotel Fort Canning, Singapore |
| 4. | Micromachining with ECDM: Research potentials and experimental investigations | International Conference on Mechanical, Industrial, and Manufacturing Engineering (ICMIME 2012) | January 15-17, 2012 | Geroldswil Swiss Hotel, Geroldswil, Zurich, Switzerland. |
| 5. | Investigation on Sliding Wear Performance of WC10Co2Ni Cladding Developed Through Microwave Irradiation | International Conference on Wear of Materials (WOM 2011) | 05.04.2011 (April 03 – 07, 2011) | Sheraton Society Hill, One Dock St, Philadelphia, PA 19106, United States of America (USA). |
| 6. | Some Aspects of Surface Integrity Study of Electro Discharge Machined Inconel 718 | International Conference (MATADOR 2010) | 14.07.2010 (July 14 – 16, 2010) | The University of Manchester, Barnes Wallis Building Sackville Street Manchester M60 1QD, UK. |

Sponsored Project Handled/Proposed

| Title of the Project | Name of the Funding Agency | Amounts (Rs.) | Status |
|--|--|---------------|-----------|
| Materials Joining and Drilling with Microwaves | BRNS, Mumbai (DAE, Govt. of India). | 31,73,025.00 | Completed |
| Parametric studies during machining of Glass and Metal Matrix Composite (Al-7075) using Electrochemical Discharge Machining (ECDM) | Council of Scientific and Industrial Research, New Delhi, India. | 28,84,000.00 | Completed |
| Development and Parametric Study of | DST, New Delhi | 20,40,000.00 | Completed |

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| Ultrasonically Assisted Abrasive Flow Machining (UAAFAM) for Precision Finishing | | | |
| Parametric studies during machining of microchannels on silicon wafer using micro ultrasonic machining. | Council of Scientific and Industrial Research (CSIR), New Delhi, India. | 13,00,000.00 | Completed |
| Microwave joining of Metals | IIT Roorkee, Roorkee – 247 667. | 1,00,000.00 | Completed |
| Solar Electric Hybrid Mushroom Dryer | Assam Science Technology and Environment Council (ASTEAC), Silpukhuri, Guwahati–781 003. | Rs.6000.00 | Completed |

Academic Administration / Reform

1. Associate Dean, Academic Studies, July 19, 2013 onwards.
2. Member, Senate, IIT Roorkee.
3. Member, Executive Committee on Senate (ECS), IIT Roorkee.
4. Member, Institute Academic Programme Committee (IAPC).
5. Member, Academic Restructuring Committee, IIT Roorkee, 2013.
6. Member Secretary, Post Graduate Programme Review Committee, 2013.
7. Chairman, Institute Academic Performance Evaluation Committee, IIT Roorkee, 2013.
8. Member, Intellectual Property Right Cell, IIT Roorkee, 2012 onwards.
9. Member, Department Administrative Committee (DAC), MIED, July 2014 onwards.
10. Member, Departmental Academic Studies Committee (DASC), MIED, July 2012 – June 2014.
11. External Member, Board of Studies for Mechanical Engineering, Graphic Era Hill University, Dehradun, Uttarakhand.
12. Member, Departmental Research Committee (DRC), July 2010-June 2012.

Representation in National Committee

1. Principal Member in the Pneumatic Tools Sectional Committee, PGD08 of Production and General Engineering Department at the Bureau of Indian Standards, New Delhi.

Courses Organised

| Sl No. | Title of the Course | Sponsored By | Duration | Date |
|--------|--|---------------------------------------|-----------|------------------------|
| 1. | Ishan Vikas | MHRD, Govt. of India | 12 Days | June 22-Jul 03, 2016 |
| 2. | Ishan Vikas | MHRD, Govt. of India | 09 Days | June 11-19, 2015 |
| 3. | Applied Research: Design and Execution | QIP, IIT Roorkee | One Day | June 15-19, 2015 |
| 4. | Microwaves in Material Processing | QIP, IIT Roorkee | One Day | June 20, 2014 |
| 5. | Finish Machining: A State-of-the-Art | QIP, IIT Roorkee | One Week | September 02-09, 2013 |
| 6. | Ultrasonic machining approach to fabrication of microchannels (One-Day Workshop) | QIP, IIT Roorkee | One Day | March 13, 2013 |
| 7. | A Novel Approach to Processing of Green Composites | QIP, IIT Roorkee | One Day | March 09, 2013 |
| 8. | Manufacturing Excellence through Quality Assurance | QIP, IIT Roorkee | One Week | July 09 – 13, 2012 |
| 9. | Advances in Surface Finishing Technologies with Special reference to Abrasive Flow Machining | QIP, IIT Roorkee | One Day | February 19, 2012 |
| 10. | Processing Challenges and Newer Manufacturing Methods | QIP, IIT Roorkee | One Week | June 25 – 29, 2011 |
| 11. | Advanced Materials and Manufacturing | AICTE, New Delhi | One Week | June 14– 18, 2010 |
| 12. | Composites: Design and Manufacturing | AICTE, New Delhi | One Week | July 7 – 11, 2008 |
| 13. | Controlling Abrasion and Erosion in Cement Plants | Self Sponsored under CEC, IIT Roorkee | Four days | May 7 – 11, 2008 |
| 14. | Combating Wear | Self Sponsored under CEC, IIT Roorkee | One week | May 29 – June 02, 2007 |
| 15. | Advanced Processing of Composite Materials | AICTE, New Delhi | One Week | July 24 – 28, 2006 |

Invited Talk

| Sl No. | Title of the Lecture | Programme | Year | Institution |
|--------|---|---|----------------------|---|
| 1. | What is Advanced in Advance Manufacturing ? A case of Finish Machining through Ultrasonically Assisted Abrasive Flow Machining (UAAFMM) | Expert Lecture in the TEQIP Program | October 18, 2016 | NIT, Kurukshetra |
| 2. | Microwave Drilling : A Novel Micro-drilling Technique using Domestic Microwave Applicator | Key-Note Lecture in the National Seminar on "Advance Materials and Manufacturing Technologies" | March 30, 2016 | Graphic Era Hill University, Dehradun |
| 3. | Advanced Manufacturing with Special Reference to Hybrid Manufacturing | Key-Note Lecture in the National Workshop on : Recent Trends in Quality, Design and Production" | February 26, 2016. | Future Institute of Engineering and Technology, Bareilly, Uttar Pradesh. |
| 4. | Intellectual Property Right and a few Patents of IIT Roorkee | Faculty Development Program | June 01, 2015 | College of Engineering, Pune (CoEP) |
| 5. | Applications of 2.45 GHz Microwaves in Micro-Drilling | Faculty Development Program | June 01, 2015 | College of Engineering, Pune (CoEP) |
| 6. | Processing Challenges of Ceramic Composites and a Newer Processing Route | Quality Improvement Program for Faculty | 2015 (28.02.2015) | ITS Engineering College, Greater Noida |
| 7. | Processing of metal-based materials using 2.45 GHz microwaves with applications in joining and cladding | Invited Talk, 5th International and 26th AIMTDR -2014 | 2014 (13.12.2014) | IIT Guwahati, Guwahati |
| 8. | Advanced Manufacturing with Special Reference to Hybrid Manufacturing | Expert Lecture | 2014 (29.11.2014) | Graphic Era Hill University, Dehradun |
| 9. | Microwaves in Material Processing | Quality Improvement Program for Faculty | 2014 (31.07.2014) | GNDEC, Ludhiana |
| 10. | Some aspects of Ultrasonic based Micromachining | Invited lecture under TEQIP | 2014 (05.06.2014) | PEC University, Chandigarh. |
| 11. | A Green approach to Processing of Green Composites | Quality Improvement Programme for Faculty | 2014 (14.05.2014) | Noida Institute of Engineering and Technology (NIET), Greater Noida, India. |
| 12. | Processing of metal-based materials using 2.45 GHz microwaves | International Colloquium Veda-Kolleg 2013 | 2013 (20.10.2013) | IIT Roorkee, Roorkee |

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| 13. | Processing of metal-based materials using 2.45 GHz microwaves with applications in joining and cladding | Quality Improvement Programme for Faculty | 2013 (18.09.2013) | Indian Institute of Technology Kanpur (IITK), Kanpur. |
| 14. | Micromachining: Fundamentals and developments in USM and ECDM based Techniques | Invited lecture under TEQIP | 2013 (14.09.2013) | PEC University, Chandigarh. |
| 15. | Micromachining : Concepts and Enabling Technologies with cases in Fabrication of Microchannels | Expert Lecture in the Faculty development Programme under TEQIP | 2013 (06.06.2013) | PEC University, Chandigarh. |
| 16. | Microwave Cladding: Challenges, Developments and Possibilities | Quality Improvement Programme for Faculty | 2013 (08.01.2013) | Noida Institute of Engineering and Technology (NIET), Greater Noida, India. |
| 17. | Micromachining: Developments and Possibilities | Faculty Development Programme sponsored by Punjab Technical University (PTU) | 2013 (04.01.2013) | Amritsar College of Technology and Engineering, Amritsar. |
| 18. | Advanced Manufacturing: Need, Growth and Applications | Expert Lecture Series in the Mechanical Engineering Department | 2011 (11.03.2011) | Seth Jai Parkash Mukand Lal Institute of Engg. and Tech. (JMIT), Radaur-135133 (Jamuna Nagar) Haryana, India |
| 19. | Electromagnetic Energy in Material Processing: An Approach to Green Manufacturing | Plenary Speaker in the National Conference at the Ganapati Institute of Technology & Management, 2010. | 2010 (12.11.2010) | Ganapati Institute of Technology & Management, Bilaspur, Haryana, India. |
| 20. | New Paradigms in Advanced Manufacturing | Invited Talk Series in the Mechanical Engineering Department | 2010 (29.10.2010) | College of Engineering and Rural Technology, Meerut, India |
| 21. | Microwave Processing of Materials – A New Paradigm in Processing of Advanced Materials | Key Speaker in AICTE sponsored National Seminar on Advanced Manufacturing Processes | 2010 (21.02.2010) | Noida Institute of Engineering and Technology (NIET), Greater Noida, India. |
| 22. | Microwave Processing of Materials – A New Paradigm in Processing of Engineering Materials | Special Talk Series in the Mechanical Engineering Society | 2009 (21.09.2009) | SASTRA University, Thanjavur, TN, India. |
| 23. | Microwave Processing of Materials – A New Paradigm in Processing of Engineering Materials | Community Development Programme | 2008 (23.05.2008) | NIT Jalandhar, India. |
| 24. | Designing Advance Engineering Materials – Ceramics and Ceramic Composites | Community Development Programme | 2008 (23.05.2008) | NIT Jalandhar, India. |

Special Seminar / Lectures Delivered

| Sl No. | Title of the Lecture | Colloquium / Course | Year | Institution |
|--------|---|---|--------------------|--|
| 1. | Knowing Yourself | Ishan Vikas Program | June 23, 2016 | IIT Roorkee |
| 2. | Express Yourself | Ishan Vikas Program | June 13, 2015 | IIT Roorkee |
| 3. | Research Publication | AICTE Sponsored Short Term Course | June 19, 2015 | IIT Roorkee |
| 4. | Resource Generation and Research Funding | AICTE Sponsored Short Term Course | June 17, 2015 | IIT Roorkee |
| 5. | Quality in Research | AICTE Sponsored Short Term Course | June 16, 2015 | IIT Roorkee |
| 6. | Research and Doing Research | AICTE Sponsored Short Term Course | June 16, 2015 | IIT Roorkee |
| 7. | Microwave Processing of Materials | AICTE Sponsored Short Term Course | July 08, 2014 | IIT Roorkee |
| 8. | Microwave Joining of Materials | One-Day QIP Workshop | June 20, 2014 | IIT Roorkee, Roorkee |
| 9. | Significance of Microwaves in Material Processing | One-Day QIP Workshop | June 20, 2014 | IIT Roorkee, Roorkee |
| 10. | Advanced Manufacturing with Special Reference to Hybrid Manufacturing | Expert Lecture | November 29, 2014 | Graphic Era Hill University, Dehradun |
| 11. | Processing of metal-based materials using 2.45 GHz microwaves | International Colloquium Veda-Kolleg 2013 | October 20, 2013 | IIT Roorkee, Roorkee |
| 12. | Processing of metal-based materials using 2.45 GHz microwaves with applications in joining and cladding | Quality Improvement Programme for Faculty | September 18, 2013 | Indian Institute of Technology Kanpur (IITK), Kanpur |
| 13. | Micromachining: Fundamentals and developments in USM and ECDM based Techniques | Invited lecture under TEQIP | September 09, 2013 | PEC University, Chandigarh |
| 14. | A State-of-the-art in Finish Machining : Concepts and Technologies | AICTE Sponsored Short Term Course | September 02, 2013 | IIT Roorkee |
| 15. | Micromachining : Concepts and Enabling Technologies with cases in Fabrication of Microchannels | Faculty Development Programme under TEQIP | June 06, 2013 | PEC University, Chandigarh |
| 16. | Enabling Micromachining Technologies in Fabrication of Microchannels | QIP-sponsored Workshop | 13 March, 2013 | I.I.T. Roorkee |
| 17. | Microwave Heating Approach to Processing of Green Composites | QIP-sponsored Workshop | 09 March, 2013 | I.I.T. Roorkee |
| 18. | Manufacturing Excellence and Quality | AICTE Sponsored Short Term Course | 09 July, 2012 | I.I.T. Roorkee |
| 19. | Advanced Material Removal Processes – I | AICTE Sponsored Short Term Course | 13 July, 2012 | I.I.T. Roorkee |

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| 20. | Advanced Material Removal Processes – II | AICTE Sponsored Short Term Course | 13 July, 2012 | I.I.T. Roorkee |
| 21. | Developments in Surface Finishing Technologies | QIP-sponsored Workshop | Feb 19, 2012 | I.I.T. Roorkee |
| 22. | Microwave Processing of Metal-based Materials: A Sustainable Approach for Development of Metallic Joints and Wear Resistant Composite Cladding | IHM-Colloquium | June 30, 2011 | Institute of Pulsed Power and Microwave Tech, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany |
| 23. | Developments in Materials Research and Emergence of Micromachining | AICTE Sponsored Short Term Course | 14 th June, 2010 | I.I.T. Roorkee |
| 24. | Processing of Ceramic composites | AICTE Sponsored Short Term Course | 15 th June, 2010 | I.I.T. Roorkee |
| 25. | Materials Processing using Electromagnetic Energy | AICTE Sponsored Short Term Course | 18 th June, 2010 | I.I.T. Roorkee |
| 26. | Materials and Metallurgical Characterisation Techniques : An Overview | Continuing Education Programme | 25 th May, 2010 | I.I.T. Roorkee |
| 27. | Quality in Design and Manufacturing | QIP Sponsored Short Term Course | 2008 | I.I.T. Roorkee |
| 28. | Mechanical and metallurgical aspects in controlling abrasion and erosion wear | Continuing Education Programme | 2008 | I.I.T. Roorkee |
| 29. | Plasma spraying and microwave glazing for performance enhancement | Continuing Education Programme | 2008 | I.I.T. Roorkee |
| 30. | Characterisation of engineered surfaces | Continuing Education Program | 2008 | I.I.T. Roorkee |
| 31. | Characterisation of engineered surfaces | Continuing Education Program | 2007 | I.I.T. Roorkee |
| 32. | Plasma spray deposits in controlling erosion wear | Continuing Education Programme | 2007 | I.I.T. Roorkee |
| 33. | An Overview of Composite Materials | QIP Sponsored Short Term Course | 2006 | I.I.T. Roorkee |
| 34. | Processing of Ceramic Composites | QIP Sponsored Short Term Course | 2006 | I.I.T. Roorkee |
| 35. | Ceramics and Ceramic Composites | QIP Sponsored Short Term Course | 2004 | I.I.T. Guwahati |
| 36. | Tools for Intelligent Manufacturing | AICTE Sponsored Short Term Course | 2001 | Sri Venkateshwara College of Engineering, Chennai |

Membership of Professional Bodies

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| 1. Fellow, Institution of Engineers (India) (Membership No. F – 1214035). |
| 2. Member, ASME, USA (Membership No. 100154747). |
| 3. Member, Society of Manufacturing Engineers (SME), USA (Membership No.15716656). |
| 4. Life Member, Indian Institution of Industrial Engineering, Mumbai (Membership No. LM9198 (99)). |
| 5. Member, Global Science and Technology Forum, Australia. |
| 6. Life Member, Materials Research Society of India, Bangalore, (Membership No. LMB 1621). |
| 7. Life Member, Indian Society for Technical Education, New Delhi, (Membership No.LM25634). |
| 8. e-Member, TMS, USA. |

Courses Developed

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| [A] | National Programme on Technology Enhanced Learning (NPTEL) |
| 1. | Apurbba Kumar Sharma and Pradeep Kumar, “Advanced Manufacturing Processes”, 2014. |
| [B] | National Mission Project on Pedagogic Development (Sponsored by the MHRD) |
| 2. | Apurbba Kumar Sharma , Inderdeep Singh, Pradeep Kumar, “Principles of Industrial Engineering”, 2010. |
| [C] | For Post Graduate Students at IIT Roorkee (M. Tech./Pre-Ph.D.) |
| 3. | Friction and Wear |
| [D] | For Undergraduate students (B.tech./ B.E.) |
| 4. | Computer Numerical Control |

DETAILS OF RESEARCH PUBLICATIONS

(Name: Dr. Apurbba Kumar Sharma)

List of Patents

| | <u>Indian Patent</u> |
|----|---|
| 1. | Apurbba Kumar Sharma and R. Krishnamurthy, Articles of Glazed Ceramic Composites on Metal Substrates and Method of Manufacture Thereof, Indian Patent No.199106 (563/MAS/2001), Year: 2006. |
| 2. | A K Sharma , M S Srinath and Pradeep Kumar, A method of joining of bulk metallic materials by microwave hybrid heating, Indian Patent Application No. 1994/DEL/2009, Year: 2009. |
| 3. | A K Sharma and Dheeraj Gupta, A method of developing metallic cladding/coating on metallic substrates by microwave irradiation, Indian Patent Application No. 527/DEL/2010, Year: 2010. |
| 4. | A K Sharma , S Rajesha, G Venkatesh and Pradeep Kumar, A natural polymer abrasive media for the abrasive flow machining and a process for preparation thereof, Indian Patent Application no. 1349/Del/2011 (dt. 09.05.2011). |
| 5. | Apurbba Kumar Sharma , Pradeep Kumar and Rajesha S, An improved ultrasonic abrasive flow machining and a device therefor, Indian Patent Application No. 3578/Del/2011 (Date: 09.12.2011). |
| 6. | Apurbba Kumar Sharma , Shantanu Das, Nitin Kumar Lautre, Titto John George, Rajesh Kumar and Pradeep Kumar, A Method of Micro-drilling with Microwaves through Metallic Concentrator, (Application No.: 201621004759, February 10, 2016). (IIT Roorkee and DAE, Govt. of India |
| 7. | Apurbba Kumar Sharma , Mohit Choudhury, Saurabh Puri and Radha Raman Mishra, In-Situ Microwave Casting. (Recommended for Filling by IPR Assessment Committee, IIT Roorkee, 2016) |
| 8. | Akshay Dvivedi, Manjot Singh Cheema and Apurbba Kumar Sharma , A Device for Multiple Operations in Ultrasonic Machining. (Recommended for Filling by IPR Assessment Committee, IIT Roorkee, 2016) |

List of Publications

| A. | Journal (Total = 94) |
|-----|---|
| 1. | Radha Raman Mishra and Apurbba Kumar Sharma , “On melting characteristics of bulk Al-7039 alloy during in-situ microwave casting”, <i>Applied Thermal Engineering</i> , 111, (2017), pp. 670–685. (DOI: dx.doi.org/10.1016/j.applthermaleng.2016.09.122) (IMPACT FACTOR: 3.043, 5-Year Impact Factor: 3.269) |
| 2. | Radha Raman Mishra and Apurbba Kumar Sharma , “On mechanism of in-situ microwave casting of aluminium alloy 7039 and cast microstructure”, <i>Materials and Design</i> , Vol. 112, (2016), pp. 97–106. (DOI:10.1016/j.matdes.2016.09.041) (IMPACT FACTOR: 3.997, 5-Year Impact Factor: 4.023) |
| 3. | Sunny Zafar, Apurbba Kumar Sharma , “Microstructure and wear performance of heat treated Wc-12Co microwave clad”, <i>Vacuum</i> , (2016), vol. 291, pp.413–422 (DOI: 10.1016/j.vacuum.2016.06.021) (IMPACT FACTOR: 1.558, 5-Year Impact Factor: 1.615) |
| 4. | Sunny Zafar, Apurbba Kumar Sharma , “Investigations on flexural performance and residual stresses in nanometric WC-12Co microwave clads”, <i>Surface & Coatings Technology</i> (2016), vol. 291, pp.413–422 (DOI: 10.1016/j.surfcoat.2016.03.009) (IMPACT FACTOR: 1.998, 5-Year Impact Factor: 2.374) |
| 5. | Goud, M. and Apurbba Kumar Sharma , “A 3D Finite Element Simulation Approach to Analyse material Removal in Electrochemical Discharge Machining”, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science (ACCEPTED). |
| 6. | Sunny Zafar and Apurbba Kumar Sharma , “Structure-property correlation in nanostructured WC–12Co microwave clad”, <i>Applied Surface Science</i> , (2016), (DOI:10.1016/j.apsusc.2016.02.114). (IMPACT FACTOR: 2.71). |
| 7. | Goud, M. and Apurbba Kumar Sharma , ‘A Review on Material Removal Mechanism in Electrochemical Discharge Machining (ECDM) and Possibilities to Enhance the Material Removal Rate’, <i>Precision Engineering</i> , (ACCEPTED). (IMPACT FACTOR: 1.517, 5-YEAR IMPACT FACTOR= 1.856) |
| 8. | Radha Raman Mishra and Apurbba Kumar Sharma , ‘A Review of Research Trends in Microwave Processing of Metal Based Materials and Opportunities in Microwave Metal Casting’, <i>Critical Reviews in Solid State and Materials Sciences</i> , (ACCEPTED). (IMPACT FACTOR: 6.450) |
| 9. | M.S. Cheema, P.K. Singh, O. Tyagi, A. Dvivedi, A.K. Sharma , ‘Tool wear and form accuracy in ultrasonically machined microchannels’, <i>Measurement</i> , 81, pp.85–94, (2015), doi: http://dx.doi.org/10.1016/j.measurement.2015.12.005. (IMPACT FACTOR: 1.484, 5-YEAR IMPACT FACTOR= 1.424) |
| 10. | Sunny Zafar and Apurbba Kumar Sharma , ‘Abrasive and erosive wear behaviour of nanometric WC-12Co Microwave clad’, <i>Wear</i> , Vol.346-347, (2016), pp.29-45, http://dx.doi.org/10.1016/j.wear.2015.11.003. (IMPACT |

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| | FACTOR: 1.913, 5-YEAR IMPACT FACTOR= 2.109) |
| 11. | Radha Raman Mishra and Apurbba Kumar Sharma , 'Microwave-material interaction phenomena: heating mechanisms, challenges and opportunities in material processing', <i>Composites Part A: Applied Science and Manufacturing</i> , Vol.81 (2016), pp.78-97. (doi:10.1016/j.compositesa.2015.10.035) (IMPACT FACTOR: 3.071, 5-YEAR IMPACT FACTOR= 4.045) |
| 12. | Amit Bansal, Sunny Zafar and Apurbba Kumar Sharma , Microstructure and Abrasive Wear Performance of Ni-WC Composite Microwave Clad, <i>Journal of Materials Engineering and Performance</i> , (DOI: 10.1007/s11665-015-1657-0), 2015. (IMPACT FACTOR: 0.998) |
| 13. | Sunny Zafar and Apurbba Kumar Sharma , Dry sliding wear performance of nanostructured WC–12Co deposited through microwave cladding, <i>Tribology International</i> , 91 (2015) 14–22, (DOI:10.1016/j.triboint.2015.06.023). (IMPACT FACTOR: 2.12). |
| 14. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Pradeep Kumar and Shantanu Das, "A simulation approach to material removal in microwave drilling of soda lime glass at 2.45 GHz", <i>Appl. Phys. A</i> (DOI 10.1007/s00339-015-9370-2), 2015. (IMPACT FACTOR: 1.704). |
| 15. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Shantanu Das and Pradeep Kumar, "A photoelasticity Approach for Characterisation of defects in microwave drilling of soda lime glass", <i>J. Mater. Process. Technol.</i> , 225, 2015, 151–161. (IMPACT FACTOR: 2.236). |
| 16. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Shantanu Das and Pradeep Kumar, "On crack control strategy in near field microwave drilling of soda lime glass using precursors", <i>J. Thermal Sci. Eng. Appl.</i> , 7(4), 2015, 1–15. (IMPACT FACTOR: 1.5), (DOI: 10.1115/ 1.4030478). |
| 17. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "Structure–Property Correlations in Microwave Joining of Inconel 718", <i>Journal of Metals</i> , June, 2015, (DOI: 10.1007/s11837-015-1523-4) (IMPACT FACTOR: 1.757) |
| 18. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "On Microstructure and Strength Properties of Microwave Welded Inconel 718/ Stainless Steel (SS – 316L)", <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , June, 2015, (DOI: 10.1177/1464420715589206) |
| 19. | S., Zafar and Apurbba Kumar Sharma , "On Friction and Wear Behaviour of WC-12Co Microwave Clad", <i>Tribology Transactions</i> , 584-691. (DOI:10.1080/10402004.2014.996310) |

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|-----|---|
| 20. | Apurbba Kumar Sharma , G Venkatesh, S Rajesha, P Kumar, Experimental investigations into ultrasonic-assisted abrasive flow machining (UAAFMM) process, <i>The International Journal of Advanced Manufacturing Technology</i> , 1-17, (DOI: 10.1007/s00170-015-7009-2). |
| 21. | Gudipadu, Venkatesh, Apurbba Kumar Sharma , and Nitish Singh, "Simulation of media behaviour in vibration assisted abrasive flow machining", <i>Simulation Modelling Practice and Theory</i> , 51, 2015, 1-13 (http://dx.doi.org/10.1016/j.simpat.2014.10.009). (IMPACT FACTOR: 1.05) |
| 22. | Manjot S. Cheema, Akshay Dvivedi, Apurbba K. Sharma , Tool wear studies in fabrication of microchannels in ultrasonic Micromachining", <i>Ultrasonics</i> , 57 2015, 57–64, (http://dx.doi.org/10.1016/j.ultras.2014.10.018). (FIVE YEAR IMPACT FACTOR: 1.948). |
| 23. | Satnam Singh, Dheeraj Gupta, Vivek Jain, Apurbba K. Sharma , "Microwave Processing of Materials and Applications in Manufacturing Industries: A Review", <i>Materials and Manufacturing Processes</i> , 30(1), 2015, 1-29. (DOI:10.1080/10426914.2014.952028). (2013 IMPACT FACTOR: 1.486). |
| 24. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantnanu Das, "On microstructural and strength characterisation of microwave welded Inconel 718 joints at 2.45 GHz frequency", <i>KOVOVÉ MATERIÁLY</i> , (Accepted). (IMPACT FACTOR: 0.546). |
| 25. | G. Venkatesh, Apurbba Kumar Sharma , Pradeep Kumar, "On Ultrasonic Assisted Abrasive Flow Machining of Bevel Gears", <i>International Journal of Machine Tools & Manufacture</i> , 89, 2015, 29-38 (http://dx.doi.org/10.1016/j.ijmachtools.2014.10.014). (FIVE YEAR IMPACT FACTOR: 3.15) |
| 26. | G. Venkatesh, Apurbba Kumar Sharma , Pradeep Kumar, "Fine Finishing of SiC Microchannels using Abrasive Flow Machining", <i>Indian Journal of Engineering & Material Sciences</i> , 22, June 2015, 297–306. (IMPACT FACTOR: 0.65). |
| 27. | Sutar, M. K., Pathak, P. M., Sharma, A. K. , Mehta, N.K., Gupta, V. K., "Inverse Kinematics and Control of Four Degree of Freedom Wire Actuated In-Vivo Robot," <i>Proceedings of the Institutions of Mechanical Engineers: Part I:: Journal of Systems and Control Engineering</i> , 229 (2), 77-91, 2015. (IMPACT FACTOR : 0.778). |
| 28. | G. Venkatesh, Apurbba Kumar Sharma , Nitish Singh, Pradeep Kumar, "Finishing of Bevel Gears using Abrasive Flow Machining", <i>Procedia Engineering</i> , 97, 2014, 320-328. |
| 29. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "Investigation on microstructure and mechanical properties of the dissimilar weld between mild steel and stainless steel-316 formed using microwave energy", <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2014, (DOI: 10.1177/09544405414558694). (IMPACT FACTOR: 0.661) |

| | |
|-----|--|
| 30. | Sunny Zafar, Apurbba Kumar Sharma , "Development and Characterisations of WC-12Co Microwave Clad", <i>Materials Characterization</i> , 96, 241-248, (DOI:10.1016/j.matchar.2014.08.015), 2014. (IMPACT FACTOR: 1.925) |
| 31. | Sunny Zafar, Amit Bansal, Apurbba Kumar Sharma , Navneet Arora, C. S. Ramesh, "Dry Erosion Wear Performance of Inconel 718 Microwave Clad", <i>Surface Engineering</i> , 30(11), 852-859, doi:10.1179/1743294414y.0000000359, 2014. (IMPACT FACTOR: 1.51) |
| 32. | C.S. Jawalkar, Pradeep Kumar and Apurbba Kumar Sharma , "Investigations on performance of ECDM process using NaOH and NaNO ₃ electrolytes while micro machining soda lime glass", <i>International Journal of Manufacturing Technology and Management</i> , 28(1/2/3), 2014, 80-93. |
| 33. | Garg A., Vikram C. S., Gupta S., Sutar, M. K., Pathak P.M., Sharma A. K. , Mehta N. K., Gupta V. K., "Design and Development of <i>In-Vivo</i> Robot for Biopsy," <i>Journal of Mechanics Based Design of Structures and Machines</i> , Vol. 42(3), 278-295. |
| 34. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "Characterization of bulk stainless steel joints developed through microwave hybrid heating", <i>Materials Characterization</i> , 91, 34-41. DOI: http://dx.doi.org/10.1016/j.matchar.2014.02.005 . (2014) (IMPACT FACTOR: 1.925) |
| 35. | Rajesha S, C.S. Jawalkar, Radha Raman Mishra, Apurbba Kumar Sharma and Pradeep Kumar (2014), "Study of Recast Layers and Surface Roughness on Al-7075 Metal Matrix Composite during EDM Machining", <i>International Journal of Recent Advances in Mechanical Engineering</i> , Vol. 3 (1), 61-70. |
| 36. | Radha Raman Mishra, Rajesha S and Apurbba Kumar Sharma, "Microwave sintering of metal powders- A review", <i>International Journal of Advanced Mechanical Engineering</i> , Vol. 4 (3), pp. 315-322. (2014) |
| 37. | Radha Raman Mishra, Rajesha S, Apurbba Kumar Sharma and A K Jha, "Development and characterization of developed foamed carbon fiber composite", <i>i-manager Journal of Civil Engineering</i> , Vol. 3, pp. 23-27. (2013) |
| 38. | Dheeraj Gupta, Apurbba Kumar Sharma , "Microwave Cladding: A New Approach in Surface Engineering", <i>Journal of Manufacturing Processes</i> , 16 (2014) 176–182, DOI: 10.1016/j.jmapro.2014.01.001. (Source Normalized Impact per Paper (SNIP): 1.528) |
| 39. | Jawalkar C. S., Kumar Pradeep and Apurbba Kumar Sharma , "Investigations on performance of ECDM process using NaOH and NaNO ₃ electrolytes while micromachining soda lime glass", <i>International Journal of Manufacturing Technology and Management (IJMTM)</i> , 28(1), 2014, 80-93. |
| 40. | Akshay Mali, Apurbba Kumar Sharma , Inderdeep Singh, "Microwave curing of natural fiber and synthetic fiber reinforced polymer matrix composites", <i>i-manager's Journal on Material Science</i> , Vol.1 (1), 2013. |

| | |
|-----|--|
| 41. | Shantanu Das, Rajesh Kumar, Titto John George, Amit Bansal, Nitin Kumar Lautre, Apurbba Kumar Sharma , "Physics of Electrostatic Resonance with Negative Permittivity and Imaginary Index of Refraction for Illuminated Plasmoid in the Experimental Set Up for Microwave Near Field Applicator", <i>Fundamental Journal of Modern Physics</i> , Vol. 5(2), 2013, pp.19–46. |
| 42. | Shantanu Das, Apurbba Kumar Sharma , Microwave Drilling of Materials", <i>BARC Newsletter</i> , Issue No. 329, Nov.-Dec. 2012, pp.15–21. |
| 43. | Cheema M.S., Dvivedi A., Apurbba K. Sharma , Sudip Biswas, "Multicriteria optimization of rotary tool electric discharge machining on metal matrix composite", <i>Materials Processing Fundamentals</i> , John Wiley & Sons, Inc., Hoboken, NJ, USA, 2012, 159 – 168. (doi: 10.1002/9781118662199.ch18). |
| 44. | Manjot S Cheema, Akshay Dvivedi and Apurbba K Sharma , A hybrid approach to multi criteria optimization based on user's preference rating, <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , July 2013 (DOI: 10.1177/0954405413491958). (IMPACT FACTOR: 0.661) |
| 45. | Sunny Zafar, Apurbba Kumar Sharma , Navneet Arora, "Development and Microstructural Characterisation of Inconel Cladding on Stainless steel through Microwave Irradiation", <i>i-Manager's Journal of Mechanical Engineering</i> , Vol. 3(1), 2013, 9–16. |
| 46. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "Metallurgical and Mechanical Characterization of Mild Steel-Mild Steel Joint Formed by microwave Hybrid Heating Process", <i>Sadhna</i> , 38 (4), 2013, 679-686. (IMPACT FACTOR: 0.587) |
| 47. | Shantanu Das, Amit Bansal, Apurbba Kumar Sharma , "Theory of Welding of Metallic Parts in Microwave Cavity Applicator" <i>Fundamental Journal of Modern Physics</i> , Vol. 3 (2), 2012, Pages 125-155 |
| 48. | M. Gharge, P.K. Rakesh, I. Singh, Apurbba Kumar Sharma , "Crushing behaviour of metal matrix composite honeycomb under impact loading", <i>International Journal of Engineering Simulation</i> , 14(1), 2013, pp.23–30 (ISSN:1468-1137). |
| 49. | C. S. Jawalkar, Pradeep Kumar and Apurbba Kumar Sharma , "Parametric study while microchannelling on optical glass using microcontroller driven ECDM process", <i>Advanced Materials Research</i> , 585, 2012, 417-421 (ISBN-13:978-3-03785-526-3). |
| 50. | Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, Shantanu Das, "Joining of mild steel plates using microwave energy", <i>Advanced Materials Research</i> , 585, 2012, 465-469 (ISBN-13:978-3-03785-526-3) |
| 51. | Amit Bansal, Apurbba Kumar Sharma, Pradeep Kumar, Shantanu Das, "Application of electromagnetic energy for joining of Inconel 718 plates", <i>i-manager's Journal of Mechanical Engineering</i> , 2 (4), 18-23, 2012. |

| | |
|-----|--|
| 52. | Manjot S Cheema, Gudipadu Venkatesh, Akshay Divedi and Apurbba Kumar Sharma , “Developments in abrasive flow machining: a review on experimental investigations using abrasive flow machining variants and media”, <i>Proc. ImechE Part B: J Engineering Manufacture</i> , 226 (12), 2012, pp.1951-1962. (DOI:10.1177/0954405412462000). (IMPACT FACTOR: 0.661) |
| 53. | Mihir Kumar Sutar, P. M. Pathak, Apurbba Kumar Sharma, N. K. Mehta, V. K. Gupta, “Forward kinematic analysis of in-vivo robot for stomach biopsy”, <i>Journal of Robotic Surgery</i> , Vol. 7, 281- 287, (DOI 10.1007/s11701-012-0375-y), August, 2012. (h-INDEDEX: 7) |
| 54. | Srinath M.S., Suryanarayana Murthy, Apurbba Kumar Sharma , Pradeep Kumar, Kartikeyan M. V., “Simulation and Analysis of Microwave Heating while Joining Bulk Copper”, <i>International Journal of Engineering, Science and Technology</i> , Vol.4 (2), 2012, 152-158. |
| 55. | Dheeraj Gupta, Bhoji, P., Apurbba Kumar Sharma , S. Dutta, “Development and Characterization of Microwave Composite Cladding”, <i>Journal of Manufacturing Processes</i> , (2012), doi:10.1016/j.jmapro.2012.05.007. |
| 56. | Titto John George, Apurbba Kumar Sharma , Pradeep Kumar, “A Feasibility Study on Microwave Drilling of Metallic Materials”, <i>i-Manager’s Journal of Mechanical Engineering</i> , Vol. 2(2), 2012, 1-6. |
| 57. | Apurbba Kumar Sharma and Dheeraj Gupta, “On Microstructure and Flexural Strength of Metal-Ceramic Composite Cladding Developed through Microwave Heating”, <i>Applied Surface Science</i> , Vol. 258, 2012, 5583– 5592, doi:10.1016/j.apsusc.2012.02.019. (IMPACT FACTOR: 2.538, 5-YR IMPACT FACTOR: 1.895) |
| 58. | Vivek Jain, A K Sharma and Pradeep Kumar, “Investigations on Tool Wear in Micro Ultrasonic Machining” <i>Applied Mechanics and Materials</i> , Vols. 110-116 (2012), doi:10.4028/www.scientific.net/AMM.110-116.1561, pp. 1561-1566. |
| 59. | C. S. Jawalkar, A K Sharma , Pradeep Kumar, “Micromachining with ECDM : Research potentials and experimental investigations”, <i>International Journal of Mechanical and Aerospace Engineering</i> , 6, 2012, 7 – 12. |
| 60. | Dheeraj Gupta, A K Sharma , Microstructural Characterisation of Cermet Cladding on Austenitic Stainless Steel Developed through Microwave Irradiation, <i>Journal of Materials Engineering and Performance</i> , DOI 10.1007/s11665-012-0142-2 (2012). (IMPACT FACTOR: 0.639 as in 2010) |
| 61. | Dheeraj Gupta, Apurbba Kumar Sharma , Guido Link, Manfred Thumm, Investigation on Microstructural Characterization of Microwave Cladding, <i>Ceramic Transactions</i> . (h-INDEDEX: 9) |
| 62. | C. S. Jawalkar, A K Sharma , Pradeep Kumar, “Experimental investigations on performance of ECDM using design of experiments approach” <i>i-manager’s Journal on Mechanical Engineering</i> , Vol.1, No.3 (2011), pp.24 – 29. (ISSN-2230-9055) |

| | |
|-----|---|
| 63. | Vivek Jain, A K Sharma and Pradeep Kumar, "Microdrilling of difficult to cut materials for micro electromechanical system using ultrasonic micromachining", <i>i-manager's Journal on Mechanical Engineering</i> , Vol. 1, No. 2, (2011), pp.24–32. |
| 64. | Himadri Phukan, A K Sharma , "Impact of Marketing Strategies on Detergent Consumption – A Study of Jorhat District in Assam", <i>Invertis Journal of Management</i> , Vol. 3, No. 2 (2011), pp. 23–40. |
| 65. | Dheeraj Gupta, A K Sharma , "Investigation on sliding wear performance of WC10Co2Ni cladding developed through microwave irradiation", <i>Wear, Special Issue</i> , doi:10.1016/j.wear.2010.12.037, (2011), pp.1642–1650.(IMPACT FACTOR: 1.862, 5-YR IMPACT FACTOR: 2.109) |
| 66. | Dheeraj Gupta, A K Sharma , "Microwave Cladding: A new Surface Engineering Technique for Developing Uniform Microstructure", <i>i-manager's Journal on Mechanical Engineering</i> , Vol. 1, No. 2 (2011), pp.17–23. |
| 67. | Dheeraj Gupta, A K Sharma , "Development and Characterisation of Ni based Microwave Cladding", <i>International Journal of Applied Engineering Research</i> , Vol.6, No.5 (2011), pp.569–577. |
| 68. | Dheeraj Gupta, A K Sharma , "Development and Microstructural Characterization of Microwave Cladding on Austenitic Stainless Steel", <i>Surface and Coatings Technology</i> , Vol.206 (2011), doi:10.1016/j.surfcoat.2011.05. 018, pp.5147–5155. (IMPACT FACTOR: 2.112, 5-YR IMPACT FACTOR: 2.294) |
| 69. | Vivek Jain, Apurbba Kumar Sharma , and Pradeep Kumar, "Recent Developments and Research Issues in Microultrasonic Machining," <i>ISRN Mechanical Engineering</i> , Vol. 2011, Article ID 413231, 15 pages, 2011. doi:10.5402/2011/413231. |
| 70. | Inderdeep Singh, Pramendra Kumar Bajpai, Deepak Malik, Apurbba Kumar Sharma , Pradeep Kumar, "Feasibility Study of Microwave Joining of 'green' Composites", <i>Akademeia</i> , Vol. 1, No. 1 (2011), pp. 1– 6. |
| 71. | Dheeraj Gupta, A K Sharma , "Copper coating on austenitic stainless steel using microwave hybrid heating", <i>Proceedings of the Institution of Mechanical Engineers (Part E), Journal of Process Mechanical Engineering</i> , Vol.225, (2012), DOI: 10.1177/0954408911414652, pp. 132–141. |
| 72. | Srinath M.S., Apurbba Kumar Sharma , Pradeep Kumar, "Investigations on microstructural and Mechanical Properties of Microwave Processed Dissimilar Joints", <i>Journal of Manufacturing Processes</i> , doi:10.1016/j.jmapro.2011.03.001. Vol.13 (2011), pp.141–146. |
| 73. | Srinath M.S., Apurbba Kumar Sharma , Pradeep Kumar, "A Novel Route for Joining of Austenitic Stainless Steel (SS-316) using Microwave Energy", <i>Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture</i> , (2011), doi:10.1177/2041297510393451. (IMPACT FACTOR: 0.77) |

| | |
|-----|--|
| 74. | Srinath M.S., Apurbba Kumar Sharma , Kumar P., “A New Approach to Joining of Bulk Copper using Microwave Energy”, <i>Materials and Design</i> , (2011), doi:10.1016/j.matdes.2011.01.023, 32, pp.2685-2694. (IMPACT FACTOR: 1.694, 5-YR IMPACT FACTOR: 1.750) |
| 75. | Srinath M.S., Apurbba Kumar Sharma , Pradeep Kumar, “Microwave processing of metallic joints and their characterization”, <i>I – manager’s Journal of Mechanical Engineering</i> , Vol. 1, No. 1, (2011), 21-25. |
| 76. | Rajesha S., G. Venkatesh, A K Sharma , Pradeep Kumar, “Performance Study of A Natural Polymer Based Media for Abrasive Flow Machining”, <i>Indian Journal of Engineering & Material Sciences</i> , Vol. 17, December 2010, pp.107–113. (IMPACT FACTOR: 0.218) |
| 77. | Rajesha S., A. K. Sharma and Pradeep Kumar, “On Electro Discharge Machining of Inconel 718 with Hollow Tool”, <i>Journal of Materials Engineering and Performance</i> , (2011), DOI: 10.1007/s11665-011-9962-8. (IMPACT FACTOR: 0.639 as in 2010) |
| 78. | Rajesha S., A. K. Sharma and Pradeep Kumar, “Optimization of Process Parameters of WEDM While Machining Inconel 718 Using Taguchi’s Orthogonal Array”, <i>International Journal of Engineering, Technology & Management</i> (ISSN: 0974-9535) (Accepted) |
| 79. | Rajesha S., A. K. Sharma and Pradeep Kumar, “An Approach to Optimization of Process Parameters While EDMing Inconel 718 Using Taguchi’s Orthogonal Array”, <i>International Journal of Production and Quality Engineering</i> , Vol. 1, No. 2, (2011), 63-70. |
| 80. | Rajesha, S., Apurbba Kumar Sharma and P. Kumar, “Influence of Process parameters in Centrifugal Force Assisted Abrasive Flow Machining”, <i>International Journal of Engineering Research and Technology</i> , Vol. 3, No. 3, 2010, 653 – 663. |
| 81. | Kishore R. A., Tiwari R., Kumar P. and Sharma, A. K. “N-Period Dynamic Deterministic Inventory Model for Perishable Goods” <i>The IUP Journal of Operations Management</i> , Vol. X, No. 1,(2011), pp. 7-17. |
| 82. | Jawalkar C.S., A. K. Sharma , Kumar Pradeep “Electric Discharge Machining: Variants, Hybridization and Research Potentials”, <i>International Journal of Production and Quality Engineering</i> , IJPQE-0028-10 Vol. 2, No. 1, (2011), 27-41. |
| 83. | A. K Sharma , S. Rajesha, Uday Divekar, Dinesh Kumar, Anish Sachdeva. “A Fuzzy Approach to Selection of Optimum Maintenance Strategy – A Case based Analysis”, <i>Industrial Engineering Journal</i> , Vol. II, No. 14, (2010), 4–11. (IMPACT FACTOR: 0.06) |
| 84. | Venkata Subbarayudu Pesala, A. K. Sharma , P. Groche and M. S. C. Okan Goertan, “ECAS: A New Technique to Produce Ultra Fine Grained Materials”, <i>Industrial Engineering Journal</i> , Vol. II, No. 12, (2010), 26–29. |

| | |
|-----|--|
| 85. | A. K Sharma and R. Krishnamurthy, "Sliding wear characterisation of microwave glazed plasma sprayed ceramic composites", Proc. ImechE, 224, Part J: <i>J. Engineering Tribology</i> , (J5), DOI:10.1243/13501JET692, 497–511, 2010. |
| 86. | Sunil Kumar, Durga Gupta, Inderdeep Singh, and Apurbba Sharma , "Behavior of Kevlar/ Epoxy Composite Plates Under Ballistic Impact", <i>Journal of Reinforced Plastics and Composites</i> , DOI:10.1177/0731684409343727, 1-17. (IMPACT FACTOR: 0.902) |
| 87. | D.S. Gupta, B.K. Mishra, I. Singh and A. K. Sharma , "Damage Behavior of Polymer Matrix Composite Plates under Low Velocity Impact: An FE Approach", <i>International Journal of Manufacturing Science and Engineering</i> , 1 (1), 21 – 24, 2010. |
| 88. | A. K Sharma and R. Krishnamurthy, "Flexural Response Characterisation of Plasma Sprayed and Microwave Glazed Ceramic Composite Coatings", <i>RSM International Journal of Engineering, Technology and Management</i> , Vol. 1, 7-17, July 2009. |
| 89. | K. Malla Reddy, A. K. Sharma and P. Kumar, "Some aspects of centrifugal force assisted abrasive flow machining of 2014 Al alloy", Proc. IMechE Vol. 222 Part B: <i>J. Engineering Manufacture</i> , 222 (B7), 773 – 783, 2008. |
| 90. | Apurbba Kr. Sharma and R. Krishnamurthy, "Microwave processing of sprayed alumina composite for enhanced performance", <i>Journal of the European Ceramic Society</i> , 22, 2849-2860, 2002, doi:10.1016/S0955-2219(02)00051-1. (IMPACT FACTOR: 2.574, 5-YR IMPACT FACTOR: 2.265) |
| 91. | K. Vijayakumar, Apurbba Kr. Sharma , M.M. Mayuram and R. Krishnamurthy, "Response of plasma sprayed alumina-titania ceramic composite to high frequency impact loading", <i>Materials Letters</i> , 54(5-6), 403-413, 2002. (IMPACT FACTOR: 2.117, 5-YR IMPACT FACTOR: 2.194) |
| 92. | A K Sharma and R. Krishnamurthy, "Microwave glazing of alumina-titania ceramic composites for enhanced properties", <i>Key Engineering Materials</i> , Vol. 206 – 213 (2002), doi:10.4028/www.scientific.net/KEM.206-213.579, pp.579-582. |
| 93. | A. K. Sharma , S. Aravindan and R. Krishnamurthy, "Microwave glazing of alumina-titania ceramic composite coatings", <i>Materials Letters</i> , 50, 295-301, 2001. (IMPACT FACTOR: 2.117, 5-YR IMPACT FACTOR: 2.194) |
| 94. | Apurbba Kr. Sharma , K. Vijayakumar and R. Krishnamurthy, "Acoustic emission response of thermal spray deposited ceramic composite", <i>Journal of the Acoustic Society of India</i> , 29 (2-4), 283-295, 2001. |

B. International Conferences (Total = 76)

1. Nitin Kumar Lautre, **Apurbba Kumar Sharma**, Pradeep Kumar, Shantanu

| | |
|-----|--|
| | Das, "Performance of Monopole Concentrator during Microwave Drilling of Perspex", Proceedings of the AIMTDR Conference, Guwahati, Dec.12-14, 2014. |
| 2. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Pradeep Kumar and Shantanu Das, "Defect Investigation in Microwave Drilling of Perspex at 2.45 GHz", Proceedings of the International Conference on Processing and Fabrication of Advanced Materials (PFAM-XXIII), Roorkee, Dec 5-7, 2014, |
| 3. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Pradeep Kumar, "Distortions in hole and tool during microwave drilling of perspex in a customized applicator", IEEE MTT-S International Microwave Symposium (IMS), Tompa Bay, Florida, 2014, 1-3. |
| 4. | Venkatesh, G., Tarlochan, Singh, Apurbba Kumar Sharma , Akshay Dvivedi, "A fuzzy logic approach in prediction of responses while finishing microchannels using abrasive flow machining", Proceedings of the International Conference on Processing and Fabrication of Advanced Materials (PFAM-XXIII), Roorkee, Dec 5-7, 2014, 374-383. |
| 5. | Sutar, M.K., Pathak, P.M., Sharma, A. K. , Mehta, N. K., Gupta, V. K., "Bond Graph Modelling of In Vivo Robot for Biopsy," <i>International Conference on Mathematical Modelling (MATHMOD 2012)</i> , February 15- 17, 2012, Vienna, Austria, Vol. 7(1), 421- 426. |
| 6. | Sutar, M.K., Garg, A., Vikram, C.S., Gupta, S., Pathak, P.M., Sharma, A. K. , Mehta, N. K., Gupta, V. K., "Design of In- Vivo Robot for Biopsy," <i>International Conference on MICROACTUATORS AND MICROMECHANISMS (MAMM-2012)</i> , January 19- 20, 2012, CSIR-CMERI India. |
| 7. | Sutar, M. K., Pathak, P. M., Mehta, N. K., Sharma, A. K. , "Trajectory Control of a 3-link Planar Manipulator using Virtual Link Based Controller," <i>1st International and 16th National Conference on Machines and Mechanisms (iNaCoMM 2013)</i> , December 18-20, , 2013, Roorkee, India, 124-131. |
| 8. | Radha Raman Mishra, Rajesha S, Apurbba Kumar Sharma , "Microwave sintering of pure metal powders – A review", International conference ITMMAAAA-2014, 15-16 Feb 2014, JNU, New Delhi, India. (2014) |
| 9. | Radha Raman Mishra, Rajesha S. and Apurbba Kumar Sharma , "Design and analysis of carbon fiber and PEEK sandwich composite", Proceeding of International Conference on Emerging Materials and Applications (ICEMA - 2014), April 5-6 th 2014, Roorkee, India. (2014) |
| 10. | Srinath M.S., Apurbba Kumar Sharma , Pradeep Kumar, "Theoretical and experimental analysis of microwave joining of stainless steel", Materials Science & Technology Conference and Exhibition (MS&T '13), October 27-31, 2013, Montreal, Canada. |
| 11. | Nitin Kumar Lautre, Apurbba Kumar Sharma and Pradeep Kumar, "Microwave drilling with Litz wire using a domestic applicator", International |

| | |
|-----|--|
| | <p>Conference on Smart Technology for Mechanical Engineering (STME -2013), New Delhi, October 25 - 26, 2013, pp 797-802. <i>Also published in "Bonfring International Journal of Industrial Engineering and Management Science", 4(3), 2014, 125-131.</i></p> |
| 12. | <p>Akshay Atul Mali, Amit Bansal, Apurbba Kumar Sharma and Inderdeep Singh, "Simulation of microwave heating of materials with different dielectric properties", International Conference on Smart Technology for Mechanical Engineering (STME -2013), New Delhi, October 25 - 26, 2013, 821-824.</p> |
| 13. | <p>Cheema M.S., Dvivedi A. and Apurbba Kumar Sharma, "On material removal mechanism by single particle impingement in ultrasonic machining", International Conference on Smart Technology for Mechanical Engineering (STME -2013), New Delhi, October 25 - 26, 2013, pp. 886-889.</p> |
| 14. | <p>Cheema M.S., Dvivedi A. and Apurbba Kumar Sharma, "An ultrasonic micromachining setup for machining of 3D geometries", International Conference on Research and Innovations in Mechanical Engineering (ICRIME-2013), Ludhiana, October 24-26, 2013.</p> |
| 15. | <p>Guripadu Venkatesh, Tarlochan Singh, Apurbba Kumar Sharma and Akshay Dvivedi, "Finishing of Microchannels using Abrasive Flow Machining", International Conference on Research and Innovations in Mechanical Engineering (ICRIME-2013), Ludhiana, October 24-26, 2013. (<i>Best Paper Award</i>)</p> |
| 16. | <p>C. S. Jawalkar, Pradeep Kumar, Apurbba Kumar Sharma and Faraz Ansari, Experimental investigations on micro channeling through ecdm using different electrolytes, Proceedings of the ASME 2013 International Manufacturing Science and Engineering Conference (MSEC2013), June 10-14, 2013, Madison, Wisconsin, USA.</p> |
| 17. | <p>Jain, Vivek, Apurbba Kumar Sharma, and Pradeep Kumar. "Fabrication of Microchannels for Micro-Fluidic Applications Using High Frequency Micromachining on an Amorphous Material." AIP Conference Proceedings. American Institute of Physics, Ste. 1 NO 1 Melville NY 11747-4502 United States, 2012.</p> |
| 18. | <p>Amit Bansal, Apurbba Kumar Sharma, "Investigations on microstructural characterization of microwave composite clads on austenitic stainless steel", Proc. of The 2nd Annual International Conference on Materials Science, Metal & Manufacturing (M3 2012), November 19-20, 2012, Singapore, pp. 108–113.</p> |
| 19. | <p>C. S. Jawalkar, Pradeep Kumar, Apurbba Kumar Sharma, "On mechanism of material removal and parametric influence while machining sodalime glass using Electro-Chemical Discharge Machining (ECDM)", 4th International and 25th AIMTDR Conference 2012, Kolkata, 2012, pp. 440–446.</p> |
| 20. | <p>Gudipadu Venkatesh, Apurbba Kumar Sharma, Pradeep Kumar, "Influence of Process Parameters on performance of Natural Polymer Media for Abrasive Flow Machining of Brass Alloy", 4th International and 25th AIMTDR Conference 2012, Kolkata, 2012, pp. 577–582.</p> |

| | |
|-----|--|
| 21. | Vivek Jain, Apurbba Kumar Sharma , Pradeep Kumar, "Fabrication of Microchannels using layer-by-layer Machining in Micro USM", 4 th International and 25 th AIMTDR Conference 2012, Kolkata, 2012, pp. 1344–1348. |
| 22. | Srinath M.S., A K Sharma , Pradeep Kumar, "Optimisation of Process Parameters for the development of Copper Joints using Microwave Irradiation", 4 th International and 25 th AIMTDR Conference 2012, Kolkata, 2012. |
| 23. | Vivek Jain, A K Sharma and Pradeep Kumar, "Investigation on Micro Ultrasonic Drilling of Glass Using Taguchi Approach", International Conference Advance Material and Processing–ICAMP 2011, Dec. 19-20, 2011, Chennai. |
| 24. | Dheeraj Gupta, A K Sharma , "Microwave Cladding: An Emerging Hardfacing Technique", International Conference Advance Material and Processing – ICAMP 2011, Dec. 19-20, 2011, Chennai. |
| 25. | C. S. Jawalkar, A K Sharma , Pradeep Kumar, "Micromachining with ECDM : Research potentials & experimental investigations", (ICMIME), Zurich, Switzerland, Jan.15-17, 2012. |
| 26. | Vivek Jain, A K Sharma and Pradeep Kumar, "Fabrication of Microchannels for Micro-fluidic Applications using High Frequency Micromachining on an amorphous material", TMS 2012, March 11-15, 2012, Florida. (Accepted). |
| 27. | C. S. Jawalkar, A K Sharma , Pradeep Kumar, "A review on EDM, ECDM and its variant processes", ICAM, 2011, Agra, India. |
| 28. | Srinath M.S., Suryanarayana Murthy P, Apurbba Kumar Sharma , Pradeep Kumar, "Finite Elemental Analysis of Microwave Joining of Bulk Metals", Proc. of the International Conference on Computational Methods in Manufacturing (ICMM2011), Dec. 15-16, 2011, IIT Guwahati, India. |
| 29. | P. K. Bajpai, D. Malik, I. Singh, J. Madaan, A K Sharma , "Investigation for Microwave Joining of Green Composites using Finite Element Approach", Proc. of the International Conference on Computational Methods in Manufacturing (ICMM2011), Dec. 15-16, 2011, IIT Guwahati, India. |
| 30. | Srinath M.S., A.K.Sharma , Pradeep Kumar, "Investigations on Interface Powder Layer during Joining of Metallic Materials", Proc. Intl. Conference and Exhibition on Powder Metallurgy for Automotive and Engineering Industries <i>PMAI-2011</i> , Pune, Feb. 3-5, 2011. |
| 31. | Dheeraj Gupta, A K Sharma , "On Microstructural Investigation of Microwave Cladding", International Conference on Materials for Advanced Technologies (ICMAT), Singapore, 2011. |
| 32. | Dheeraj Gupta, A K Sharma , "Characterization Of Microwave Heating Induced Copper Coating On Graphite Substrate", International conference on recent trends in materials and characterization (RETMAC 2010), NIT Surathkal (India), 14 th -15 th February (2010), 23. |

| | |
|-----|--|
| 33. | Dheeraj Gupta, A K Sharma , Prabhakar M. Bhovi, "Structure-Property Correlation in Microwave Cladding", E-proceeding of Second international conference on Materials for the Future (ICMF), 2011, India. (<i>Best Paper Award</i>) |
| 34. | Dheeraj Gupta, A K Sharma , "Investigation on Microstructural Characterization of Microwave Cladding", Materials Science & Technology Conference & Exhibition, October 16-20, 2011, Columbus, Ohio, USA. |
| 35. | Suryanarayana Murthy P, Srinath M S, Sharma A K and Pradeep Kumar, "An FEM approach to analysis of microwave heating of alumina in multi-mode applicator", Proc. International Conference on Mathematical Modelling and Applications to Industrial Problems, NIT Calicut, March 28-31, 2011. |
| 36. | Srinath M.S., A. K. Sharma , Pradeep Kumar, "Comparative study of Microwave welded and TIG welded stainless steel (SS-316) Joints", Proc. (MS&T-11) Materials Science & Technology 2011 Conference & Exhibition October 16-20, 2011 Columbus, Ohio. |
| 37. | Dheeraj Gupta and Sharma, A K , "On development and performance of microwave induced metal-ceramic composite cladding", Processing and Fabrication of Advanced Materials PFAM–XIX, January 13-15, Auckland, NZ, 2011, pp.90 – 101. |
| 38. | Dheeraj Gupta, A K Sharma , "Investigation On Sliding Wear Performance Of WC10Co2Ni Cladding Developed Through Microwave Irradiation", International Conference on Wear of Materials, April 3-7, 2011, Philadelphia, USA. |
| 39. | Vivek Jain, Sharma, A K and Pradeep Kumar, "Investigation on tool wear in micro ultrasonic machining", 2 nd International Conference on Mechanical, Industrial, and Manufacturing Technologies MIMT 2011, 26-28 February, 2011, Singapore. |
| 40. | M.S.Srinath, A. K. Sharma , Pradeep Kumar, "Microstructural Investigations on Microwave Induced Dissimilar Joints", <i>Intl. conference on AMMMT</i> 2010, Tumkur, India, Nov. 17-18, 2010, pp71. |
| 41. | Dheeraj Gupta and Sharma, A K , "Development Of Copper Coating On Austenitic Stainless Steel Through Microwave Hybrid Heating", 2011 TMS Annual Meeting & Exhibition, San Diego, February 27 - March 3, 2011. |
| 42. | Dheeraj Gupta and A K Sharma , "Development Of Metallic Coating On Metallic Substrate Using Electromagnetic Radiation And Their Characterization", International Conference on Emerging Trends In Mechanical Engineering (ICETME), 2011, Thapar, India, pp.967 – 971. |
| 43. | Dheeraj Gupta, A. K. Sharma , "Development of erosion resistant cladding on austenitic stainless steel through microwave heating", 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference, Visakhapatnam, India, December 13-15, 2010, pp. 1029–1033. |

| | |
|-----|--|
| 44. | S. Rajesha, Pramod Kumar Patnaik, Apurbba Kumar Sharma and Pradeep Kumar, "Surface Integrity Evaluation of Electro Discharge Machined Inconel", 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference, Visakhapatnam, India, December 13-15, 2010, pp.259–264. |
| 45. | M.S. Srinath, C. Suresh Kumar, A.K.Sharma , Pradeep Kumar, "Joining of Copper through Microwave Energy", 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference, Visakhapatnam, December 13-15, 2010, pp. 467– 471 (Poster Proceedings). |
| 46. | G. Venkatesh, S. Rajesha, Apurbba Kumar Sharma , Pradeep Kumar, "Performance Evaluation of a Newly Developed Media for AFM Using Taguchi's Orthogonal Arrays", 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference, Visakhapatnam, India, December 13–15, 2010, pp. 1187–1192. |
| 47. | P. Venkatasubbarayudu, A K Sharma , P. Groche, and Okan Goertan, "Prediction of Forces in a New Severe Plastic Deformation (SPD) Process", 3rd International & 24th AIMTDR (All India Manufacturing Technology, Design and Research) Conference, Visakhapatnam, India, December 13–15, 2010, pp.965–969. |
| 48. | Dheeraj Gupta and A K Sharma , "Microwave Processing of Metallic Materials: Some Developments at IIT Roorkee", National Symposium on Microwave Processing of Materials (NSMWP), IIT Delhi, Delhi (India), 2010, pp 10. |
| 49. | S. Rajesha, Apurbba Kumar Sharma , Pradeep Kumar, "Influence of Process Parameters on Metal Removal Rate while EDMing Inconel 718", 2nd International Conference on Production and Industrial Engineering (CPIE 2010), Jalandhar, India,, 03-05 December, 2010, 733 – 737. |
| 50. | Dheeraj Gupta, A K Sharma , "A New Metallic Deposition Process using 2.45GHz Electromagnetic Radiation", Proceeding of International conference on Production and Industrial Engineering (CPIE), 2010, Jalandhar, India, pp 1644-1648. |
| 51. | Jawalkar C.S., Walia R. S., Sharma A. K , Kumar Pradeep (2010) "Surface Finishing of 1100-0 Aluminum specimens using Roller Burnishing", International Conference on Production and Industrial Engineering (CPIE-2010), Dec-2010, Jalandhar, India, pages: 738-743. |
| 52. | Srinath M.S., Apurbba Kumar Sharma , Pradeep Kumar. "A Novel Method for Joining of Stainless Steel (SS-316) through Microwave Energy", 2011 TMS Annual Meeting & Exhibition, San Diego, February 27 - March 3, 2011. |
| 53. | Rajesha, S., A. K. Sharma and Pradeep Kumar, "Some Studies On Performance of A Natural Polymer Media for Abrasive Flow Machining", 2011 TMS Annual Meeting & Exhibition, San Diego, February 27 - March 3, 2011. |
| 54. | S. Rajesha, A. K. Sharma , Pradeep Kumar, "Some Aspects of Surface |

| | |
|-----|---|
| | Integrity Study of Electro Discharge Machined Inconel 718” Proceedings of the 36th International MATADOR Conference, The University of Manchester, United Kingdom, July 14 – 16, 2010, pp 439 – 444. |
| 55. | Rajेश S., Sharma A. K. , Pradeep Kumar, “Effect of Process Parameters on Performance of WEDM while Machining Inconel 718” Proceeding :International Conference on Frontiers in Mechanical Engineering, FIME-2010, NITK, Surathkal, May 20-22, 2010, pp 162-167. |
| 56. | Rajेश S., Sharma A. K. , Pradeep Kumar, “Development and Performance Evaluation of Alternative Media for Abrasive Flow Machining”, Proceedings of the International Conference on Frontiers in Mechanical Engineering FIME-2010, NITK, Surathkal, May 20-22, 2010, pp 168 – 173. |
| 57. | Dheeraj Gupta and Sharma A. K. , “A green approach to development and characterization of thin copper coating on austenitic stainless steel”, Proceedings of the International Conference on Frontiers in Mechanical Engineering FIME-2010, NITK, Surathkal, May 20–22, 2010, pp. 439 – 444. (<i>Best Paper Award</i>) |
| 58. | Srinath M.S., Sharma A. K. , P. Kumar, “Microwave welding of SS-316 and its characterisation”, Proceedings of the International Conference on Frontiers in Mechanical Engineering FIME-2010, NITK, Surathkal, May 20-22, 2010, pp. 150–155. |
| 59. | Srinath M S., Chintam Suresh Kumar, Apurbba Kumar Sharma , Pradeep Kumar, “Processing of Copper through Microwaves: Developments at IIT Roorkee” International conference on Recent Trends in Materials and Characterization (RETMAC-2010), NITK, Surathkal, February 14 – 16, 2010, pp169 – 175. |
| 60. | Rajेश S., A. K. Sharma and P. Kumar, “Influence of Parameters on Process Performance During Electro Discharge Machining of Inconel-718”, Supplementary Proc., Volume 3: TMS Annual Meeting 2010, February 14 – 18, 2010, Seattle, WA, pp. 841 – 848. |
| 61. | Srinath M S, Chintam Suresh Kumar, Apurbba Kumar Sharma , Pradeep Kumar, “Processing of Copper through Microwaves: Developments at IIT Roorkee”, <i>Proc. of the International conference RETMAC – 2010</i> , Surathkal, February, 2010. |
| 62. | Joy Prakash M, Sharma A. K. , Jain N. K, Design of Experiments for Electrochemical Honing of Helical Gear, <i>Proc. of the International Conference on Emerging Research and Advances in Mechanical Engineering, ERA 2009</i> , Chennai, India, pp. 874–878. |
| 63. | Uday Devekar, Dinesh Kumar, A. K. Sharma , Anish Sachdeva, “An Optimum maintenance strategy selection using fuzzy approach”, <i>Proc. of the 2nd International & 23rd AIMTDR Conference</i> , Chennai, December 15 – 17, 2008, pp. 1127–1132. |

| | |
|-----|--|
| 64. | Ramlal Naik L., Jain N. K., A. K. Sharma , "Investigation on Precision Finishing of Spur Gears by Electrochemical Honing", <i>Proc. of the 2nd International & 23rd AIMTDR Conference</i> , Chennai, December 15 – 17, 2008, pp. 509–514. |
| 65. | D.S. Gupta, B.K. Mishra, I. Singh, A. K. Sharma . "Damage Behavior of Polymer Matrix Composite Plates under Low Velocity Impact: An FE Approach", <i>Proceedings of International and INCCOM-6 Conference, Future Trends in Composite Materials and Processing</i> , December 12-14, 2007, IIT Kanpur, 292 – 296. |
| 66. | A.K. Sharma and R. Krishnamurthy, "Structure property co-relation in microwave glazed ceramic composite coatings". <i>Proceedings of The First International and 22nd All India Manufacturing Technology, Design and Research Conference</i> , Roorkee, India, December, pp. 629-634, 2006. |
| 67. | Apurbba Kr. Sharma and R. Krishnamurthy, "Performance enhancement of plasma sprayed ceramic composite coatings through microwave glazing", <i>Indo-Japan Conference on Damage Tolerant Design and Materials DTDM 2004</i> , December 16-18, Chennai, India, pp.316-320, 2004. |
| 68. | Apurbba Kr. Sharma and R. Krishnamurthy, "Microwave glazing of plasma sprayed alumina-titania composites for enhanced resistance to high frequency impact loading", <i>Proc. of the International Conference on CAD, CAM, Robotics and Autonomous Factories (INCARF-2003)</i> , August11-13, New Delhi, India, 2003. |
| 69. | Apurbba Kr. Sharma and R. Krishnamurthy, "Response characterisation of microwave glazed alumina-titania spray deposits under sliding and erosion environment", <i>6th Biennial Conference on Engineering Systems Design and Analysis</i> , Istanbul, Turkey, July, 2002. |
| 70. | Apurbba Kr. Sharma , K. Vijayakumar and R. Krishnamurthy, "Evaluation of plasma deposited alumina-titania ceramic composite coatings". <i>International Thermal Spray Conference and Exposition ITSC 2002</i> , Düsseldorf, Germany, March, 2002. |
| 71. | Apurbba Kr. Sharma and R. Krishnamurthy. "Response characterisation of microwave glazed plasma spray deposited ceramic composite coatings", <i>ASME/JSME International Conference on Materials and Processing</i> , Honu Lulu, 2002. |
| 72. | K. Vijayakumar, Apurbba Kr. Sharma , M.M. Mayuram and R. Krishnamurthy. "Response of alumina-titania (AT-13) ceramic composite deposits to high frequency impact loading", <i>The 26th Annual International Conference on Advanced Ceramics & Composites</i> . Cocoa Beach, Florida, USA, January, 2002. |
| 73. | Apurbba Kr. Sharma and R. Krishnamurthy, "Microwave glazing of alumina-titania ceramic composites for enhanced properties", <i>Proceedings of 7th ECERS Conference and Exhibition of the European Ceramic Society "ECerS VII"</i> , Belgium, September, pp.579-582, 2001. |

| | |
|-----|--|
| 74. | Apurbba Kr. Sharma and R. Krishnamurthy, "Response of plasma sprayed ceramic composites to sliding contact. <i>2nd World Tribology Congress</i> ", Vienna, Austria, September, 2001. |
| 75. | Apurbba Kr. Sharma and R. Krishnamurthy, "Microwave processing of alumina-titania ceramic composite coating", <i>International Conference on Microwave and High frequency Heating</i> . Bayreuth, Germany, September, 2001. |
| 76. | Apurbba Kr. Sharma and R. Krishnamurthy, "Monitoring of grinding wheel wear through acoustic emission", <i>Proc. of the International Conference on Industrial Tribology- TRIBO-TECH '96</i> , February 23-24, Jamshedpur, India, pp.163-173, 1996. |

| | |
|-----------|--|
| C. | <u>National Conferences</u> (Total = 34) |
| 1. | Sunny Zafar, Apurbba Kumar Sharma , Navneet Arora; Microwaves in Surface Engineering, Proceedings of STME-2013, International Conference on Smart Technologies for Mechanical Engineering, Delhi Technological University, Delhi, India, October 2013, 698-704. |
| 2. | Amit Bansal, Apurbba Kumar Sharma , "3D electromagnetic field simulation of silicon carbide and graphite plate in microwave oven", Recent Advances in Mechanical Engineering (RAME-2013), Roorkee, India, October 05-06, 2013, pp. 7-12 |
| 3. | Nitin Kumar Lautre, Apurbba Kumar Sharma , Pradeep Kumar and Shantanu Das, "Performance of different drill bits in microwave assisted drilling", Recent Advances in Mechanical Engineering (RAME-2013), Roorkee, India, October 05-06, 2013, pp 21-25. |
| 4. | Apurbba Kumar Sharma , Amit Bansal, Shantanu Das, "Joining of Materials and Metals in Microwave Oven at 2.45 GHz", Proceedings of Indian Physics Association Theme Meeting on 'Synergy in Physics and Industry (SPI-2013)', Mumbai, January 21-22, 2013, pp.66-68. |
| 5. | Apurbba Kumar Sharma , Titto John George, Amit Bansal, Shantanu Das, "Drilling of Materials in Atmospheric Conditions using 2.45 GHz Microwaves", Proceedings of Indian Physics Association Theme Meeting on 'Synergy in Physics and Industry (SPI-2013)', Mumbai, January 21-22, 2013, pp.69-70. |
| 6. | Jawalkar C. S., Kumar Pradeep and Apurbba Kumar Sharma , "Predicting the material removal in ECDM process through modeling and simulation", Proceedings of the second national seminar on Computing Techniques for Engineering Applications (NSCTEA), Bhopal, November 9-10, 2012, 6-9. |
| 7. | Titto John George, Amit Bansal, Apurbba Kumar Sharma , Pradeep Kumar, "Microwave Drilling: A Review and a Case Study of Drilling of Metallic |

| | |
|-----|---|
| | Materials", Proceedings of International Conference on Mechanical Engineering Technology (ICOMET 2012), Kerala, India, January 2012, 205-211. |
| 8. | Prabhakar M. Bhovi, Dheeraj Gupta, A K Sharma , Sushanta Dutta, "Simulation Studies on Slurry Flow Analysis for Jet Erosion Testing", Proceedings for National Conference on "Advancements & futuristic trends in mechanical and industrial engineering", November 12–13, 2010, Yamunanagar, India, pp. 118–121. |
| 9. | Srinath M.S., Suryanarayana Murthy P, Apurbba Kumar Sharma , Pradeep Kumar, "Finite Elemental Analysis of Microwave Joining of Bulk Metals", Proc. ICCMM, Dec. 15-16, 2011, IIT Guwahati, India. |
| 10. | Srinath M.S., C. Suresh Kumar, A K Sharma , P. Kumar, "Sintering of Copper through Microwaves: Novel Developments in Metallic Material Processing", Proc. National Conference on Advanced Manufacturing Techniques (NCAMT-2009), SMVDU Katra, Jammu, Nov. 5-6, 2009, pp358. |
| 11. | Srinath M.S., A K Sharma , P. Kumar, "Joining of Bulk Metallic Materials using Microwave Energy", Proc. National Symposium on Microwave Processing of Materials, NSMWP-2010, IIT Delhi, Nov. 28, 2010, pp31. |
| 12. | Dheeraj Gupta, A K Sharma , "Deposition of Copper Coating on Austenitic Stainless Steel through Microwave Hybrid Heating", National Conference on Advanced Manufacturing Techniques (NCAMT), Shri Mata Vaishno Devi University, Jammu, India, 2009. |
| 13. | Dheeraj Gupta, A K Sharma , "Development and Characterisation of Ni based Microwave Cladding", National Conference on Design And Manufacturing (NaConDM2011), Indian Institute of Information Technology Design And Manufacturing (IITd&M) Kancheepuram, 27-28, May 2011. |
| 14. | Malik D., Singh I., A K Sharma , Pradeep Kumar, "Processing of Thermoplastics with Microwave Energy: A Review", Proceedings for National Conference on "Advancements & futuristic trends in mechanical and industrial engineering", November 12–13, 2010, Yamunanagar, India, pp. 55–60. |
| 15. | Vivek Jain, Sharma, A K , and Pradeep Kumar, "Micro USM: Developments and research issues", 6 th ISME Conference, December 2 – 4, 2010, New Delhi. |
| 16. | Dheeraj Gupta and A K Sharma , "Microwave Processing of Metallic Materials: Some Developments at IIT Roorkee", National Symposium on Microwave Processing of Materials, New Delhi, India, November 28, 2010. |
| 17. | M.S. Srinath, A K Sharma , Pradeep Kumar, "Simulation and Analysis of Microwave Heating while Joining Bulk Copper", Comsol Conference COMSOL 2010, Bangalore, India, October 2010. |
| 18. | Vivek Jain, Sharma, A K , and Pradeep Kumar, "Investigations on process capabilities of micro ultrasonic drilling", Proceedings for National Conference |

| | |
|-----|---|
| | on “Advancements & futuristic trends in mechanical and industrial engineering”, November 12–13, 2010, Yamunanagar, India, pp. 66–70. |
| 19. | Vivek Jain, Sharma, A K , and Pradeep Kumar, “Fabrication of microchannels through high frequency low amplitude machining”, 5 th Uttarakhand State Science and Technology Congress UCOST 2010, 2010, pp.172. |
| 20. | Dheeraj Gupta and Sharma, A K , “A Novel Processing Method for Development of Metallic Coating on Metallic Substrate”, 5 th Uttarakhand State Science and Technology Congress UCOST 2010, 2010, pp.205. |
| 21. | G. Venkatesh, S. Rajesha, A K Sharma , Pradeep Kumar, “Performance Evaluation of a New Abrasive Carrier for Abrasive Flow Machining”, <i>Proc. of the National Conference on Recent Innovations in Production Engineering (RIPE)</i> , 16 th – 17 th April, 2010, Chennai, pp. B 97 – 100. |
| 22. | Rajesha S., A K Sharma and P. Kumar, “Hybrid abrasive flow machining process: a brief review”, <i>Proc. of the National Conference on Recent Advances in Manufacturing and Production Engineering (RAMP-2009)</i> , Pantnagar, February 12 – 14, pp. 366 – 374, 2009. |
| 23. | A K Sharma , M.S. Srinath and P Kumar, “Microwave processing of metals and its developments: a new paradigm in metal processing”, <i>Proc. of the National Conference on Recent Advances in Manufacturing and Production Engineering (RAMP-2009)</i> , Pantnagar, February 12 – 14, pp. 330 – 335, 2009. |
| 24. | Joy Prakash Mishra, A K Sharma and N K Jain, “Set-up for Electrochemical Honing of Helical Gear”, <i>Proceedings of the National Conference on Emerging Trends in Mechanical Engineering, ETME 2009</i> , Anand, March, 2009. |
| 25. | L. Deshpandulal and A. K. Sharma , “Diamond grinding of HVOF sprayed Ni-Cr deposits on stainless steel”, <i>Proc. of 2nd National Conference on Advances in Manufacturing Technology</i> , Chandigarh, March, pp. 111-120, 2008. |
| 26. | H. P. Sharma and Apurbba Kr. Sharma , “Impact of product attributes on customers – a case study”, <i>3rd National Conference on Precision Engineering</i> , Kolkata, India, December, 2005, (<i>Abstract accepted</i>). |
| 27. | Apurbba Kr. Sharma and R. Krishnamurthy, “Response characterization of microwave glazed plasma sprayed ceramic composites under sliding environment”, <i>XIII National Conference of Indian Society of Mechanical Engineers</i> , Roorkee, India, December, 2003. |
| 28. | Apurbba Kr. Sharma and R. Krishnamurthy, “Erosion wear behavior of alumina-titania composites in the as-sprayed and microwave glazed conditions”, <i>The 20th All India Manufacturing Technology, Design and Research Conference</i> , Ranchi, India, December, pp.821-826, 2002. |
| 29. | Apurbba Kr. Sharma and R. Krishnamurthy. “Microwave glazing: a new bulk post processing technique for plasma sprayed ceramic composites”, <i>Proceedings of the 1st ISAMPE National Conference on Composites “New</i> |

| | |
|-----|--|
| | <i>Frontiers in Materials and Processing</i> ”, Thiruvananthapuram, India, May, pp.42-49, 2002. |
| 30. | Apurbba Kr. Sharma and R. Krishnamurthy, “Functional evaluation of plasma deposited alumina-titania ceramic composite protective coatings”, <i>Proceedings of the 2nd National Conference on Precision Engineering</i> , Coimbatore, India, January, pp.1-8, 2002. |
| 31. | Apurbba Kr. Sharma , K. Vijayakumar and R. Krishnamurthy, “Response of alumina-titania (AT-13) ceramic composite coatings to dynamic loading”, <i>Proceedings of the 2nd National Conference on Precision Engineering</i> , Coimbatore, India, January, pp.19-24, 2002. |
| 32. | Apurbba Kr. Sharma and R. Krishnamurthy, “Microwave glazing of ceramic composite coatings for structural modification”, <i>Proceedings of the Symposium on Manufacturing Excellence</i> , IIT Madras, Chennai, India, January, pp.65-66, 2002. |
| 33. | Apurbba Kr. Sharma and R. Krishnamurthy, “Flexural characterization of thermally sprayed alumina-titania ceramic composite coatings”, <i>Proceedings of National Conference on Recent Advances in Materials Processing</i> , Annamalainagar, India, September, pp.66-73, 2001. |
| 34. | Sreedhar, C.S.D., A K Sharma , G. Santhanakrishnan and R. Krishnamurthy, “Fabrication and strength evaluation of bi-layered plasma sprayed ceramic coatings”, <i>Proceedings of The 19th All India Manufacturing Technology, Design and Research Conference</i> , Chennai, India, December, pp. 501-506, 2000. |