Full Resume of D K Dwivedi, Ph.D.

Name and Designation : **Dheerendra Kumar Dwivedi, Professor**

Date of Birth : Dec 02

Institution : Indian Institute of Technology, Roorkee

Department : Mechanical & Industrial Engineering

Field of Specialization : Material Processing, Surfacing and Joining technologies

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Department, I.I.T., Roorkee,
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Academic Qualification (B.E. onwards):

Degree	University / Institution	Division/ Equivalent	Year of Passing	Specialization
B.E.	Govt. Engg. College, Rewa (MP)	(72.6%) 1st	1993	Mechanical Engineering
M.E.	University of Roorkee	(70.4%) 1st	1997	Welding engineering
Ph. D.	MNIT, University of Rajasthan Jaipur, India	Feb 2003		Metallurgical Engineering on "Production and Properties of Cast Al-Si Base Alloys"

Areas of consultancy:

- Residual life assessment and NDT of hydro mechanical components e.g. gates, penstocks etc.
- Corrosion testing and estimation of life
- Welding of metals of commercial importance
- Mechanical, corrosion and chemical analysis of mechanical splices/couplers
- Increasing life of tribological components through surface engineering
- Controlling residual stress and distortion in weld joints
- Tensile, fatigue and fracture toughness testing
- Manufacturing related issues of casting & welding, surfacing
- Development welding/hardfacing electrodes
- Failure analysis of mechanical components such as gears, penstocks, valves

Research experience

Duration	Organization	Area (s)
1996-1997	University of Roorkee, Roorkee	Welding (thermal sprayed coatings for wear resistance)
1999-2002	MNIT, University of Rajasthan, Jaipur	Production and properties of cast Al-Si base alloys
2001-2004	National Institute of Technology, Hamirpur, HP	On sponsored R & D projects as PI 1. Grain refinement of cast Al-Si Alloys 2. Machining Characteristics of Cast Al-Si base alloys
2004-till date	Indian Institute of Technology, Roorkee,	On sponsored R & D project 1. Thermal spraying for longer life of tribological components (SRIC, IITR) 2. Development of wear resistant piston materials (CSIR, New Delhi) 3. Development of Non-cobalt base surfaces by laser cladding for nuclear applications (BRNS, Mumbai). 4. Process modeling for twin wire SAW welding (DST). 5. Investigation on the Failure of Aluminium Transformers and Recommendation of Suitable Material for Manufacturing Transformer Windings (MOP, GOI) 6. Development of welding procedure for joining marine aluminium alloys (DST, GOI) 7. Weld-bonding of aluminium structures (ARDB, New Delhi) 8. Fracture and fatigue studies of friction stir welded joints of aluminium alloys (DST New Delhi) 9. Development of fracture and fatigue resistant cast aluminium alloys produced by semi-solid metal casting and conventional casting processes (DST, New Delhi) 10. Development of refined high strength cast hypereutectic Al-Si alloy (CSIR, New Delhi) 11. Development of nitrogen ion implantation of PVD coating on stainless steel substrates for improved mechanical and tribological performance (DST) 12. Development of diffusion bonding technology for producing fatigue and fracture resistant bonds of stainless steels and titanium alloys with different inter-layers (SDF, MoS) 13. Investigation on plastic behavior of aluminium alloys during friction stir welding and its effect on weldability (DST) 14. Corrosion behavior of friction stir weld joint of aluminium alloys (CSIR, New Delhi) 15. Dissimilar steel welding by A-TIGW (BRNS) 16. Developing creep resistant Cr-Mo steel

		weld joints using activated flux GTAW and FSW (INSA)

Teaching experience

Duration	Designation	Organization	Subjects (s)
Aug 21, 1995 to Aug 2, 2004	Lecturer/Sr Lecturer	N.I.T. (Formerly R. E. C.), Hamirpur	1. Production i.e. Manufacturing process, 2. Machining Science, 3. Welding engineering, 4. Unconventional machining, 5. Mechanical properties and heat treatment
Aug 3, 2004 to Sept 3, 2009	Assistant Professor	IIT, Roorkee	1. Manufacturing Techniques (UG) 2. Manufacturing Technology (UG) 3. Manufacturing Engineering for IIT Mandi 4. Welding engineering (UG) 5. Total Quality Management (UG) 6. Work system Design (UG) 7. Principles of Industrial engineering (UG) 8. Quality Management (UG) 9. Surface engineering (UG) 10. Welding metallurgy (PG) 11. Failure Analysis of Weld Joints (PG) 12. Weldability of Metals (PG) 13. Design and analysis of welded joints (PG) 14. Theory of arc welding processes (PG) 15. Unconvetional welding processes (PG)
Sep 4, 2009 to April 3, 2014	Associate Professor	IIT Roorkee	
April 4, 2014 to till date	Professor	IIT Rookee	

Organization of Workshops & conferences: 04

- Organized workshop on “Advances in Joining Technologies: Friction Stir Welding” in association with QIP, IIT Roorkee on 03-11-2012
- Organized workshop on “Advances in Surface Modification Technologies: Friction Stir Processing” in association with QIP, IIT Roorkee on 30-11-2013
- Organized workshop on “Advances in Manufacturing Systems” in association with QIP, IIT Roorkee on 14-02-2015
- Organized workshop on “Advances in Solid State Joining Technologies” in association with QIP, IIT Roorkee on 27-02-2016

AICTE-ISTE Sponsored Short Terms Training Programs Organized (3)

1. National Institute of Technology, Hamirpur, on "Advances in Manufacturing Systems" w. e. f. Dec 23, 2002 to Jan 4, 2003, (2 weeks)
2. National Institute of Technology, Hamirpur, on "Reliability Centered Maintenance" w. e. f. June 23-28, 2003, (1 week).
3. National Institute of Technology, Hamirpur, on "Melt Treatment in Foundries" w. e. f. June 14-18, 2004, (1 week).

Continuing Education Course Organized (9)

4. Indian Institute of Technology, Roorkee on "**Combating Wear**" w. e. f. 29-5-2007- to 02-6-2007.
5. Indian Institute of Technology, Roorkee on "**Controlling erosion in hydro turbines**" w. e. f. 30-10-2007- to 02-11-2007.
6. Indian Institute of Technology, Roorkee on "**Controlling abrasion and erosion in cement plants**" w. e. f. May 7-10, 2008.
7. Indian Institute of Technology, Roorkee on "**Welding for fabrication and repair in hydro power industry**" w. e. f. Dec 20-23, 2008.
8. Indian Institute of Technology, Roorkee on "**Principles and practices in gas cutting, welding, brazing**" w. e. f. May 3-4, 2010 Sponsored by BPCL, India.
9. Indian Institute of Technology, Roorkee on "**Welding of alloy steel: controlling problems**" w. e. f. May 24-27, 2010.
10. GNEC, Indian Institute of Technology, Roorkee on "C**ontrolling residual stresses, distortion, and defects in weld joints**" w. e. f. July 15-17, 2011.
11. Indian Institute of Technology, Roorkee on **"Failure analysis and metallography"** sponsored by Shriram Piston & Rings, Gaziabad, w. e. f. Aug 27-31, 2012.
12. Indian Institute of Technology, Roorkee on **"Manufacturing Process for Quality Assurance"** sponsored by THDC, Rishikesh, w. e. f. Sep 27-28, 2012.

Video-lecturers delivered for NPTEL I Program of MHRD, Govt. of India

- **16 video lectures delivered** on "**work system design**" under industrial engineering
- **14 video lectures delivered** on various aspects of "manufacturing technology" under manufacturing technology

Web & Video lecturers prepared for NPTEL II Program of MHRD, Govt. of India

- **40 web lectures** on "welding engineering" completed
- **40 video lectures** on "welding engineering" completed

Video lecturers prepared for NPTEL III MOOCs Program of MHRD, Govt. of India

- **40 lectures completed on "joining technologies for metals"**

Awards and Recognition

1. **Binani Gold Medal** award –2001 for best paper of the year published Transactions IIM in area of non-ferrous group.
2. **Star performer for 2004-05** (a recognition by IIT Roorkee based on performance appraisal).
3. **Best paper award** for a research paper entitled "Effect of creep ehavior on reliability of aluminium wound distribution transformers presented in XXXII National Systems Conference-2008 at IIT Roorkee.
4. **Best paper award** for research paper Ratnesh Kumar Raj Singh, Deepti Jaiswal, Rajesh Prasad, Sunil Pandey, Dheerendra Kumar Dwivedi, Effect of friction stir welding on microstructure and mechanical properties of Al-Zn-Mg alloy" presented at 1st National conference on Recent Advances in Technology and Engineering, w.e.f. Jan 2-22, 2012 at Manglaytan University, Aligarh
5. **Best paper award** for research paper Chaitanya Sharma, Dheerendra Kumar Dwivedi, Pradeep Kumar, Mechanical and microstructural characterization of friction stir welded joints of AA7039 published in proceedings of International Conference on Manufacturing Excellence (MANFEX 2012), Amity University, Noida, 21-25.
6. **Expert in technical papers committee** for National level Conference on "Advances and Recent Trends in Manufacturing" (CARTM-2003) on November 14 – 15, 2003 at Kalyani Government Engineering College.
7. **Co-chairman** for technical paper presentation (Mechanical Session) in National Level Seminar, National Institute of Technology, Hamirpur, HP, w. e. f. March 19-21, 2004.
8. **Chairman** for technical paper presentation in National Level Seminar, organized by National Institute of Technology, Hamirpur, HP, w. e. f May 1-4, 2004.
9. **Chaired** technical session in International Conference on "Advances in Materials Processing and Characterization" organized by Department of Mechanical Engineering, College of Engineering, Anna University, Guindy, Chennai, w. e. f. Aug. 28-30, 2006.
10. **Chaired** technical session in International Conference on "Materials Science and Engineering" organized by WASET, at Penang, Malaysia, w. e. f. Feb 22-24, 2011.
11. **Chaired** technical session in International Conference on "Manufacturing Research" organized by Cranfield University, at Cranfield, UK, w. e. f. Sep 19-20, 2013.
12. Member in panel of experts in area of thermal spraying coatings of BHEL, India
13. Delivered more than 65 invited lectures in various training programs, and workshops
14. UGC inspection committee for engineering college affiliated with different universities
15. PAC of UGC on research projects in area of mechanical and industrial engineering

16. Expert member, DRDL, Hyderbad visited on Jan 23, 2017

Member in Editorial Board of International Journals

- The Scientific World Journal: Materials Science
- International Journal of Metals
- American Journal of Materials Engineering and Technology
- Journal of Advanced Manufacturing Research

Membership of Professional Bodies

1. Indian Society for Technical Education: LM 22430
2. Indian Institute of Metals: LM 33427
3. Indian Society for Construction Materials and Structures: LM 668
4. TMS-2008: MEM 466457 (joined 9/3/08)
5. Professional member 466457 TMS -2012 (The metals, minerals and materials society) since 2-8-12

Foreign Visits

1. **New Orleans, USA,** for presenting research paper and attending International Conference TMS 2008 w.e.f. March 8-13, 2008
2. **Las Vegas, USA,** for presenting research paper and attending 17th International Conference on Wear of materials 2009 w.e.f. April 19-23, 2009.
3. **Universidade Federal de Uberlandia, MG, Santa Monica, Brazil** under Indo-Brazil research scheme from Nov 28 to Dec 6, 2009
4. **Universidad Autonoma de Zacatecas, Zacatecas, Mexico** under Indo-Mexican research scheme June 17 to July 5, 2010
5. **Universidad Autónoma de Nuevo León, Monterrey, Mexico** to explore possibility of collaborative research with Facultad de Ingenieria Mecanica y Electrica
6. **Penang, Malaysia,** for presenting research paper and attending International Conference ICMSE 2011 w.e.f. Feb 22-24, 2011
7. **Universidad Autonoma de Zacatecas, Zacatecas, Mexico** under Indo-Mexican research scheme June 11 to 30, 2011
8. **Orlando, USA** for attending TMS 2012 and presenting research paper from March 10-17, 2012
9. **Universidad Autonoma de Zacatecas, Zacatecas, Mexico** under Indo-Mexican research scheme June 22 to July 10, 2012
10. **Phuket, Thailand** for attending international conference on advances in…… mechanical engineering w.e.f. Dec 18-19, 2012

11. **Cranfield University, UK,** for attending international conference on manufacturing research w.e.f. Sep 19-20, 2013
12. **Physical Technical Institute, Minsk, Belarus** under Bilateral S & T cooperation program between India and Belarus w.e.f. Oct 6 to 12, 2014
13. **Bangkok, Thailand** for attending international conference on production and mechanical engineering w.e.f. Dec 30-31, 2014
14. **Kuala Lumpur, Malaysia,** attending international conference on tribology and interfaces w.e.f. June 11-12, 2015
15. **Chemintz, Germany,** INSA-DFG Scientist Exchange programme w.e.f. July 6-26 2015
16. **University of Coimbra, Portugal,** under Bilateral S & T cooperation program between India and Portugal w.e.f. Nov 27 to Dec 3, 2015
17. **Port Luis, Maurituis,** for attending international conference on innovation in engineering and technology w.e.f. March 17-21, 2016
18. **Physical Technical Institute, Minsk, Belarus** under Bilateral S & T cooperation program between India and Belarus w.e.f. May 11 to 15, 2016
19. **Shanghai, China** for presenting research paper in Congress on Enginering and Technology 2016 w.e.f. Oct 21-23, 2016
20. **Los Angeles, USA** for presenting research paper in 21st Internaitonal Conference on Wear of Materials w.e.f. March 25-31, 2017

Other countries visited

21. **Paris, france**
22. **Spain**
23. **Singapore**
24. **Dubai, UAE**
25. **Prague, Czech Republic**
26. **Rome, Venice, Milan, Italy**

Book Publication

- D. K. Dwivedi, Surface Engineering: enhancing tribological life of component subjected to wear, Springer, New Delhi, (2017), pages 240, (in press)
- D. K. Dwivedi, Production and properties of cast Al-Si alloys, ISBN 978-81-224-3451-4 New Age Publication, New Delhi, (2013), pages 215, (hard-bound)
- J. P. Misra, P. K. Jain, D. K. Dwivedi, book chapter entitled “Electrochemical Honing –A Novel Technique for Gear Finishing, Chapter 29, 365-382, DAAAM International

Scientific Book 2011, Vol.10, ISBN 978-3-901509-84-1, ISSN 1726-9687, Published By DAAAM International, Vienna, Austria.

International Collaborations: 05

Sr. No.	**Project**	Duration	Collaborative agency
1	Exploratory project to formulate a joint collaborative research project on "Development of welding procedure for enhanced fatigue performance of marine aluminium alloys by new welding processes"	2009-10	Dr. Américo Scotti Professor Universidade Federal de Uberlândia, Centro de Ciências Exatas e Tecnologia, Faculdade de Engenharia Mecânica. BLOCO M CAMPUS SANTA MONICA, SANTA MONICA 38400-902 – Uberlandia, MG – Brasil – Caixa-Postal: 593 (34) 32394192 Ramal: 240 (34) 32394206 E-mail: ascotti@ufu.br
2	Development of fracture and fatigue resistant cast aluminium alloys produced by semi-solid metal casting and conventional casting processes"	2009-12	Dr. Sergio Haro Rodríguez Researcher- Professor Maestria en Procesos y Materiales Unidad Académica de Ingeniería Universidad Autónoma de Zacatecas Av. López Velarde # 801 Zacatecas, Zac. MEXICO CP. 98000 Phone: +52 4929 239407 ext. 1618 Fax No.:+52 4929 222924 E-mail: haros907@hotmail.com
3	Development of nitrogen ion implantation of PVD coating on stainless steel substrates for improved mechanical and tribological performance	2013-16	Dr. Alexey Byeli Professor Physical-Technical Institute, Department of Plasma and Beam Processing, 10, Kuprevich Street, 220141 Minsk, Belarus Telephone No.:+375172638619 E-mail: vmo@tut.by
4	Investigation on plastic behavior of aluminium alloys during friction stir welding and its effect on weldability	2014-17	Dulce Maria Esteves Rodrigues Professor Auxiliar Engenharia e Tecnologia-Engenharia dos Materiais, Universidade de Coimbra Faculdade de Ciências e Tecnologia Departamento de Engenharia Mecânica Polo 2, Rua Luís Reis Santos Coimbra, 3030-788 Coimbra, Portugal Telefone: (+351)239790700Extensão: 1324 Fax: (+351)239790701 E-mail: dulce.rodrigues@dem.uc.pt

5	Developing creep resistant Cr-Mo steel weld joints using activated flux GTAW and FSW	2014-15	PETER MAYR, Technische Universität Chemnitz, Institute of Joining and Assembly, Chair of Welding Engineering Reichenhainer Strasse 7009126 Chemnitz Deutschland Telephone:+49-37153139543 Fax:+49-37153123729 Email: peter.mayr@mb.tu-chemnitz.de

Expert/invited lectures delivered: 71

Sr. No.	**Title of Lecture/Lecture Series**	Date, Place and Programme where lectures delivered
1.	Maintenance of worn out surface, Hard facing and thermal spraying	MED, NIT under ISTE chapter, REC, Hamirpur, HP
2.	Wear friction behaviour of cast Al-Si alloys	24-12-02, NIT, Hamirpur, under STTP "Advances in Manufacturing Systems" Sponsored by AICTE-ISTE, NIT Hamirpur
3.	Treatment for strengthening of cast aluminium alloys	25-12-2002, Do
4.	Powder-metallurgy: An Introduction	25-12-2002, Do
5.	Surface roughness testing :lab work	27-12-2002, Do
6	Foundry Technology: An Introduction	14-6-06, NIT, Hamirpur, under STTP "Melt treatment in foundries" Sponsored by AICTE-ISTE, for 2004-05
7	Grain refinement and modification in aluminium foundries	15-6-04, Do
8	Mechanical behaviour of cast aluminium alloys	16-6-2004, Do
9	Melt treatment and wear behaviour of cast aluminium alloys	17-6-2004, Do
10	Production of metal matrix composite by stir casting	26-7-2006 Advances in manufacturing of composite materials
11	Surfacing of steel and railways	9-9-06, Advance course on welding for railways (PKG)
12	Wear of metals	29-3-2007, Invited lecture, MED, NIT Hamirpur
13	Abrasive wear and weld surfacing	1-6-07, resource person, Continuing education programme on "Combating Wear" w.e.f. 29-5-07 to 02-6-07, IIT Roorkee
14	Combating wear by thermal spraying of wear resistant materials	1-6-07, resource person, Continuing education programme on "Combating Wear" w.e.f. 29-5-07 to 02-6-07, IIT Roorkee
15	Erosion & Its control in hydro turbines	30-10-07, resource person, Continuing education programme on "controlling erosion in hydro turbines" w.e.f. 30-10-07 to 02-11-07, IIT Roorkee
16	Controlling erosion by surface modification techniques	1-11-07, resource person, Continuing education programme on "controlling erosion in hydro turbines" w.e.f. 30-10-07 to 02-11-07, IIT Roorkee
17	Weld surfacing and thermal spraying for controlling cavitation erosion	02-11-07, resource person, Continuing education programme on "controlling erosion in hydro turbines" w.e.f. 30-10-07 to 02-11-07, IIT Roorkee

18	Total quality management	19-2-2008, resource person, Continuing education programme sponsored by Panjab state electricity board, Patiala w.e.f. Feb 18-22, 2008, IIT Roorkee
19	Controlling abrasion and erosion in cement plants: Overview	7-5-2008, resource person, Continuing education programme on “controlling abrasion and erosion in cement plants:, w.e.f. May 7-10, 2008, IIT Roorkee
20	Abrasion wear: Fundamental, mechanism other factors affecting it	8-5-2008, resource person, Continuing education programme on “controlling abrasion and erosion in cement plants:, w.e.f. May 7-10, 2008, IIT Roorkee
21	Thermal spraying (flame spraying) for controlling abrasive wear	9-5-2008, resource person, Continuing education programme on “controlling abrasion and erosion in cement plants:, w.e.f. May 7-10, 2008, IIT Roorkee
22	Weld surfacing: Fundamentals, Techniques, Materials and Their Applications	10-5-2008, resource person, Continuing education programme on “controlling abrasion and erosion in cement plants:, w.e.f. May 7-10, 2008, IIT Roorkee
23	Mechanical and metallurgical properties of weld joints and their relationship with process parameters	03-7-2008, resource person, AICTE sponsored short training programme on “recent advances in production and industrial engineering”:, w.e.f. June 30-July 12, 2008, MANIT Bhopal
24	Thermal spraying and weld surface for controlling wear	03-7-2008, resource person, AICTE sponsored short training programme on “recent advances in production and industrial engineering”:, w.e.f. June 30-July 12, 2008, MANIT Bhopal
25	Total quality management: Customer focus	04-7-2008, resource person, AICTE sponsored short training programme on “recent advances in production and industrial engineering”:, w.e.f. June 30-July 12, 2008, MANIT Bhopal
26	Welding for fabrication and repair: Overview	20-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
27	Principles and practices in SMAW and GTAW	20-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
28	Metallurgical aspects in welding of stainless steel	21-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
29	Repair welding for prolonged life of hydro turbine components	21-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
30	Design of weld joints for static loading and welding symbols	22-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
31	Residual stress in weld joints, distortion and their control	22-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
32	Weld surfacing for controlling wear	23-12-2008, resource person, Continuing education programme on “Welding for fabrication and repair in hydro power industry“, w. e. f. Dec 20-23, 2008, IIT Roorkee
33	Welding research activities in welding labs of MIED, IIT	02-12-2009, Invited speaker at Universidade Federal De Uberlandia, MG, Brazil

	Roorkee, India	
34	Principles and practices in gas cutting, welding and brazing: Overview	3-5-2010, resource person, Continuing education programme on Principles and practices in gas cutting, welding and brazing “, w. e. f. May 3-4, 2010, IIT Roorkee
35	Principles and practices in oxy-fuel gas cutting	3-5-2010, resource person, Continuing education programme on Principles and practices in gas cutting, welding and brazing “, w. e. f. May 3-4, 2010, IIT Roorkee
36	Methods of enhancing the productivity when using BMCG and Factors affecting performance of BMCG gas in terms of preheat time, cutting speed	4-5-2010, resource person, Continuing education programme on Principles and practices in gas cutting, welding and brazing “, w. e. f. May 3-4, 2010, IIT Roorkee
37	Welding of alloys steel: controlling problem	24-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
38	Gas metal and slag metal reactions in welding of alloys steel	24-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
39	Welding of HSLA steel, Q & T low alloy steel and heat treatable low alloy steel	25-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
40	Heat flow in welding and methodology of predicting the cracking tendency of steel weld joints	26-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
41	Cracking tendency of steels welds & their control	27-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
42	Residual stress and distortion control in welding of steel	27-5-2010, resource person, Continuing education programme on “Welding of alloys steel: controlling problem “, w. e. f. May 24-27, 2010, IIT Roorkee
43	Overview and basics of fusion arc welding processes such as arc heat generation, heat input and energy density concept and temperature distribution	15-7-2011, resource person in Continuing education programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
44	Heat flow in weld zone affecting peak temperature, cooling rate, and effect of preheat	15-7-2011, resource person in Continuing education programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
45	Factors affecting RS and their effect of residual stresses on mechanical performance of weld joints	15-7-2011, resource person in Continuing education programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
46	Selection of welding process, parameter, welding sequence and consumable for controlling DISTORION	16-7-2011, resource person in Continuing education programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
47	Controlling defects in	17-7-2011, resource person in Continuing education

	weldment of aluminium alloys	programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
48	Controlling defects in weldment of stainless steel	17-7-2011, resource person in Continuing education programme on “controlling residual stresses, distortion and defects in weld joints, w. e. f. July 15-17, 2011, GNEC, IIT Roorkee, Greater Noida
49	Weld thermal cycle, residual stress and distortion in weld joints	16-12-2011, resource person in Continuing education programme on “Quality assurance and design of weld joints, w. e. f. Dec 14-16, 2011, IIT Roorkee,
50	Failure analysis and metallography: Overview	27-8-2012, resource person, Continuing education programme on “Failure analysis and metallography”, w. e. f. Aug 27-31, 2012, IIT Roorkee
51	Structure and property relationship for piston and piston ring materials	28-8-2012, resource person, Continuing education programme on “Failure analysis and metallography”, w. e. f. Aug 27-31, 2012, IIT Roorkee
52	Image analysis of micrographs	28-8-2012, resource person, Continuing education programme on “Failure analysis and metallography”, w. e. f. Aug 27-31, 2012, IIT Roorkee
53	Fundamental source of failure of mechanical component	29-8-2012, resource person, Continuing education programme on “Failure analysis and metallography”, w. e. f. Aug 27-31, 2012, IIT Roorkee
54	Procedure of metallurgical failure analysis of mechanical component	30-8-2012, resource person, Continuing education programme on “Failure analysis and metallography”, w. e. f. Aug 27-31, 2012, IIT Roorkee
55	Manufacturing process for quality assurance: overview	27-9-2012, resource person, Continuing education programme on “Manufacturing process for quality assurance”, w. e. f. Sep 27-28, 2012, held at THDC, Rishikesh
56	Heat treatment of ferrous metals: principles and practices	27-9-2012, resource person, Continuing education programme on “Manufacturing process for quality assurance”, w. e. f. Sep 27-28, 2012, held at THDC, Rishikesh
57	Defect in heat treated components and their remedy	28-9-2012, resource person, Continuing education programme on “Manufacturing process for quality assurance”, w. e. f. Sep 27-28, 2012, held at THDC, Rishikesh
58	Fundamental approaches for quality assurance in manufacturing through DT & NTD	28-9-2012, resource person, Continuing education programme on “Manufacturing process for quality assurance”, w. e. f. Sep 27-28, 2012, held at THDC, Rishikesh
59	Post heat treatment and in process cooling of FSW joints of Al alloys	03-11-2012 resource person in one day QIP workshop on advances in joining technologies: friction stir welding on Nov 03, 2012
60	Grain refinement of metal matrix in MMCs	05-07-2013 resource person in AICTE sponsored STC on processing and fabrication of MMCs held during July 1-5, 2013
61	Improving mechanical properties and wear resistance of Al alloys using FSP	30-11-2013 resource person in one day QIP workshop on advances in surface modification technologies: friction stir processing held on Nov 30, 2013

62	Advances in solid state joining technologies	9-7-2014 as a resource person QIP sponsored STC advances in materials processing and manufacturing technologies held during July 7-11, 2014
63	Failure analysis: Causes of failure and procedure of RCA	14-3-2015 as a resource person in one day QIP workshop on Failure analysis and prevention, March 14, 2015
64	Solid state joining and surface modification technologies	26-3-2015 key-note speaker in International conference on recent trends in mechanical engineering held at Jaipur during March 25-26, 2015.
65	Adavances in Joining Technologies	23-11-2015 as a resource person in STP sponsored by Directorate of Technical Education, Bhopal held at RJIT Gwalior during Nov 23-27, 2015
66	Flux Assisted Gas Tungsten Arc welding of ASS for enhaced prenetration	23-11-2015 as a resource person in STP sponsored by Directorate of Technical Education, Bhopal held at RJIT Gwalior during Nov 23-27, 2015
67	Overview of welding research activities at IITR with focus on FA-GTAW	01-12-2015, presentation and interaction with Faculty of Welding Group at Univeristy of Coimbra, Portugal
68	Advances in Joining Technologies; AGTAW and FSW	20-2-2016, as resource person in Three Day Workshop in Materials processing and Characterization at NIT Patna w.e.f. Feb 18-20, 2016
69	Enhacing productivity of diffusion bonding process	27-2-2016 as a resource person in one day QIP workshop on Advances in Solid State Joining Technologies, held on Feb 27, 2016
70	Laser Assisted Nitridng of 13/4 Cast Stainess Steel	13-05-2016 presentation of work done at IITR on Indo-Belarus bilateral project and interaction with research goups atPhysical Technical Institute, Minsk
71	Joining Technologies: Zero defect; No effect	9-1-2017 as a resource person in 2 week day QIP STP on Make in India held on during Jan 3-14, 2017

RESEARCH PUBLICATIONS

Total research papers published:	**165**
Research papers in International Journals:	**99**
Papers in other Refereed journals:	**13**
Domestic papers:	**12**
Papers in National/International Conferences:	**41**
Total citation of all publications	**1600** *(h factor 21, g factor: 40 and i-10 index: 43)*
RG score	**33.79**

International Journal

1. **D. K. Dwivedi**, Ashok Sharma, T V Rajan, Interface temperature under dry sliding conditions, **Materials Transactions,** Vol. 43, No. 9, (Sep 2002), 2256-61.
2. **D. K. Dwivedi**, Interface temperature and wear behavior of cast Al-Si alloys, **Material Science and Technology,** Vol. 19, No. 8, (Aug. 2003), 1091-96.
3. B. S. Kaith, A. S. Singha, **D. K. Dwivedi,** Sanjeev kumar, Diwakar Kumar, and Adhesh Dhemeniya, "Preparation of Polystyrene Matrix based Composites using Flax-g-Copolymers as reinforcing agent and Evaluation of their Mechanical Behaviour, **International Journal of Plastic Technology**, Vol. 7, (Nov. 2003), 119-125.
4. **D. K. Dwivedi,** Abrasive wear ehavior of iron base hard surfacing alloy coatings developed by welding, **Surface Engineering**, Vol. 20, No. 2, (2004), 87-92.
5. **D. K. Dwivedi**, Sliding temperature and wear behavior of cast Al-Si-Mg alloys, **Material Science and Engineering A,** 382, 1-2, (2004) 328-334.
6. **D.K. Dwivedi,** T.S. Arjun, P. Thakur, H. Vaidya & K. Singh, Sliding Wear and Friction Behaviour of Al-18%Si-0.5%Mg Alloy**" Material Processing Technology,** 152/3, (2004), 323-328**.**
7. **D. K. Dwivedi**, Microstructure and abrasive wear behavior of iron base hardfacing developed by SMA welding, **Material Science and Technology,** 20, 10, (2004) 1326-1330**.**
8. **D. K. Dwivedi**, A S Singha, Sanjeev Kumar, B S Kaith, "Graft Co-Polymerization of Binary Vinyl Monomer Mixtures on Mercerized Fibre and Their Applications as Fillers in Preparation of Polystyrene Matrix Based Composites, **International Journal of Plastic Technology**, Vol. 8, (Dec. 2004), 299-304.

9. **D. K. Dwivedi**, Ashok Sharma, T V Rajan, Influence of silicon morphology and mechanical properties of piston alloys, **Materials and Manufacturing Processes,** 20, 5, (2005) 777-791.

10. Tarun Sharma, Saurabh Maria, **D. K. Dwivedi**, Abrasive Wear Behaviour of Fe-30Cr-3.6C Overlays Deposited on Mild Steel**, ISIJ International,** 45, 9, (2005) 1322-25.

11. Rajesh Sharma, Anesh, **D. K. Dwivedi**, Influence of Silicon (wt. %) and Heat Treatment on Abrasive Wear Behaviour of Cast Al-Si-Mg Alloys, **Materials Science and Engineering A,** 408, 1-2, (2005) 274-280.

12. **D. K. Dwivedi**, Wear Behaviour of Cast Hypereutectic Aluminium Silicon Alloys, **Materials and Design**, 27, 7, (2006), 610-16.

13. Rajesh Sharma, Anesh, **D. K. Dwivedi**, Influence of Solution Temperature on Microstructure and Mechanical Properties of Two Cast Al-Si Alloys, **Materials and Manufacturing Processes**, 21, 3 (2006), 309-314.

14. **D. K. Dwivedi,** Microstructure and dry sliding wear behavior of cast Al-8%Si-0.3%Mg alloy against En-31, **ISIJ International,** 46, (2006), 7, 1101-1105.

15. Sudheer Harsha, **D. K. Dwivedi,** A. Agarwal, Investigations on the abrasive wear behavior of flame sprayed Ni-Cr-Co-Si alloy coating deposited on mild steel substrate", **ISIJ International, 46, (2006), 10, 1473-78.**

16. **D. K. Dwivedi,** Rajesh Sharma, Anesh Kumar, Influence of Silicon Content and Heat Treatment on the Mechanical Properties of Cast Al-Si-Mg Alloys, **International Journal of Cast Metal Research**, 19, 5 (2006), 275-281**.**

17. A. K. Yadav, N. Arora, **D. K. Dwivedi**, On Microstructure, Hardness and Wear Behaviour of Flame Sprayed Co Base Alloy Coating Deposited on Mild Steel, **Surface Engineering,** 22, 5 (2006) 331-336.

18. K.B. Shah, S. Kumar, **D.K. Dwivedi**, Abrasive wear behavior of Fe–Cr–C overlays, **Paton Welding Journal**, 11, (2006), 22-27

19. Rajesh Manti, **D. K. Dwivedi**, Microstructure of Al-Mg-Si Weld Joints Produced by Pulse TIG Welding, **Materials and Manufacturing Processes**, 22, (2007) 57-61.

20. Sudheer Harsha, **D. K. Dwivedi,** A. Agarwal, Influence of WC Addition in Co-Cr-W-Ni-C Flame Sprayed Coatings on Microstructure, Microhardness and Wear Behaviour Surface and Coatings Technology, **Surface and Coating Technologies,** 201 (2007) 5766–5775.

21. K. B. Shah, Sandeep Kumar, **D. K. Dwivedi**, Aging Temperature and Abrasive Wear Behaviour of Cast Al-(4, 12, 20%)Si-0.3%Mg Alloys, **Materials & Design**, 28, 6, 2007, 1968-1974.

22. Rajesh Sharma, Anesh, **D. K. Dwivedi**, Solutionizing Temperature and Abrasive Wear Behaviour of Cast Al-Si-Mg Alloys, **Materials and Design,** 28, 6, 2007, 1975-1981.

23. S. Harsha, **D. K. Dwivedi,** Some studies on Microstructure, Hardness and Abrasive Wear Behaviour of Flame Sprayed Co base alloy Coating, **Surface Engineering,** 23 4, 2007, 261.

24. Rambabu Arji, **D K Dwivedi,** S R Gupta, Sand Slurry Erosive Wear of Thermal Sprayed Coating of Stellite, **Surface Engineering**, 2007, 23, 5, 391-97.

25. D. K. Dwivedi, A. Sharma, T. V. Rajan, Machining of LM 13 and LM 28 Cast Aluminium Alloys: Part I, **Journal of Materials Processing Technology**, Vol. 196, No.1-3, (2008) pp 197-204.

26. Sudheer Harsha, **D. K. Dwivedi,** A. Agarwal, Performance of Flame Sprayed Ni-WC Coating under Abrasive Wear Conditions, **Materials Engineering and Performance**, 17, 1 (Feb 2008) pp 104-109**.**

27. Rajesh Manti, **D. K. Dwivedi**, A. Agarwal, Microstructure and Hardness of Al-Mg-Si Weldments Produced by Pulse GTA Welding, International **Journal of Advance Manufacturing Technology**, 36, 3-4 (March, 2008), 269-263.

28. Keshav Prasad, **D. K. Dwivedi**, Some Investigations on Microstructure and Mechanical Properties of Submerged Arc Welded HSLA Steel Joints, **International Journal of Advance Manufacturing Technology,** 36, 5-6 (March, 2008), 475-483

29. Keshav Prasad, D K Dwivedi, Microstructure and Tensile properties of submerged arc welded 1.25Cr-0.5Mo steel, **International Journal of Materials and Manufacturing Processes,** 23, 5 (May 2008) 463-868.

30. Sudheer Harsha, **D. K. Dwivedi,** A. Agarwal, Influence of CrC Addition in Ni-Cr-Si-B Flame Sprayed Coatings on Microstructure, Microhardness and Wear Behaviour, **International Journal of Advance Manufacturing Technology,** 38, (July 2008), 93-101.

31. S. Sharma, **D. K. Dwivedi**, P. K. Jain**,** Microstructure, hardness and abrasive wear behavior of continuously compacted thermal sprayed Ni base alloy powder coatings in different conditions, **International Journal of Surface Science and Engineering**, 2, 3-4, (Sep 2008) 240-251.

32. Rajesh Manti, **D K Dwivedi,** A Agarwal, Pulse TIG welding of two Al-Mg-Si alloys, **Journal of Materials Engineering and Performance,** 17, 5 (Oct 2008), 667-671**.**

33. Mohit Dhiman, **D. K. Dwivedi**, Rakesh Sehgal, I. K. Bhatt, Effect of Iron microstructure of Al-12Si-1Cu-0.1Mg alloy**, International Journal of Materials and Manufacturing Processes,** 23, 8, (Oct 2008) 805-808.

34. Satpal Sharma, **D. K. Dwivedi,** P K Jain, Effect of CeO_2 addition on the microstructure, hardness and abrasive wear behavior of flame sprayed Ni based coatings, **Proceedings of the I MECH E Part J Journal of Engineering Tribology**, 222, 7, (Nov 2008), 925-933

35. D. K. Dwivedi, A. Sharma and T. V. Rajan, Effect of Material and Test Parameters on Wear Behaviour of Eutectic Al-Si Alloy (LM13), **International Journal of Cast Metal Research**, 21, 8, (Nov 2008) 439-444

36. Mohit Dhiman, **D. K. Dwivedi**, Rakesh Sehgal, I. K. Bhatt, Effect of Iron (Wt.%) on Adhesive Wear Response of Al-12Si-1Cu-0.1Mg Alloy in Dry Sliding Conditions, **Trans. Of Indian Institute of Metals (An International Journal), 61**, 6, (Dec 2008), 451-456.

37. T V S Reddy, **D. K. Dwivedi,** N K Jain, Effect of stir-casting on the microstructure and adhesive wear characteristics of cast Al-Si-Cu alloy, **Proceeding of Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture**, Vol. 223 (Jan. 2009), 083-087.

38. Rakesh Kumar, Ulrich Dilthey, **D.K. Dwivedi**, P. K. Ghosh, Thin sheet welding of Al 6082 alloy by AC pulse-GMA and AC wave pulse-GMA Welding, **Materials and Design,** 30, (Feb 2009), 306-313.

39. T. V. S. Reddy, **D. K. Dwivedi,** N. K. Jain, Adhesive Wear of Stir Cast Hypereutectic Al-Si-Mg Alloy Under Reciprocating Sliding Conditions, **Wear,** 266 (Jan 2009), 1-5.

40. Rambabu Arji, **D K Dwivedi,** S R Gupta, Some Studies on Slurry Erosion of Flame Sprayed Ni-Cr-Si-B Coating, **Industrial Tribology and Lubrication**, 61, 1 (Jan 2009), 4-10

41. Rakesh Kumar, Ulrich Dilthey, **D.K. Dwivedi**, S. P. Sharma, P. K. Ghosh, Welding of thin sheet of Al Alloy (6082) by using Vario Wire DC P-GMAW, **International Journal of Advance Manufacturing Technology**, 42, (April 2009), 102-117.

42. Sat Pal Sharma, **D. K. Dwivedi**, P K Jain, Effect of La2O3 addition on the microstructure, hardness and abrasive wear behavior of flame sprayed Ni based coatings, **Wear,** 267, 5-8, 853-859.

43. S. Haro R., J. Ramírez C., **D. K. Dwivedi**, E. Martínez, Influence of Solutionizing and Ageing Temperatures on Microstructure and Mechanical Properties of Cast Al-Si-Cu Alloy, **Material Science and Technology,** Vol. 25, No. 7, (July 2009), 886-890.

44. D. Jagannadham, Dheerendra Kumar Dwivedi; P K Ghosh, Weld Surfacing of Aluminium alloy by Ni-Cr Base Alloys, **Proceedings of the Institution of Mechanical Engineers, Part L, Journal of Materials: Design and Applications,** Vol 233, (Aug 2009) 117-129.

45. V. R. Rajeev, **D. K. Dwivedi**, and S. C. Jain, Effect of Wear Parameters on Reciprocating Wear Behavior of Al-Si-SiCp Composites under Dry Condition, **Tribology Online**, 4, 5, (Nov 2009) 115-120

46. Sat Pal Sharma, D. K. Dwivedi, P K Jain, Study of mechanical and metallurgical characteristics of flame sprayed NiCrBSi as sprayed and continuous compacted, , **Proceedings of the I MECH E Part J Journal of Engineering Tribology**, Vol 224, (Jan 2010) 107-114.

47. **D. K. Dwivedi**, Adhesive Wear Behaviour of Cast Al-Si Base Alloys: Overview, **Materials and Design**, 31 (Feb 2010), 2517-2531

48. N. S. Beniwal, **D. K. Dwivedi,** H. O. Gupta, , Creep life assessment of distribution transformers, **Engineering Failure Analysis**, 17 (April 2010) 1077–1085.

49. V. R. Rajeev, **D. K. Dwivedi**, and S. C. Jain, Dry reciprocating wear of Al-Si-SiCp composites: a statistical analysis, **Tribology International**, (May 2010), 43 (2010) 1532–1541.

50. V. R. Rajeev, **D. K. Dwivedi**, and S. C. Jain, Effect of load and reciprocating velocity on the transition from mild to severe wear behavior of Al-Si-SiCp composites in reciprocating conditions, **Materials and Design**, 31 (June, 2010), 4951-4959

51. Ratnesh Raj Singh; Chaitanya Sharma; **Dheerendra Kumar Dwivedi**; N K Mehta, P Kumar, The microstructure and mechanical properties of friction stir welded Al-Zn-Mg alloy in as welded and heat treated conditions, **Materials and Design**, 32, (Oct 2010), 682-87

52. N. S. Beniwal, H. O. Gupta, D. K. Dwivedi, "Effect of creep on failure of distribution transformers – an experimental evaluation," *International Journal of Performability Engineering*, 6, 2, (March 2010) 171-179.

53. Sergio Haro-Rodríguez, Rafael E. Goytia-Reyes, **Dheerendra Kumar Dwivedi**, Víctor H. Baltazar-Hernández, Horacio Flores-Zúñiga, María. J. Pérez-López, On influence of Ti and Sr on microstructure, mechanical properties and quality index of cast eutectic Al-Si-Mg alloy, **Materials & Design**, 32 (Jan 2011) 1865–1871

54. N.S. Beniwal, D.K. Dwivedi, H.O. Gupta, Life estimation of distribution transformers considering axial fatigue in loose winding conductors, Engineering Failure Analysis 18 (Feb 2011) 442–449

55. V. R. Rajeev, **D. K. Dwivedi**, and S. C. Jain, A Fractional Factorial Design Study of Reciprocating Wear Behavior of Al-Si-SiCp Composites at Lubricated Contacts", **Journal of Material Engineering and Performance**, 20 (March 2011), 368-376

56. N. S. Beniwal, **D. K. Dwivedi,** H. O. Gupta, Magnetizing Inrush Current in Transformers: An Overview", **International Journal of Energy Technology and Policy**, 7 (March 2011), 358-378

57. N.S. Beniwal, **D.K. Dwivedi**, H.O. Gupta, Creep failure and prevention in aluminum wound distribution transformers, **Journal of Failure Analysis and Prevention**, Volume 11, 5 (Nov 2011) 530-538
58. J. P. Misra, P. K. Jain, **D. K. Dwivedi**, Precision finishing of gears by electrochemical honing process: a state of art review, **Journal of Advanced Manufacturing Systems** (JAMS), Volume 10, 2 (Dec 2011) 309-327
59. S. Sharma, D. K. Dwivedi and P. K. Jain, **Abrasive Wear Study of Flame Sprayed Co-Based Composite Coatings, Journal of Tribology and Surface Engineering**, Vol. 2 (2011), **41-48**
60. S. R. Kiran, B. K. Gandhi, D. K. Dwivedi, C. P. Paul and L. M. Kukreja, Erosive Wear Behaviour of Laser Clad Surfaces of Ni and Co Based Alloys**, Journal of Tribology and Surface Engineering**, Vol. 2 (2011), **33-40**
61. V.R. Rajeev, **D.K. Dwivedi,** S.C. Jain, Effect of Counter Surface Temperature and Load on the Transition from Mild to Severe Wear Behavior of Al-Si SiC_p Composites in Reciprocating Conditions, **Materials Science Forum**, Advances in Metallic Materials and Manufacturing Processes for Strategic Sectors, Volume 710, (Jan 2012) 551-556
62. B M Dhakar, **D K Dwivedi**, S P Sharma, Studies on re-melting of tungsten carbide and rare earth (RE) modified Nickel base alloy composite coating, **Surface engineering,** Vol. 28 (Jan 2012), No. 1, 73-80
63. Md. F U Khan, **D K Dwivedi**, Development of response surface model for tensile shear strength of weld-bonds of aluminium alloy 6061 T651, **Materials and Design**, 34 (Feb 2012) 673–678
64. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, Effect of welding parameters on microstructure and mechanical properties of friction stir welded joints of AA7039 aluminum alloy, **Materials and Design**, Volume 36 (April 2012), 379–390
65. Sergio Haro Rodríguez, Rafael E. Goytia Reyes, Dheerendra. K. Dwivedi* Omero Alonso González, Víctor H. Baltazar Hernández, Microstructure and Mechanical Properties of Al-12Si-xFe alloy, **Materials and Manufacturing Processes**, 27, (May 2012) 6, 599-604
66. MD Faseeulla Khan, D K Dwivedi, **Mechanical and Metallurgical Behaviour of Weld-Bonds of 6061 Aluminium Alloy,** Materials and Manufacturing Processes, 27, (May 2012) 6 670–675,
67. S Sharma, D K Dwivedi, P K Jain, Study and model development of erosive wear by RSM, **Proceedings of the I MECH E Part J Journal of Engineering Tribology,** 226 (June 2012), 57-70
68. Prabhkiran kaur, **Dheerendra K. Dwivedi**, Pushpraj M Pathak, Sergio Haro Rodriguez, An effect of Electromagnetic stirring and Cerium oxide addition on dry, sliding and reciprocating wear of Al-Si alloy**, Part J, Journal of Engineering Tribology**, 226, (June 2012), 251-258

69. Mayank Mittal, **Dheerendra Kumar Dwivedi**, Statistical Analysis of influence of input process parameters on characteristics of weld-bonds of Al 5052 H32 alloy using Box-Behnken Design (BBD), Proceedings of the Institution of Mechanical Engineers, Part B, **Journal of Engineering Manufacture,** (June 2012), Vol 226, 6, 1001-1017
70. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, Influence of in-process cooling on tensile ehavior of friction stir welded joints of AA7039, Materials Science & Engineering A, Volume 556, (October 2012), 479–487
71. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, "Effect of post weld heat treatments on microstructure and tensile properties of friction stir welded joints of Al-Zn-Mg alloy AA7039, **Materials and Design**, 43 (Jan 2013) 134–143
72. J P Misra, P K Jain, and **D K Dwivedi**, Parametric Optimization of Electrochemical Honing of Helical Gears by Response Surface Methodology and Genetic Algorithm, **Advanced Materials Research** Vols. 622-623 (2013) pp 86-90
73. Prabhkiran kaur, **Dheerendra k. Dwivedi**, Pushpraj M Pathak, Effects of Electromagnetic stirring and Rare Earth compounds on the Microstructure and Mechanical properties of Hypereutectic Al-Si alloys", **International Journal of Advanced Manufacturing Technology** , (Dec 2012) 63:415–420
74. P. K. Sood, Rakesh Sehgal and **D. K. Dwivedi**, Machinability Study of Stir Cast Hypoeutectic Aluminum-Silicon Alloys During Turning, **Journal of Materials Engineering and Performance**, (Feb 2013) 22, 470–482
75. J P Misra, P K Jain, **D K Dwivedi**, N K Mehta, Mixture D-optimal design of Electrolyte composition in ECH of bevel gears, Advanced materials research, 685 (March 2013), 347-351
76. Mohit Dhiman, **Dheerendra Kumar Dwivedi**, Rakesh Sehgal, I. K. Bhat, Effect of Iron on Wear behavior of As Cast and Heat Treated Hyper-Eutectic Al-18Si-4Cu-0.5Mg alloy: A Taguchi Approach, Proceedings of the Institution of Mechanical Engineers, Part L, **Journal of Materials: Design and Applications**, Vol 228, No. 1, 2-16
77. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, "Heterogenity of microstructure and mechanical properties of friction stir welded joints of Al-Zn-Mg alloy AA7039, **Procedia Engineering** 64 (2013) 1384 – 1394
78. Joy Prakash Misra, Pramod Kumar Jain, **Dheerendra kumar Dwivedi**, Narinder Kumar Mehta, Study of Electrochemical-Mechanical Finishing of Bevel Gears" **International Journal of Manufacturing Technology and Management**, 27, (2013), 154-169
79. Surajit Purakayastha, **D K Dwivedi**, 'Abrasive and erosive wear performance of rare earth oxide doped Ni/WC coatings', **ASME Journal of Tribology**, Vol. 136 (2014), 602-609

80. Surajit Purakayastha, **D K Dwivedi**, Slurry erosion performance of CeO2 modified Ni/WC coatings", **Industrial Lubrication and Tribology,** Vol 66, (2014) 533-537.
81. C P Paul, B K Gandhi, P Bhargava, **D K Dwivedi**, L M Kukreja, Cobalt Free Laser Cladding on AISI type 316L Stainless Steel for Improved Cavitation and Slurry Erosion Wear Behavior, **Journal of Materials Engineering & Performance,** 23, (Sep 2014), 4463-4471
82. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, "Fatigue Behaviour of Friction Stir Weld Joints of Al-Zn-Mg alloy AA7039 Developed Using Base Metal in Different Temper Condition", **Materials and Design**, 64, (2014) 334-344.
83. Chaitanya Sharma, **Dheerendra Kumar Dwivedi**, Pradeep Kumar, Influence of Pre-weld Temper Conditions of Base Metal on Microstructure and Mechanical Properties of Friction Stir Weld Joints of Al-Zn-Mg Alloy AA7039, **Materials Science & Engineering A**, 620, (Jan 2015) 107-119
84. Joy Prakash Misra, Pramod Kumar Jain, **Dheerendra kumar Dwivedi**, Narinder Kumar Mehta, "Prediction of Tribological Performance of Electrochemical Honed Bevel Gears Teeth Profile" **International Journal of Surface Science and Engineering**, 9 (Jan 2015), 24-42
85. Md F U Khan, G Sharma, D K Dwivedi, weld-bonding of 6062 Aluminium Alloy, **International Journal of Advanced Manufacturing Technology**, 78 (5-8), 863-873
86. C Sharma, **D K Dwivedi**, P Kumar, Influences of friction stir welding on the microstructure, mechanical and corrosion behaviour of Al-Zn-Mg aluminium alloy 7039, **Engineering Review** 35 (3), 267-274
87. YK Singla, **D K Dwivedi,** N Arora, On the modeling of dry sliding adhesive wear parameters of vanadium additive iron-based alloys at elevated temperatures, **Surface and Coatings Technology, 284, 223-233**
88. J. P. Misra, P. K. Jain, **D. K. Dwivedi** and S. Verma, Empirical Modelling of Sur-face Quality in Electrochemical-Mechanical Finishing of Bevel Gears, **International J. of Machining and Machinability**, 18 (2016) 350-364
89. Shivraman Thapliyal, **Dheerendra Kumar Dwivedi**, Study of the effect of friction stir processing of the sliding wear behavior of Cast NiAl Bronze: A statistical analysis, **Tribology Internatonal**, 97 May 2016) 124-135
90. Ravi Shankar, **Dheerendra Kumar Dwivedi**, Activating flux tungsten inert gas welding for enhanced weld penetration, **Journal of Manufacturing Processes**, 22 (2016) 211-228
91. Shivraman T, Dheerendra Kumar Dwivedi, Microstructure evolution and tribological behavior of the solid lubricant based surface composite of cast Nickel Aluminum Bronze developed by friction stir processing, **Journal of Materials Processing Technology,** 238, 30-38

92. Y Singla, N Arora, **D K Dwivedi**, Dry Sliding Adhesive Wear Characteristics of Fe-based Hardfacing Alloys with different CeO 2 Additives–A Statistical Analysis, **Tribology International**, 105, 229-240

93. Gaurav Sharma, **Dheerendra Kumar Dwivedi**, Structure and Properties of Friction Stir Weld Joints of Structural Steel, **Trans. Ind. Inst. Of Metals**, (accepted)

94. Gaurav Sharma, **Dheerendra Kumar Dwivedi**, Microstructure and mechanical properties of dissimilar steel joints developed using Friction Stir Welding, **International Journal of Advanced Manufacturing Technology,** (accepted)

95. Sandhya Verma, Ramesh Chandra, **D K Dwivedi**, Cavitation Erosion Behavior of Nitrogen Ion Implanted 13Cr4Ni Steel, Internaitonal joinrnal of **Trans. Of Indian Institute of Metals,** (accepted)

96. Chaitanya Sharma, Vikas Upadhyay, **D K Dwivedi**, Pradeep Kumar, Mechanical properties of friction stir welded armor grade Al-Zn- Mg alloy joints, **Transactions of Nonferrous Metals Society of China**, (accepted)

97. Sunil Sinhmar, **D K Dwivedi,** Enhancement of mechanical properties and corrosion resistance of friction stir welded joint of AA2014 using water cooling**, Materials Science & Engineering A** (Accepted)

98. Shivraman Thaplial, **Dheerendra Kumar Dwivedi**, On Cavitation Erosion Behavior of Friction Stir Processed Surface of Cast Nickel Aluminium Bronze, **Wear** (accepted)

99. Ravi Shankar, **Dheerendra Kumar Dwivedi**, Influence of M-TIG and A-TIG Welding Process on Microstructure and Mechanical behaviour of 409 Ferritic Stainless Steel, **Materials Engineering and Performance (accepted)**

Refereed National Journal Papers

100. **D. K. Dwivedi**, Effect of cutting parameters and heat treatment on specific –power consumption in machining of En-31, **Transaction of Indian Institute of Metals**, Vol. 54, No. 4-5, Aug 2000, 539-543.

101. P K Ghosh, **D. K. Dwivedi,** P S Mishra, Studies on oxidation and wear resistance of hard surface produced by gas thermal spraying of modified nickel base eutectic alloy powder, **Indian Welding Journal**, Vol. 34, No. 1, Jan 2001, 35-41.

102. **D. K. Dwivedi,** Ashok Sharma and T V Rajan, Friction and wear ehavior of hypereutectic Al-Si base Alloys at low sliding velocities, **Transaction of Indian Institute of Metals,** Vol. 54, No. 6, Dec 2001, 247-254.

103. **D. K. Dwivedi,** Transitions in wear-friction ehavior under dry sliding conditions of cast Al-Si base alloys" **Institution of Engineers (India),** Vol. 82, Nov 2001, 69-74.

104. **D. K. Dwivedi,** Study the effect of cutting parameters and heat treatment on machining ehavior of spheroidized steel En-31, **Institution of Engineers (India),** Vol. 82, March 2002, 57-60.

105. **D. K. Dwivedi,** Wear ehavior of cast Al-13%Si-0.5%Mg alloy in dry sliding conditions "**Institution of Engineers (India),** Vol. 83, April 2002, 5-10.

106. **D. K. Dwivedi,** Influence of modifier and grain refiner on solidification ehavior and mechanical properties of cast Al-Si base alloys," **Institution of Engineers (India),** Vol. 83, Oct 2002, 46-50.

107. **D. K. Dwivedi,** Influence of Microstructure on Wear Behaviour of Cast Al-Si Base Alloys" **Transaction of Indian Institute of Metals,** Vol. 56, No. 3, June 2003, 215-220

108. Kinjal B. Shah; Sandeep Kumar; **D K Dwivedi**, Influence of Heat Treatment Parameters on Abrasive Wear Behaviour of Two Cast Al-Si Alloys, **Transactions of Indian Institute of Metals,** Vol. 57, No. 5, (Oct. 2004), 28.

109. Chaitanya Sharma, **D K Dwivedi**, Pradeep Kumar, Investigating the Microstructure and Mechanical Properties of Friction Stir Weld Joints of Solution Hardening Aluminum Alloy AA5086, **Indian Welding Journal**, Volume 47 No. 4 (October, 2014), pp 65-73

110. N Saini, **D K Dwivedi**, P K Jain, H Singh, Surface Modification of Cast Al-17% Si Alloys Using Friction Stir Processing, Procedia Engineering 100, 1522-1531

111. P S Rao, P K Jain, **D K Dwivedi**, Electro Chemical Honing (ECH) of External Cylindrical Surfaces of Titanium Alloys, Procedia Engineering 100, 936-945

112. PS Rao, PK Jain, DK Dwivedi Precision Finishing of External Cylindrical Surfaces of EN8 Steel by Electro Chemical Honing (ECH) Process using OFAT Technique, Materials Today: Proceedings 2 (4), 3220-3229

Domestic Papers

113. **D. K. Dwivedi,** Wear resistance of coated surfaces, **Manufacturing Technology and Management**, Vol. 6, No. 3, March 1998, 18-21.

114. **D. K. Dwivedi,** Ashok Sharma, T V Rajan, molten metal treatment of Al-Si alloys for improved properties, **Foundry Journal**, Vol. 12, No. 6, Nov-Dec 2000, 9-13.

115. **D. K. Dwivedi,** Ashok Sharma, T V Rajan, methods to improve the structure and properties of cast Al-Si alloys, **Indian Foundry Journal** , Vol. 46, No. 12, Dec-2000, 31-39.

116. **D. K. Dwivedi,** Ashok Sharma, T V Rajan, Friction and wear behavior of cast Al-Si base alloys, **Indian Foundry Journal**, Vol. 47, No. 1, Jan 2001, 18-22.

117. **D. K. DWIVEDI,** Heat treatment of cast Al-Si base alloys for improved mechanical properties, **Aluminium India**, Vol. 28, No. 4, Oct- Dec 2000, 21-24.

118. **D. K. Dwivedi**, Grinding abrasion resistance of iron base hard facing alloy coating, **Indian Foundry Journal**, Vol. 47, No. 4, April 2001, 17-20.

119. **D. K. DWIVEDI**, Alloying elements and solidification of cast Al-Si base alloys for better mechanical properties, "**Aluminium India**", July-Sep 2001, Vol. 1, No. 1, 18-24.

120. **D. K. Dwivedi**, Sumit Sood and Virender Thakur, Influence of microstructure on mechanical properties of cast Al-Si base alloy, **Indian Foundry Journal**, Vol. 47, No. 10, Oct. 2001, 34-37.

121. N. S. Beniwal, **D. K. Dwivedi**, H. O. Gupta, "Energy efficient grades for distribution transformers," *Electrical India,* vol. 50, no. 8, August 2010 68-77.

122. N. S. Beniwal, S. K. Joshi, **D. K. Dwivedi**, H. O. Gupta, "Failure investigation of aluminium wound distribution transformers," *Electrical India, 51*, 8, (Aug 2011) 79-84

123. P K Sood, R Sehgal, **D K Dwivedi,** Optimization of turning parameters for surface roughness in CNC turning, Journal of Mechanical Engineering, Dec 2011, 26-31

124. Prabhkiran Kaur, **D.K. Dwivedi**, P.M. Pathak and Sunil Kumar, Improvement in Wear Properties of a Hypereutectic Aluminium Silicon Alloy with Manganese, Journal of Industrial Engineering and Management Science, 4, 3, (2014), 121-124

Conference Papers

125. **D. K. Dwivedi**, Maintenance of worn out surfaces: Hard surfacing and Thermal Spraying, in proceedings of national seminar on “Maintenance and condition monitoring”, at Govt. Engineering College, Thrissur, w. e. f. Feb.14, 1998, 174-181.h

126. **D. K. Dwivedi,** “Studies on wear ehavior of iron base hard surfacing alloy coatings developed by different welding processes” proceedings of National Convention of Mechanical Engineers on “ Research and Development in Mechanical Engineering”, at MIED, UOR, Roorkee, w. e. f. Sep. 29-30, 2000, 84-87.

127. **D. K. Dwivedi**, Ashok sharma and T V Rajan, Influence of 5/1 Ti-B-Al and strontium on cast eutectic Al-Si base alloy, in proceedings of Indian Foundry Congress”, at Delhi, w.e.f.Feb.16-18, 2000, 103-108.

128. T. S. Arjun, P. Thakur, **D. K. Dwivedi,** “Influence of alloying elements on machining ehavior of cast aluminium alloys” presented in National Conference on “Recent Advances on Material Processing-2001”, at Production Engineering Department, Anna University, Chennai, w. e. f Sep7-8, 2001, 544-551.

129. **D. K. Dwivedi,** Influence of sliding temperature on wear and friction ehavior of some cast aluminium-silicon alloys, Proceedings of International Conference held at I I T Kharagpur w. e. f. Feb 1-3, 2002, on “Recent advances on material and material processing” 287-291.

130. **D. K. Dwivedi,** Studies on machining ehavior of cast A-(4-20)%Si alloys, Proceedings of National Conference on “Recent Trends in Manufacturing” held at KGEC, Kalyani w. e. f. Nov. 14-15, 2003, pp 189.

131. **D. K. Dwivedi** “Influence of Heat Input on Microstructure and Wear Behaviour of Fe Base Overlays Deposited on C Steel.” Presented at NMD-ATM 2005 held on Nov. 15-16, 2005 at IIT Madras, Chennai.

132. Rajesh Manti, **D. K. Dwivedi**, Influence of Pulse TIG Welding Parameters on Microstructure and Microhardness of Al-Mg-Si alloys Weld Joints, presented in International Conference on “Advances in Materials Processing and Characterization”, Anna University, Chennai, w. e. f. Aug. 28-30, 2006, 524-531.

133. Sudheer Harsha, **D. K. Dwivedi**, A. Agarwal, Some studies on wear ehavior of flame sprayed nickel and cobalt base alloy coatings deposited on steel, AIMTDR, 2006 w. e. f. Dec-21-23, 2006.

134. **D. K. Dwivedi**, Combating Wear of Components in Sugar Industries, present and published in proceedings of International workshop on “Advances in Surfacing Technologies” Chennai 2007 w. e. f. June 29-30, 2007.

135. V R Rajiv, **D K Dwivedi,** S C Jain, Reciprocating wear study of composites under dry sliding conditions, Proceeding of International conference on Advanced Materials held at Trivandrum, Oct 24-27, 2007.

136. Julian Ramirez, Enrique Martinez, **D K Dwivedi**, Sergio Haro, solution and aging heat treatment of cast Al-Si-Cu alloys, in proceeding of International Materials Research Congress on Materials Characterization held in Cancun, Mexico, Oct 28-Nov 1, 2007.

137. Hector Carenas, Enrique Martinez, Sergio Haro **, D K Dwivedi**, Effect of pouring temperature on microstructure, porosity and mechanical properties of cast Al alloys, in proceeding of International Materials Research Congress on Materials Characterization held in Cancun, Mexico, Oct 28-Nov 1, 2007.

138. Mohit Dhiman, **D K Dwivedi**, R Sehgal, I K Bhatt, The Effect of Fe-Rich Intermetallics on Sliding Wear and Mechanical Properties of Piston Alloy, Proceedings: Aluminum Alloys: Fabrication, Characterization and Applications, Meeting: 2008 TMS Annual Meeting & Exhibition, Editor(s): Weimin Yin, Subodh Das, pp 177-185.

139. V.R.Rajeev, **D. K. Dwivedi**, and S. C. Jain, High Temperature reciprocating wear behavior of aluminum alloy composites under wet condition, International Conference on Advances in Mechanical Engineering held at IISc Bangalore, wef July 2-4, 2008.

140. V.R.Rajeev, **D. K. Dwivedi**, and S. C. Jain, High Temperature reciprocating wear behavior of Al-Si-SiC composites under dry condition, International symposium on Processing and Fabrication of Advanced Materials at Indian Habitat Center New Delhi, w.e.f. Dec 15-17, 2008.

141. N Beniwal, H O Gupta, **D. K. Dwivedi**, "Effect of creep ehavior on reliability of aluminium wound distribution transformers, XXXII National Systems Conference-2008 held at IIT Roorkee, w. e. f. Dec 17-19, 2008

142. V. R. Rajeev, **D. K. Dwivedi**, and S. C. Jain, High Temperature Reciprocating Wear Behavior of Al-Si-Sic_p Composites Under Dry Condition, the International Conference on Emerging Research and Advances in Mechanical Engineering, ERA 2009, Velammal Engineering College, Chennai – 600 066, Tamil Nadu, India

143. N. S. Beniwal, H. O. Gupta, **D. K. Dwivedi,** "Distribution transformer requirements and their reliability issues," *Power for all by 2012, Issues and challenges,* IEC Greater Noida, India, pp. 35-38, Feb. 14-16, 2009.

144. Sat Pal Sharma, **D. K. Dwivedi**, P K Jain, Effect of La2O3 addition on the microstructure, hardness and abrasive wear behavior of flame sprayed Ni based coatings, 17th International Conference held at Las Vegas, USA, w.e.f. April 19-23, 2009.

145. Sat Pal Sharma; **D. K. Dwivedi**; P. K. Jain, Abrasive wear response surface model of HVOF sprayed NiCr-WC-Co composite coatings, Proceedings "International Conference on Surface Modification Technologies (SMT 23)" held at Chennai, w.e.f. Nov 2-5, 2009.

146. MD Faseeulla Khan, **D K Dwivedi**, P K Ghosh, Studies on the Effect of Process Parameters on the Shear Performance of Weld- Bonds of Aluminium Alloy, published in proceedings of 36th International MATADOR Conference to be held in Manchester 14th – 16th July, 2010.

147. Ratnesh Raj Singh; Chaitanya Sharma; **Dheerendra Kumar Dwivedi**, P Kumar, Mechanical properties of friction stir welded commercial structural aluminium alloy, Proc. Of the 4th International Conference on Advances in Mechanical Engineering, September 23-25, 2010, S.V. National Institute of Technology, Surat – 395 007, Gujarat, India

148. N. S. Beniwal, H. O. Gupta, **D. K. Dwivedi**, "Effect of Temperature on Creep and Tensile Characteristics of Aluminum Wire used in 25 kVA Distribution Transformers," The 9th International Power and Energy Conference IPEC 2010, Singapore, Oct. 27-29, 2010.

149. Mohit Dhiman, **D.K. Dwivedi,** Rakesh Sehgal, I.K. Bhat, Fe-rich Intermetallics, Microstructure and Wear ehavior of Piston Alloy in as cast and T4 treated condition, 2nd International Conference on Production and Industrial Engineering, CPIE-2010, held to NIT Jalandhar, pp 319-322.

150. Dhananjayulu Avula, Ratnesh Kumar Raj Singh, **D.K.Dwivedi**, N.K.Mehta, Effect of friction stir welding on microstructural and mechanical properties of copper alloy, proceedings of International Conference on Material Science and Engineering, held at Penang, Malaysia w.e.f Feb 22-24, 2011.

151. S. Haro Rodríguez, Bricia L. Charles Berardi S. I. Maldonado Ruiz, M. J. Pérez López, Marco L. Hernández**, D. K. Dwivedi**, "Effect of scandium, titanium and strontium on wear behavior of Al-7Si alloy", Proceeding of XX International Materials research Congress 2011, held w.e.f. Aug 14-19, 2011 at Cancun, Mexico

152. Bricia L. Charles Berardi, S. Haro Rodríguez, S. I. Maldonado Ruiz, M.P. Guerrero Mata, **D. K. Dwivedi**, "Influence of Scandium, Titanium and strontium on mechanical properties of Al-7Si alloy" Proceeding of XX International Materials research Congress 2011, held w.e.f. Aug 14-19, 2011 at Cancun, Mexico

153. Prabhkiran Kaur, **D K Dwivedi**, P M Pathak, An Effect of Electromagnetic Stirring on Microstructure, Mechanical properties and Wear behavior of 390 Aluminium-Silicon Alloys, Proceedings of International Conference on advanced material and processing held at I I T Kharagpur w. e. f. Dec 9-11, 2011

154. J. P. Misra, P. K. Jain, **D. K. Dwivedi,** Prediction of Surface Improvements of Gear Teeth Profile in ECH of Helical Gears using RSM and ANN, published in proceeding of International Conference on Computational Methods in Manufacturing (ICCMM 2011), held at IIT Guwahati from Dec 15-16, 2011

155. Chaitanya sharma, **Dheerendra K Dwivedi**, Pradeep Kumar, Friction Stir Welding of Al-Zn- Mg Alloy AA7039, Presented and published in proceedings of Light Metals 2012: Aluminum Alloys: Fabrication, Characterization and Applications, in TMS 2012 to held at Orlando, USA w.e.f. March 11-15, 2012.

156. B.M. Dhakar, **D. K. Dwivedi**, Satpal Sharma, Influence of TIG re-melting and RE (La_2O_3) addition on microstructure, hardness and wear of Ni-WC composite coating, Presented and published in proceedings of symposia on surface coatings and films in TMS 2012 to held at Orlando, USA w.e.f. March 11-15, 2012.

157. Surajit Purkayastha, **Dheerendra Kumar Dwivedi** , Effect of CeO_2 on the friction and sliding wear performance of Ni/WC coatings, presented and published in proceedings of International conference on Advances in Electrical and Mechanical Engineering, Phuket, Thailand, Dec 18-19, 2012.

158. V R Rajiv, **D K Dwivedi**, S C Jain, Reciprocating wear ehavior of cast Al-Si-SiC composite, International Conference on Recent Advance on Composite Material, held at International centre in Goa w.e.f. Feb 18-21, 2013.

159. Chaitanya sharma, **Dheerendra K Dwivedi**, Pradeep Kumar, Corrosion behavior of Friction Stir Welded joints of Al- Zn- Mg Alloy, Presented and published in proceedings of International conference on Manufacturing Excellence held at Amity University Noida, w.e.f. May 30-31, 2013, 00 157-161.

160. Mayank Mittal, **D K Dwivedi**, Studies on fatigue behavior of weld-bonds of Al-Mn-Mg alloys, presented and published in proceedings of International Conference on Manufacturing Research (ICMR 2013) held at Cranfield University, Bedford, UK during Sep 19-20, 2013.

161. Sunil Sinhmar, D K Dwivedi, Vivek Pancholi, Friction stir processing of AA 7039 alloy, presented and published in proceeding of International conference on Production and Mechanical Engineering, Bangkok, Dec 30-31, 2014

162. Shivraman Thaplial, Dheerendra K. Dwivedi, Microstructural and mechanical characterization of multipass friction stir processed cast nickel aluminium bronze (C95500) alloy, presented in International conference on tribology and interface engineering, held at Kuala Lumpur during June 11-12, 2015.

163. Ravi Shankar Vidyarthi, Gaurav Sharma, Shivam Chauhan, Dheerendra Kumar Dwivedi, Creep Behaviour of Ferritic Steel Weld Joints, International Conference on Fatigue, Fracture and Creep, held at IGCAR, Kalpakkam, during Jan 19-22, 2016

164. R Arji, Dheerendra Kumar Dwivedi, Erosive Wear Behaviour of Ni-WC Coatings Developed by Flame Spraying, International Conference on Innvation in Engieering, held at Maurituis, during March 20-21, 2016

165. D K Srinath, **D K Dwivedi**, N K Jain, Electrode Wear in Resistance Spot Welding of Zinc-Coated Steel Sheets, present in Congress on Engineering and Technology, held at Shanghai, China during Oct 21-23, 2016

Sponsored Projects: 25					
Sr. No.	**Period**	**Funding Agency**	**Title of Projects**	**Outlay (Rs. Lakhs)**	**Status**
1	2002-2003	IIF, Hyderabad	Influence of vibrations and magnesium on grain refinement by Al-5Ti-1B of cast Al-Si alloys (**R & D)**	0.20 Lacs	Completed
2	2001-04	MHRD, Govt. of India	Studies on machining characteristics of cast Al-Si base alloys **(R & D)**	5.00	Completed
3	1999-2001	MHRD, Govt. of India	Modernization of Production section labs	5.00	Completed
4	2003-05	MHRD, Govt. of India	Modernization of Production section labs	6.00	Completed
5	2004-05	SRIC, IIT, Roorkee	Thermal spraying for enhanced life of tribological components **(R & D)**	1.00	Completed
6	2005-08	CSIR, New Delhi	Development of wear resistant piston materials **(R & D)**	9.26	Completed
7	2006-09	DST, Delhi	Process Modelling of Twin Wire Welding System **(R & D)**	8.62	Completed
8	2007-10	BRNS, Mumbai	Development of non-cobalt base cavitation resistant surface by laser cladding process **(R&D)**	13.95	Completed
9	2007-08	MOP, GOI	Investigation on the Failure of Aluminium Wound Distribution Transformers **(R & D)**	10.04	Completed
10	2008-09	DST, GOI	Surface modification technologies: (**FIST)**	50.0	Completed
11	2009-10	DST, GOI	Development of welding procedure for joining marine aluminium alloys **(R & D)**	1.9	Completed
12	2009-13	ARDB, DRDO	Weldbonding of aluminium structures **(R & D)**	22.452	Completed
13	2009-13	DST, GOI	Structural Instability in Friction Stir Weld Joints of Aluminium Alloys and their Effect on Mechanical Properties **(R & D)**	19.10	Completed
14	2010-12	DST, GOI	Development of fracture and fatigue resistant cast aluminium alloys produced by semi-solid metal casting and conventional casting processes (**R & D)**	8.39	Completed
15	2009-11	MHRD	Pedagogy project: Development of curriculum for “work system design”: NMICT	8.0	Completed

16	2010-11	NPTEL II, MHRD	Web and video content development on “Welding Engineering: Process, Design, Inspection and Weldability”	5.0	Completed
17	2010-12	CSIR	Development of refined high strength cast hypereutectic Al-Si alloys	7.34	Completed
18	2013-16	DST	Development of nitrogen ion implantation of PVD coating on stainless steel substrates for improved mechanical and tribological performance	6.4	Completed
19	2014-17	MoS	Development of diffusion bonding technology for producing fatigue and fracture resistant bonds of stainless steels and titanium alloys with different inter-layers	81.15	Ongoing
20	2014-17	DST	Investigation on plastic behavior of aluminium alloys during friction stir welding and its effect on weldability	6.4	ongoing
21	2013-16	CSIR	Corrosion behavior of friction stir weld joint of aluminium alloys (CSIR, New Delhi)	15.48	completed
22	2013-15	ICT, MHRD	Main pedagogy project on work system design	-	Ongoing
23	2015-18	BRNS	Dissimilar steel welding by A-GTAW	32.5	Ongoing
24	2015-16	INSA	Exchange visit to explore possibility for collaborative project with Technische Universität Chemnitz, Germany in area of development of creep resistant Cr-Mo steel weld joints using activated flux GTAW and FSW	1.50	completed
25	2016-17	NPTELIII MOOCs	Joining Technologies for Metals	3.0	completed
26	2016-17	NPTEL III Moocs	Failure Analysis & Prevention	3.0	submitted

Activities to assist various Govt. bodies: Crime branch-CBI & Hon. High Court

- Failure investigation of cranes accidents at Jamrudpur site of DMRC, Crime branch Delhi Police
- Classification of plastic moulding machine as per direction of Hon. High Court, Nainital

- Screening of application for faculty position in engineering as per direction of Hon. High Court, Nainital
- Failure analysis of Girth gear cracking problem at Ambuja Cements Limited, Bhatinda
- Failure analysis of sluice valves HPSEB power project
- Failure analysis of penstock M/s Sai Engg Foundaiton

Funding Received for Internaitonal Travel

S. No.	Funding agency	Purpose	Period	Out lay (Rs.)
1	ITS, DST	Prsenting research paper in wear of materials conference 2009	April 19-23, 2009	0.9 L
2	ITS, DST	presenting research paper in international conference in manufacturing technologies	Sep 19-20, 2013	0.6 L
3	INSA	bilaterial collaboration	July 6-25, 2015	1.3 L
4	ITS, DST	Prsenting research paper in wear of materials conference 2017	March 26-30, 2017	1.2 L

Consultancy Projects: 49		**47 completed and 2 in progress**	
Period	**Sponsoring organization**	**Title of Projects**	**Status**
2006-2007	UJVSN, Dehradun	Recommendation of suitable IS standard for welding of pipes carrying fluid under pressure	Completed
2007-08	Atlas Copco, Pune	To assist in selection of aluminium cylinder block manufacturer	Completed
2007-08	Industry & Institutions	Combating wear	Completed
2007-08	CRRI, New Delhi	Fatigue behaviour of bridge steel plates	Completed
2007-08	CCW, ACC, Chaibasa	Addressing erosive wear problems in VRM fan	Completed
2007-08	GCW, ACC, Gaggal	Root cause analysis of problems caused by excessive of separator fan and related imbalance	Completed
2007-08	Hydro Ind.	Controlling erosion in hydro turbines	Completed
2008-09	PWD, Garhwal	Recommendation on use of welding electrodes for fabrication and testing of 6013 electrode	Completed
2008-09	ACC/Ambuja Cement Ind.	Controlling abrasion and erosion in cement plants	Completed
2008-09	GCW, ACC	Analysis of line stone sample	Completed
2008-09	GCW, ACC, Gaggal	Recommendation for controlling problems caused by erosion wear of separator fan blades	Completed
2008-09	CRRI, New Delhi	Fatigue studies of bridge steel plates	Completed
2008-09	Institutes & Industries	Welding for fabrication and repair	Completed
2009-10	CRRI, New Delhi	Fatigue studies of bridge steel plates	Completed
2009-10	Ambuja Cement Ltd, Bhatinda	Failure analysis of cracking problem of Girth gear	Completed
2009-12	BPCL, Mumbai	Studies on preheat time for BMCG & development suitable device / nozzle for efficient gas cutting	Completed

2009-10	CRRI, New Delhi	Fatigue studies of Railway bridge steel plates	Completed
2010-11	Industry and Institutes	Welding of alloy steels: controlling problems	Completed
2010-11	AIPL	Manufacturing process…… pipes	Completed
2010-11	BPCL	Principles and practices in gas cutting, welding and brazing	Completed
2010-11	CRRI, New Delhi	Fatigue studies of steel members	Completed
2010-11	Crime branch, ISC, Delhi	Failure investigation of cranes accidents at Jamrudpur site of DMRC	Completed
2010-11	Tata Growth Shop	To develop the procedure for welding of some engineering components	Completed
2010-11	RDSO, LKO	Design and analysis of welded joints of stainless steel	Ongoing
2011-12	CRRI, Delhi	Fatigue studies of bridge steel plates	Completed
2011-12	THDC, TGS	Controlling residual stresses, distortion, and defects in weld joints	Completed
2011-12	Contractors and co Bhimatal	Studies on mechanical properties and zinc coating of GI wire	Completed
2012-13	BPCL	Studies on characteristics of steel surfaces cut by BPCL and LPG	Completed
2012-13	JB Engg, Una	Studies on low cycle fatigue of steel couplers	Completed
2012-13	AGL, Mangalore	Controlling the problems of permanent formation in car glass windows	Completed
2012-13	JB Engg, Una	Studies on slip, static tensile and chemical analysis and corrosion studies	Completed
2012-13	Sriram pistons & rings	Failure analysis and metallography	Completed
2012-12	THDC, Rishikesh	Manufacturing process for quality assurance	Completed
2012-13	SME, Mumbai	Development of hardfacing electrode	Ongoing
2013-14	Panchsheel Fasteners	Studies on stud weld joints in respect of mechanical and chemical properties	Completed

2013-14	Uttarakhand Jal Sansthan, Uttarkashi	Quality assessment of steel pipes	Completed
2013-14	NDMC, Delhi	Weld quality assessment for Re-development project of Connaught place, New Delhi	Completed
2013-14	BKT, Barauni	Development of QAP, production drawling and design of component for EOT cranes	Completed
2013-14	Texplas, Haridwar	Inspection of injection moulding machine to determine its classification	Completed
2013-14	Satyam Enterprises, Haridwar	Evaluation of mechanical characteristics of false ceiling	Completed
2014-15	Baira Siul, NHPC, Chamba	Ultrasonic testing of gates and penstocks	Completed
2014-15	JBE, Una	Studies on mechanical properties of mechanical splices	Completed
2014-15	JB Re-bar and coupler, Umb, HP	High cycle fatigue studies of mechanical coupler	Completed
2015-16	Sriram piston	Chemical analysis and grade classification	Completed
2015-16	HPSEB Shimla	Failure analysis (RCA) of sluice valve of small hydro power station	Completed
2015-16	CPWD, Jodhpur	Studies on mechanical properties of mechanical splices	Completed
2015-16	Loktak, NHPC	NDT of HM component of Loktak power project	Completed
2015-16:	UKJVNL	Mechanical and physical testing of pipes	Completed
2015-16	Sai Engg. Foundation	Failure analysis of penstock	Completed
2016-17	Delhi Jan Board	Testing of hydro-mechanical components of Wazirabad Barrage	Submitted

Research Supervision

M. Tech. Dissertation: 47 (46 awarded + 1 ongoing)		
Year	**Name of student**	**Title**
2004-06	Mr. Jaya Rajesh Manti	Investigation on the weldability of Al-Mg-Si alloys
2004-06	Mr. Keshav Prasad	Study the mechanical ehavior of SAW joints of heat resistant steel
2004-06	Mr. Rambabu Arji	Investigation on erosive wear ehavior of Ni-Cr, Co-WC coating deposited by detonation gun on stainless steel substrate
2004-06	Mr. Sriharsha Sudheer Ch.	Studies on wear ehavior of Ni-WC and Co base alloy thermal sprayed coating deposited on steel substrate
2004-06	Mr. Rakesh Kumar	Investigation on pulsed MIG welding of thin sheets of aluminium
2004-06	Mr. T. V. S. Reddy	Studies on stir cast aluminium alloys
2005-07	Sri D V Kiran	Welding of dissimilar aluminium alloys
2005-07	Sri Ranganaykulu	Welding of heat treatable aluminium alloys
2005-07	Sri Jagan	Weld surfacing of aluminium alloys
2006-08	Mr. Kailash Kuhite	Experimental and analytical studies on surface roughness of EDMed surfaces
2006-08	Ms. S Srivastava	Investigation on mechanical and metallurgical properties of continuous compacted weld joints of aluminium alloys
2006-08	Ms. Reena Rani	Failure mechanics of aluminium transformers due to mechanical stresses
2006-08	Mr. Vijay K. Ojha	Analysis and control of imbalance in raw mill separator due to wear
2007-09	Narendra kumar	Modeling of residual stress in welded joints
2007-09	S. Raja Kiran	Development and characterization of Cavitation resistant non-cobalt base laser cladding
2007-09	P. Mohanta	Fracture and fatigue ehavior of stir cast Al-Si alloys
2008-10	K Durga Prasad	Design and development of nozzle for enhanced performance of Oxy-fuel cutting of steels
2008-10	M F Khan	Weldbonding of aluminium alloys for improved mechanical performance
2008-10	B M Dhakar	Wear studies on thermal sprayed coatings on steel substrate
2008-10	D Srinath	Development of technology for enhanced performance of spot welding copper electrodes in welding of GI steel
2008-10	Ratnesh singh	Fracture and fatigue studies on friction welded aluminium alloys
2009-11	Mayank mittal	Studies on weld-bonding of aluminium alloys
2009-11	Surajit singh	The mechanical and tribological performance thermal sprayed components
2009-11	Neetu singh	Studies on laser assisted weld bonding of stainless steel
2009-11	Prashant Pandey	Development of fracture and fatigue resistant welded joints of stainless steels

2009-11	Dhananjay	Friction stir welding of similar and dissimilar aluminium alloys
2010-12	Shiv Raman	Corrosion fatigue of friction stir weld joints of aluminium alloys
2010-12	Avani	Transient liquid phase bonding of dissimilar metal systems
2010-12	Uday gupta	Stress corrosion cracking behavior of friction stir weld joints of aluminium alloys
2010-12	Anurag mani Tiwari	Fracture and fatigue behavior of GMAW welds of FSS
2010-12	Anand mondal	Weld-bonding of aluminium alloy sheets and their FE analysis
2011-13	Ravi Vidyarthi	Development of RE modified hardfacing electrode
2011-13	Sunil	Friction stir processing of aluminium alloys for improved for performance
2011-13	Naveen K Yadav	Plastic deformation during FSW and weldability of aluminium alloys
2011-13	Navneet Kumar	Friction stir spot welding of aluminium alloys
2011-13	Rohit Chuahan	PWHT of FSW joints of Al alloys for improved mechanical and metallurgical properties
2012-14	Omkar Chawla	Development of wear and corrosion resistant welding fluxes
2012-14	Nitin Saini	Friction stir processing of cast Al-Si alloys
2012-14	Amit Kumar	Hybrid FSW-adhesive joining of Al alloys
2012-14	Gaurav Sharma	Joining of dissimilar metals
2013-15	Sandhya	Nitrogen ion implantation and PVD coating of stainless steel
2013-15	Bhavesh	ATIG welding of stainless steel
2013-15	Krishna	Diffusion bonding of stainless steel
2013-15	Akash	Plastic flow behavior and weldability of aluminium alloys by FSW
2013-16	Swetank	FSW of Steel for enhanced mechanical performance
2014-16	Bhupesh	Laser welding for thin sheet of alloy steel
2014-16	Anagdha	Novel approaches for A-GTAW of steels
2014-16	Debolina	Improving the corrosion resistance of FSW joints
2014-16	Shivam	Structure and mechanical behavior of FSW steel
2014-16	Lokesh Tiwari	Diffusion bonding of steel for enhanced productivity
2015-17	Pushpraj	Diffusion bonding of steels using different interlayers
2016-18	Arun Jena	Joining of copper base alloys
2016-18	Gautam	Spot welding of steel-Aluminium alloys

Ph. D. Thesis supervision: 16: 10 awarded, and 7 in progress

			Status
2004-07	S Paul	Electro Magnetic Abrasive Finishing	Awarded (2007)
2006-09	S. Sharma	Abrasive and erosive wear of thermal sprayed coatings	Awarded (2009)
2006-09	M. Dhiman (ext.)	Development, characterization and optimization of wear resistant piston alloys	Awarded (2010)
2006-09	V R Rajeev	Reciprocating wear of AMCs	Awarded (2010)
2007-10	N. S. Beniwal	Failure analysis and performance enhancement of aluminium wound distribution transformers	Awarded (2011)

2008-11	Prabhkiran Kour	Studies on electromagnetically stir cast Al-Si alloys	Awarded (2012)
2007-11	P. K. Sood (ext.)	Machining of stir cast aluminium alloys	Awarded (2012)
2009-12	Chaitanya Sharma	Studies in friction welded aluminium alloys	Awarded (2012)
2010-14	Joy Prakash	Studies in ECH of gears	Awarded (2014)
2012-16	Y K Singla	Development of hardfacing electrodes for enhanced wear and corrosion resistance	Awarded (2016)
2011-16	S Rao	ECH of cylindrical objects	Ongoing (Jointly QIP)
2013-16	Shiv Raman	Friction stir processing for improved mechanical performance	Ongoing (Single IITR)
2013-16	Ravi Shankar	Activated flux-TGAW of stainless steel	Ongoing (Single IITR)
2014-17	Gaurav sharma	Diffusion bonding of dissimilar steels	Ongoing (Single IITR)
2015-19	Sunil Sinhmar	Corrosion behavior of FSW joints	Ongoing (Single CSIR)
2015-19	P Sharma	Dissimilar steel welding by flux assisted GTAW	Ongoing (Single IITR)
2016-20	Anup Kulkarni	Tri-metallic weld joint using A-GTAW	Ongoing (Single BRNS)