

CURRICULUM VITAE

1. **Name:** Dr. Debabrata Dhupal, **Professor**
2. **Address:** Production Engineering Department, VSSUT, Burla, Odisha 768018
Email: debabratadhupal@gmail.com, ddhupal_pe@vssut.ac.in
Mobile: 9437111022, 7978553083.
3. **Qualifications:**
 - B.E. (Mech), Utkal University.
 - M.E (Production Engineering), Jadavpur University.
 - Ph.D. (Engg), Jadavpur University
 - Diploma in Business Management, IGNOU.
4. **Specialisation:** Advance Manufacturing Processes, Additive Manufacturing, Production Engineering. Laser Machining.
5. **Experience:** 24+ Years Teaching, 07 Years Industry. (Excluding M.Tech)
 - 11.9+ years and continuing as Professor at VSSUT, Burla
 - 2.5 Year as Reader at IGIT, Sarang.
 - 10 years of Assistant Prof & Prof at OEC, Bhubaneswar
 - 7 years in different Industry in various Capacity.
6. **Subject of Teaching:**
 - Graduate Level:** Basic manufacturing Process. Non-traditional machining, Precision Engineering. Additive Manufacturing, SQC.
 - Post Graduate Level:** Laser Processing of Materials, Rapid-manufacturing, Advance Machining Process and Morden Machining Process, CE
7. **Research Area:**
 - Micromachining, Advance Manufacturing Process, Additive Manufacturing & Non-traditional machining, Metal Cutting.
8. **Research Guidance:**
 - Ph. D. Candidates: **07 Nos (Awarded), Submitted: 01, Ongoing: 02 Nos**
 - M. Tech. Candidates: **24 Nos (Completed), 0 Nos (Ongoing)**
9. **Book Published:**
 - Laser Micro machining on Engineering Ceramics
 - LAMBERT, Academic Publishing, OmniScriptum, GmbH & Co. KG
 - ISBN: 978-3-659-68564-4
10. **Members of Professional Bodies:**
 - F Member, Institution of Engineers (IE), India
 - Life Membership, Indian Society for Technical Education (MISTE) India
11. **NAAC & NBA Pear Team Member:**
 - Visited Numbers University and Institution as Assessor Member for NAAC.
12. **Awards / Honours received:**

Sl. No.	Name of Awards/ Honours	Year of Award	Awarding Agency	Field
1	Best Senior faculty by DK International Research Foundation (ISO 9001:2015 &12AA, 80G Approved)	2020	4th International Web conference (IWCETASET-2020)	International level
2	Presidential award in my School as best scout	1984	Govt. of India	National level
3	UGC Merit's Scholarship	2007	UGC	National Level

13. Sponsored Project & Consultancy: 03 (external), 02 (internal)

Sl. No.	Name of the Project	Sponsoring Agency	Name of Co-investigator, if any	Amount sanctioned
1	Development of Fluidized Bed hot Abrasive Jet Machining (FB-HAJM) For Micro Machining	AICTE, REF. NO: FILE NO. 8-32/RIFD/RPS-NDF/POLICY-1/ 2018-2019	-	24,80,000/-
2	Laser Micromachining of Advance Engineering Materials	AICTE, 8023/RID/RPS-49(POLICY-1)(GOVT)/2011-2012	-	20,00,000/-
3	Analysis of Micro-Electro discharge machining of advance engineering materials	AICTE, 12/AICTE/RIFD/MOD(POLICY-2)-63/2012-2013	-	1500000/-
4	Co-axial Nozzle design and manufacturing for Laser micromachining System	TEQIP- II, VSSUT, BURLA	-	1,47,140.00
5	Fabrication and Installation of Abrasive Jet Micromachining	TEQIP- II, VSSUT, BURLA	-	Amount: 1,00,000/-

14. Patents Filed/Grant:

Name of the Patent	Patent no./year	Design/ Inventors	Indian/Foreign
Flexible Tool Holder for Machining micro Features using EDM.	360058 Date of grant- 02/03/2021	Debabrata Dhupal, Kanchan Kumari, Sujit Kumar Nayak, Vijaya Sharma.	Indian
Fluidized hot chamber for abrasive jet machining	202031053304A/2020 Granted	Debabrata Dhupal, Kanchan Kumari, Subhadip Pradhan, Sudhansu Ranjan Das, Pankaj Charan Jena	Indian
Design to Abrasive jet machining	335992-001 (design) Date of issue 18/01/2021	Ankan Mishra, Basanta Kumar Nanda, Debabrata Dhupal	Indian
Apparatus and method for assessing structural damage in laminated composite plates	202331077544A Date of publish: 17/11/2023	Pankaj Charan Jena, Sudhansu Ranjan Das, Debabrata Dhupal, Sunita Sethy	Indian
Apparatus of temperature controlled Abrasive Multijet machining	202331068740	Debabrata Dhupal, Kanchan Kumari, Subhadip Pradhan	Indian

15. Administrative Experiences:

Sl. No	Name of the Activities	Date of Activity Held	Remarks
1	Dean, CDCE	Continuing	VSSUT, Burla
2	Director, IQAC	15 th Dec 2021 to till date	VSSUT, Burla
3	HOD, Production Engg. Dept.	2 nd April 2018 to 15 th April 2019.	VSSUT, Burla
4	Coordinator TEQIP-II Program	May 2013 to April 2016	VSSUT, Burla
4	Member University Academic Council	January 2013,2014, 2016, 2017,2018, 2020,2022, 2023	VSSUT, Burla
5	Member BOS	January 2013 to till date	VSSUT, Burla
6	Examination Superintend (Diploma)	June 2011 to 30 th Oct 2012	IGIT, Sarang
7	Vice President Cultural	28 th march 2011 30 th Oct 2012	IGIT, Sarang
8	H.O.D Mechanical Engg. Dept.	April 2009 to 30 th June 2010	OEC, Bhubaneswar
9	Deputy Superintend Examination	May 2002 to Nov 2003	OEC, Bhubaneswar
10	Hostel Superintend	Aug 2003 to June 2005	OEC Boys Hostel
11	Besides this member in numbers of confidential activity under university.		

16. Publications: Journals (Published) SCI, SCIE and SCOPUS

- Banerjee, B., Pradhan, S., Das, S., & Dhupal, D. (2024). Surface topography characterization of USMM during machining of zirconia ceramic using silicon carbide abrasives: An experimental and simulation approach. *CIRP Journal of Manufacturing Science and Technology*, 51, 1-19.
- Parida, S. P., Mishra, D., Padhy, R. L., Jena, P. C., Das, S. R., Basem, A. A., ... & Elsheikh, A. (2024). Effect of Alkali Treatment on Mechanical and Buckling Behaviour of Natural Fiber Reinforced Composite Cylinder. *ES Materials & Manufacturing*, 24, 1161.
- Samantaray, S. R., Pradhan, S., Dhupal, D., Padhan, S., & Das, S. R. (2024). Comparative performance investigation and sustainability evaluation between hot-AJM and AJM during machining of zirconia ceramic using Al₂O₃ abrasives. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 46(5), 263.
- Banerjee, B., Pradhan, S., & Dhupal, D. (2024). Machining and Surface Characterization of Si₃N₄-Based Ceramic During Recently Developed USMM Using SiC Abrasives: An Experimental Investigation and Simulation Approach. *Arabian Journal for Science and Engineering*, 1-29.
- Dhupal, D., Panigrahi, D., Rout, S., Bhuyan, R. K., Nayak, S., Jena, P. C., & Das, S. R. (2024). Generation of effusion holes on ultra-high temperature alloy by micro electro-discharge machining process. *Surface Review and Letters*, 31(02), 2450015.
- Roy, S., Pradhan, A., Padhan, S., Das, A., Das, S. R., & Dhupal, D. (2024). Investigation on Surface Roughness and Power Consumption for Sustainability Assessment in Hard Turning of HSLA Steel With SPPP-ALTiSiN-Coated Carbide Tool Under Various Cooling-Lubrications. *Lubrication Science*. <https://doi.org/10.1002/lis.1717>
- Roy, S., Pradhan, A., Padhan, S., Das, A., Das, S. R., & Dhupal, D. (2024). Analysis on power consumption for life cycle sustainability assessment in hard turning of AISI 4140 steel using SPPP ALTISIN-coated carbide tool under various cutting environments. *Surface Review and Letters*, 31(06), 1-26.
- Rout, S., Patel, S.K., Dhupal, D., Panigrahi, D. (2024) "Experimental investigation during pulsed fiber laser micro-engraving act on high-performance ceramic: Statistical study followed by surface morphology", *Optics and Laser Technology*, 168, 109887.
- Subhadip Pradhan, Samir Kumar Panda, ..., Debabrata Dhupal, (2023) "Computational approach for structural and thermal behavior of laser-machined microgrooves on alumina ceramic using ANSYS", *Proc IMechE Part E: J Process Mechanical Engineering*, 1-12, DOI: 10.1177/09544089231209314.
- Pradhan, S. Dhupal, D. (2023) "Machining of aluminium nitride ceramic with a hAJM process using SiC abrasives: Experiments and simulation". *Journal of Manufacturing Processes*, 95, pp. 68-90.

11. Panda. S.K., Rout, S. Panigrahi. D, Dhupal. D. (2022), “Experimental Investigation on Dimensional Characteristics and Surface Morphology of Microchannels Fabricated on Smart Ceramic by DPSS Nd:YAG Laser”. *Indian Journal of Engineering and Materials Sciences.*, 29(6), pp. 730–737
12. Pradhan S, Dhupal D;(2022) “An Integrated Approach of Simulation, Modeling and Computer-aided Design of Hot Abrasive Jet Machining Setup”. *Journal of Advanced Manufacturing Systems;* Vol. 21, No. 03, pp. 427-472.
13. Naik S, Das S R, Dhupal D & Khatua A K; (2022) “Electrical Discharge Machining of Engineered Al-22% SiC Metal Matrix Composite: Surface Roughness Analysis, Optimization, Economic Analysis, and Sustainability Assessment”. *Process Integration Optimization Sustain*, 6, 223–251. <https://doi.org/10.1007/s41660-021-00207-1>
14. Pradhan S & Dhupal D; (2022) “Experimental and simulation approach of surface generation on K-80 alumina ceramic by recently developed sustainable FB-HAJM using novel nozzle design”. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*; 236(6):2502-2514. doi:10.1177/09544089221093988
15. Rout B, Dash R, Dhupal D & Das SR; (2022) “Optimized posture prediction for task specific during stacking process using human upper body movements”. *Int J Interact Design Manufacturing*, 16, 291–303. <https://doi.org/10.1007/s12008-022-00841-0>
16. Pradhan S, Sahu S, Das S R & Dhupal D; (2022) “Experimental study and simulation of surface generation during machining of K-80 alumina ceramic in modified abrasive jet machining with different temperatures using Al₂O₃ abrasives” *International Journal of Abrasive Technology*. Vol. 10, No. 4, pp. 298-329. <https://doi.org/10.1504/IJAT.2021.120291>.
17. Parida SP, Jena PC, Das SR, Dhupal D & Dash RR; (2021) “Comparative stress analysis of different suitable biomaterials for artificial hip joint and femur bone using finite element simulation” *Advances in Materials and Processing Technologies.*, 1-16, <https://doi.org/10.1080/2374068X.2021.1949541>.
18. Pradhan S, Das SR, Jena PC & Dhupal D; (2021) “Investigations on Surface Integrity in Hard Turning of Functionally Graded Specimen under Nano Fluid Assisted Minimum Quantity Lubrication” *Advances in Materials and Processing Technologies*.1-16,<https://doi.org/10.1080/2374068X.2021.1948706>.
19. Banerjee B, Pradhan S, Das S & Chakraborty A; (2021) “Horn design and analysis in ultrasonic machining process using ANSYS” *Advances in Materials and Processing Technologies*. 1-14,<https://doi.org/10.1080/2374068X.2021.1945266>.
20. Pradhan S, Dash PB, Kumari K & Dhupal D; (2021) “Study of micro machining characteristics by Nd-YAG Laser on NiTiInol shape memory alloy” *Advances in Materials and Processing Technologies*.1-15,<https://doi.org/10.1080/2374068X.2021.1946757>.
21. Pradhan S, Tripathy S S & Dhupal D; (2021) “Machining of aluminium nitride ceramic using developed hot abrasive jet machining: an experimental and simulation approach ”*Advances in Materials and Processing Technologies*.1-15, <https://doi.org/10.1080/2374068X.2021.1945275>.
22. Rout S, Panigrahi D, Patel SK & Dhupal D;(2021) “Microchanneling on bio-inert dental ceramic using dry pulsed laser ablation and liquid supported pulsed laser ablation approach” *Optics and Lasers in Engineering* 144, 106654 <https://doi.org/10.1016/j.optlaseng.2021.106654>.
23. Dixit S, Panigrahi D, Rout S, Panda S & Dhupal D; (2021) “A Tribological Parametric Analysis of Laser Textured Microgrooves on Si₃N₄” *Lasers in Engineering* (Old City Publishing).
24. Naik S, Das SR & Dhupal D; (2021) “Experimental Investigation, Predictive Modeling, Parametric Optimization and Cost Analysis in Electrical Discharge Machining of Al-SiC Metal Matrix Composite” *Silicon*.13, 1017-1040.
25. Pradhan S, Das SR, Jena PC & Dhupal D; (2021) “Machining performance evaluation under recently developed sustainable HAJM process of zirconia ceramic using hot SiC abrasives: An experimental and simulation approach” *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 09544062211010199.
26. Panigrahi D, Rout S, Patel SK & Dhupal D (2021) “Stray current and its consequences on microstructure of Hastelloy C-276 during parametric investigation on geometrical features: fabricated by electrochemical micromachining”. *The International Journal of Advanced Manufacturing Technology*.112 (1), 133-156.

27. Pradhan S, Das SR, Nanda BK, Jena PC & Dhupal D (2021) "Machining of Hardstone Quartz with Modified AJM Process Using Hot SiC Abrasives: Analysis, Modeling, Optimization, and Cost Analysis". *Surface Review and Letters (SRL)* 28 (02), 1-21.
28. Pradhan S, Das SR, Nanda BK, Jena PC & Dhupal D (2020) Experimental investigation on machining of hardstone quartz with modified AJM using hot silicon carbide abrasives. *Journal of the Brazilian Society of Mechanical Sciences and Engineering* 42, 559. <https://doi.org/10.1007/s40430-020-02644-4>.
29. Pradhan S, Das SR & Dhupal D (2020) Performance evaluation of recently developed new process HAJM during machining hardstone quartz using hot silicon carbide abrasives: an experimental investigation and sustainability assessment. *Silicon*, 1-25.
30. Pattanayak S, Panda S & Dhupal D (2020) "Laser micro drilling of 316L stainless steel orthopedic implant: A study". *Journal of Manufacturing Processes* 52, 220-234.
31. Naik S, Das SR & Dhupal D (2020) "Analysis, predictive modelling and multi-response optimization in electrical discharge machining of Al-22% SiC metal matrix composite for minimization of surface roughness and hole overcut". *Manufacturing Review* 7, 1-20.
32. Panda A, Das SR & Dhupal D (2020) Machinability investigation and sustainability assessment in FDHT with coated ceramic tool. *Steel and Composite Structures* 34 (5), 681-698.
33. Rout B, Dash RR & Dhupal D (2020) "Posture prediction and optimization for a manual assembly operation involving lifting of weights". *International Journal for Simulation and Multidisciplinary Design Optimization* 11.
34. Rout B, Tripathy PP, Dash RR & Dhupal D; (2020) "Optimization of posture prediction using MOO in brick stacking operation. *Computational Intelligence in Data Mining*, 461-472.
35. Panda A, Das SR & Dhupal D; (2019) "Machinability investigation of HSLA steel in hard turning with coated ceramic tool: assessment, modeling, optimization and economic aspects" *Journal of Advanced Manufacturing Systems* 18 (04), 625-655.
36. Dixit SR, Das SR & Dhupal D (2019) "Parametric optimization of Nd: YAG laser microgrooving on aluminum oxide using integrated RSM-ANN-GA approach" *Journal of Industrial Engineering International* 15 (2), 333-349.
37. Rout B, Dash RR & Dhupal D; (2019) "Optimal posture prediction in brick stacking operation for reducing ergonomic risk factor" *Int. J. Recent Technol. Eng.*, 1835-1841.
38. Panda A, Das SR & Dhupal D; (2019) "Statistical Analysis of Surface Roughness Using RSM in Hard Turning of AISI 4340 Steel with Ceramic Tool" *Advances in Industrial and Production Engineering*, 17-26.
39. Jena PC, Pradhan B & Dhupal D; (2019) "Modeling and Numerical Analysis of Advanced Machining for Orthotic Components" *Design, Development, and Optimization of Bio-Mechatronic Engineering Products*, 230-271.
40. Jena PC, Pradhan B & Dhupal D; (2019) "Experimental Investigation on ECM with Nimonic 75 Alloy for Prosthetic Component" *Design, Development, and Optimization of Bio-Mechatronic Engineering Products* 126-157.
41. Sahu SK, Naik S, Das SR & Dhupal D; (2019) "Parametric optimization of surface roughness and overcut in electric discharge machining of Al-SiC using copper electrode" *Renewable Energy and its Innovative Technologies*, 99-116.
42. Panda A, Das SR & Dhupal D; (2018) "Hard Turning of HSLA Steel with Coated Ceramic Inserts An Assessment, Modelling, Optimisation and Cost Analysis" *International Journal of Automotive & Mechanical Engineering* 15 (4).
43. Panda A, Das SR, Dhupal D & Davim JP; (2018) "Hard turning of HSLA steel with coated ceramic tool based on evaluation of surface roughness, tool wear, chip morphology and economic analysis" *Journal of Manufacturing Technology Research* 10 (3/4), 113-141.
44. Panda A, Das SR & Dhupal D; (2018) "Experimental investigation, modelling and optimization in hard turning of high strength low alloy steel (AISI 4340)" *Matériaux & Techniques* 106 (4), 404.
45. Panda A, Das SR & Dhupal D; (2017) "Surface roughness analysis for economical feasibility study of coated ceramic tool in hard turning operation" *Process Integration and Optimization for Sustainability* 1 (4), 237-249.

46. Das SR, Panda A & Dhupal D;(2017) “Experimental investigation of surface roughness, flank wear, chip morphology and cost estimation during machining of hardened AISI 4340 steel with coated carbide insert” *Mechanics of Advanced Materials and Modern Processes* 3 (1), 1-14.
47. Nanda BK, Mishra A&Dhupal D; (2017) “Fluidized bed abrasive jet machining (FB-AJM) of K-99 alumina ceramic using SiC abrasives”*The International Journal of Advanced Manufacturing Technology* 90 (9), 3655-3672.
48. Nanda BK& Dhupal D; (2017) “Effect of Machining Parameters in Drilling of Glass Fiber Reinforced Polymer Composite with Modified AJM Process” *International Journal of Manufacturing Technology and Management*. (In press)
49. Das SR, Kumar A&Dhupal D;(2016) “Experimental investigation on cutting force and surface roughness in machining of hardened AISI 52100 steel using cBN tool”*International Journal of Machining and Machinability of Materials* 18 (5-6)501-521.
50. Das SR, Dhupal D & Kumar A;(2015) “Study of surface roughness and flank wear in hard turning of AISI 4140 steel with coated ceramic inserts”*Journal of Mechanical Science and Technology* 29 (10), 4329-4340.
51. Das SR, Dhupal D & Kumar A;(2015) “Experimental investigation into machinability of hardened AISI 4140 steel using TiN coated ceramic tool”*Measurement* 62, 108-126.
52. Das SR, Kumar A & Dhupal D;(2015) “Surface roughness analysis of hardened steel using TiN coated ceramic inserts”*International Journal of Machining and Machinability of Materials* 17 (1), 22-38.
53. Das SR, Kumar A, Dhupal D & Rath KC;(2013) “Estimating the effect of machining parameters on surface roughness during machining of hardened EN24 steel using coated carbide inserts” *International Journal of Mechanical and Industrial Engineering (IJMIE)* 3 (2).
54. Doloi B, Dhupal D & Bhattacharyya B; (2010) “Modelling and analysis on machining characteristics during pulsed Nd: YAG laser microgrooving of aluminium titanate (Al₂TiO₅)” *International journal of manufacturing technology and management* 21 (1-2), 30-41.
55. Dhupal D, Doloi B & Bhattacharyya B; (2009) “Modeling and optimization on Nd: YAG laser turned micro-grooving of cylindrical ceramic material” *Optics and Lasers in Engineering* 47 (9), 917-925.
56. Dhupal D, Doloi B & Bhattacharyya B;(2008) “Parametric analysis and optimization of Nd: YAG laser micro-grooving of aluminum titanate (Al₂TiO₅) ceramics” *The International Journal of Advanced Manufacturing Technology* 36 (9), 883-893.
57. Dhupal D, Doloi B & Bhattacharyya B;(2008) “Pulsed Nd: YAG laser turning of micro-groove on aluminum oxide ceramic (Al₂O₃)” *International Journal of Machine Tools and Manufacture* 48 (2), 236-248.
58. Dhupal D, Doloi B & Bhattacharyya B;(2007) “Optimization of process parameters of Nd: YAG laser microgrooving of Al₂TiO₅ ceramic material by response surface methodology and artificial neural network algorithm” *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture* 221 (8) 1341-1350.

17. Research Papers published in Conference/ Seminar Proceedings:

1. Samantaray, S. R., Das, S. R., & Dhupal, D. (2024). Material removal rate in AJM of zirconia ceramic using silicon carbide abrasive: Investigation, modelling, and optimization. In *E3S Web of Conferences* (Vol. 552, p. 01051). EDP Sciences.
2. Banerjee, B, Doloi, S, Das, S., Dhupal, D. (2023) “Parametric Optimization of MRR During Ultrasonic Machining Process”, *Lecture Notes in Mechanical Engineering, Part F54*, pp. 257–270
3. Behera, S.P., Nanda, B.K., Nayak, S.K., Routara, B.C., Dhupal, D. (2023), “Abrasive Jet Machining of Quartz Plates with Hot Silica Abrasives”, *Lecture Notes in Mechanical Engineering*, pp. 605–614.
4. Naik S, Sabat S, Das SR, Dhupal D& Nanda BK; (2021) “Experimental Investigation, Parametric Optimization, and Cost Analysis in EDM of Aluminium-Silicon Carbide Metal Matrix Composite”*Advanced Manufacturing Systems and Innovative Product Design: Select Proceedings of IPDIMS 2020*, pp. 175-187.

5. Panigrahi D, Rout S, Tripathy SS, Patel SK&Dhupal D; (2021) "Optimization and simulation of laser beam trepanning approach on DSS superalloy"Materials Today: Proceedings.44, 1916-1924.
6. Pradhan S, Dhupal D, Das SR & Jena PC;(2021) "Experimental investigation and optimization on machined surface of Si₃N₄ ceramic using hot SiC abrasive in HAJM" Materials Today: Proceedings.44, 1877-1887.
7. Pradhan S, Sahu S, Tripathy SS, Das SR & Dhupal D; (2020) "Material Removal Rate Analysis for Economical Feasibility Study in Abrasive Jet Machining with Different Temperatures Using K-92 Ceramic" International Conference on Industrial and Manufacturing Systems (CIMS - 2020). (In press)
8. Pradhan S, Tripathy SS, Sahu S, Das SR & Dhupal D; (2020) "Parametric Analysis and Numerical Investigation of Hot Abrasive Jet Micro-Machining Using Computational Fluid Dynamics" International Conference on Industrial and Manufacturing Systems (CIMS - 2020). (In press)
9. Nanda BK, Das D, Mishra SB, Satpathy MP, Routara BC&DhupalD; (2020)Machining of borosilicate glass using Normal-Pressurized-Bed and Fluidized-bed AJM set ups"Materials Today: Proceedings 26, 2412-2418.
10. Naik S, Dhupal D & Nanda BK;(2020)"Experimental analysis on composite material using multiple electrodes by EDM process" Innovative Product Design and Intelligent Manufacturing Systems, 589-598.
11. Pradhan S, Tripathy SS, Sahu S, Das SR, Jena PC&Dhupal D; (2020)"Investigation on MRR and DOC of the micro-holes generated on quartz using silicon carbide by FB-HAJM"Materials Today: Proceedings 26, 2005-2012.
12. Panda SK, Das SR &Dhupal D;(2020)"Predictive Modeling and Optimization of Technological Response Parameters in Nd: YAG Laser Microgrooving of Titanium Alloy Using Combined RSM-PSO Approach"Emerging Trends in Mechanical Engineering, 165-175.
13. Nanda BK, Mishra A, Das SR&Dhupal D;(2020)"Fluidized bed hot abrasive jet machining (FB-HAJM) of K-60 alumina ceramic"Advances in Unconventional Machining and Composites, 641-650.
14. NandaBK, DasD, NayakRK, MishraSB, RoutaraBC&DhupalD; (2019)"Fluidised Bed Hot Abrasive Jet Machining of Borosilicate Glass with Zircon Sand"Materials Today: Proceedings 18, 2993-3000.
15. Jena J, Panda A, Behera AK, Jena PC, Das SR&Dhupal D; (2019)"Modeling and optimization of surface roughness in hard turning of AISI 4340 steel with coated ceramic tool" Innovation in Materials Science and Engineering, 151-160.
16. Pradhan S, Das SR, Nanda BK&Dhupal D; (2019) "Parametric optimization HAJM of alumina ceramic using integrated approach of RSM GA" International Conference on Advances in Mechanical Processing and Design, 2019; (ICAMPD-2019).
17. Pradhan S, Das SR, Nanda BK, Jena PC&Dhupal D; (2019) Parametric optimization of hot abrasive jet machining of K-60 alumina ceramic using response surface methodology and genetic algorithm; International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore.
18. Pradhan S, Behera RK, Nanda BK&Dhupal D;(2018)"Drilling of K-60 Alumina Ceramic with Different Grades of Abrasives at Various Temperatures using Fluidized Bed-Hot Abrasive Jet Machining (FB-HAJM) Process" IOP Conference Series: Materials Science and Engineering 455 (1), 012076.
19. Pradhan S, Behera RK, Nanda BK, Das SR, Dhupal D; (2018) "Parametric optimization of hot abrasive jet machining of alumina ceramic using integrated RSM-GA approach" First International Conference on Emerging Trends in Mechanical Engineering- 2018 (ICETME-2018).
20. Dixit SR, Dhupal D & Nanda BK;(2018)"Temperature Distribution and Stress Analysis of Aluminium Oxide Work-Piece during Laser Micro Machining Operation" IOP Conference Series: Materials Science and Engineering 390 (1), 012005.
21. Rout B, Dash RR&Dhupal D; (2018)"Effective work procedure design using discomfort and effort factor in brick stacking operation-a case study" IOP Conference Series: Materials Science and Engineering 310 (1), 012020.

22. Dhupal D, Dixit SR& Das SR;(2018)“Optimization of process parameters in laser micro-grooving of alumina ceramic using genetic algorithm” UPB Sci. Bull. 80, 163-178.
23. Panda SK, Dhupal D & Nanda BK;(2018)“Experimental study on Ca₃ (PO₄)₂-Al₂O₃ bio-ceramic composite using DPSS laser”Materials Today: Proceedings 5 (11), 24133-24140.
24. Paul BK, Sahu SK, Jadam T, Datta S, Dhupal D&Mahapatra SS;(2018)“Effects of addition of copper powder in the dielectric media (EDM Oil) on Electro-discharge machining performance of inconel 718 super alloys”Materials Today: Proceedings 5 (9), 17618-17626.
25. Sahu SK, Jadam T, Datta S, Dhupal D & Nandi G;(2018)“Application of SiC power added in kerosene dielectric media for electro-discharge machining of Inconel 718 super alloys: effect of powder concentration”Materials Today: Proceedings 5 (9), 20297-20305.
26. Dixit SR&Dhupal D;(2018) “Analysis of Thermal Stress and Temperature Distribution of Laser Power 10.0 w and 20.0 w on Material Removal in Aluminium Oxide Ceramic”Materials Today: Proceedings 5 (5), 12821-12831.
27. Nanda BK, Dhupal D, Buda D & Das SR;(2018)“Abrasive jet drilling of alumina ceramic with pressurized-fluidized bed set-up”Materials Today: Proceedings 5 (5), 12570-12578.
28. Dhupal D, Mohanty S, Dixit SR, Das SR& Nanda BK;(2018)“Micromachining on Al-SiC based metal matrix composite using DPSS laser”Materials Today: Proceedings 5 (5), 11304-11318.
29. Dhupal D, Naik S & Das SR;(2018)“Modelling and optimization of Al-SiC MMC through EDM process using copper and brass electrodes”Materials Today: Proceedings 5 (5), 11295-11303.
30. Das SR, Panda A&Dhupal D;(2018)“Hard turning of AISI 4340 steel using coated carbide insert: Surface roughness, tool wear, chip morphology and cost estimation”Materials Today: Proceedings 5 (2), 6560-6569.
31. Nanda BK, Mishra A, Dhupal D& Swain S;(2017)“Experimentation and optimization of process parameters of abrasive jet drilling by surface response method with desirability based PSO” Materials Today: Proceedings 4 (8), 7426-7437.
32. Nanda BK, Mishra A&Dhupal D;(2016)“Drilling of GFRP Flat Plates with Modified AJM Process using SiC Abrasives”(AIMTDR-2016) College of Engineering, Pune, Maharashtra, INDIA December, 16-18.
33. Doloi B, Dhupal D& Bhattacharyya B;(2007)“Investigations into Nd: YAG laser micro-grooving on alumina” Proceedings of international conference on advanced manufacturing technologies, Durgapur, India,pp.125-135.

18. Book /Chapter Published:

Book:

Laser Micro machining on Engineering Ceramics

LAMBERT, Academic Publishing, OmniScriptum, GmbH & Co. KG

ISBN: 978-3-659-68564-4

Chapter Published:

1. Das, S. R., & Dhupal, D. (2024). Simulation Analysis During Laser Microgrooving of Alumina Ceramic. In *Electro-Micromachining and Microfabrication* (pp. 111-138). Apple Academic Press.
2. Samantaray, S. R., Das, S. R., & Dhupal, D. (2024). Material removal rate in AJM of zirconia ceramic using silicon carbide abrasive: Investigation, modelling, and optimization. In *E3S Web of Conferences* (Vol. 552, p. 01051). EDP Sciences.
3. Pradhan, S., Sahu, S., Tripathy, S. S., Das, S. R., & Dhupal, D. (2022). Material Removal Rate Analysis for Economical Feasibility Study in Abrasive Jet Machining with Different Temperatures Using K-92 Ceramic. In *Modern Manufacturing Systems* (pp. 455-472). Apple Academic Press.
4. Pradhan, S., Tripathy, S. S., Sahu, S., Das, S. R., & Dhupal, D. (2022). Parametric Analysis and Numerical Investigation of Hot Abrasive Jet Micromachining Using Computational Fluid Dynamics. In *Modern Manufacturing Systems* (pp. 437-454). Apple Academic Press.

5. Pankaj Charan Jena, Barsarani Pradhan, Sudhansu Ranjan Das, and D. Dhupal, (2019) Experimental Investigation on ECMM With Nimonic 75 Alloy for Prosthetic Component. In: Kaushik Kumar, J. Paulo Davim (eds.) Design, Development, and Optimization of Bio-Mechatronic Engineering Products. IGI Global, Chapter 6, ISBN: 9781522582359
6. Panda A., Das S.R., Dhupal D. (2019) Statistical Analysis of Surface Roughness Using RSM in Hard Turning of AISI 4340 Steel with Ceramic Tool. In: Shanker K., Shankar R., Sindhvani R. (eds) Advances in Industrial and Production Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore, Chapter 3, ISBN:978-981-13-6411-2
7. Nanda B.K., Mishra A., Das S.R., Dhupal D. (2020) Fluidized Bed Hot Abrasive Jet Machining (FB-HAJM) of K-60 Alumina Ceramic. In: Shunmugam M., Kanthababu M. (eds) Advances in Unconventional Machining and Composites. Lecture Notes on Multidisciplinary Industrial Engineering. Springer, Singapore Chapter 53, ISBN: 978-981-32-9470-7.
8. S.K. Sahu, S. Naik, S.R. Das, D. Dhupal, "Parametric Optimization of Surface Roughness and Overcut in Electric Discharge Machining of Al-SiC Using Copper Electrode", Renewable Energy and its Innovative Technologies, Chapter 9, ISBN: 978-981-13-2116-0, Springer Nature Singapore Pte Ltd. 2019. https://doi.org/10.1007/978-981-13-2116-0_9.
9. J. Jena, A. Panda, A.K. Behera, P.C. Jena, S.R. Das and D. Dhupal, "Modeling and Optimization of Surface Roughness in Hard Turning of AISI 4340 Steel with Coated Ceramic Tool", Innovation in Materials Science and Engineering, Chapter 15, ISBN: 978-981-13-2116-0, Springer Nature Singapore Pte Ltd. 2019. https://doi.org/10.1007/978-981-13-2944-9_15.

19. Seminar/Symposia/Short Term Course organised:

1. Organised two numbers of UHV Introductory workshop of AICTE at VSSUT, Burla.
2. AICTE QIP short term course on "Recent Advances in Machining Processes" Organized by Department of Production Engineering, Veer Surendra Sai University of Technology, Burla during 7th – 12th May 2018. National Level
3. One Week work shop on Faculty Development Course Organized under QIP 18-23 April 2016. National Level
4. Two Day MDP work shop organized Under TEQIP-II in 2017.
5. Two day Seminar Organized on VISION 2020 from July 12 & 13 2014 at Bhubaneswar, State Govt level.
6. Tightly associated with my Supervisor to Organise AIMTDR 2012 and COPEN 2006at Jadavpur University.

20. Seminar/Symposia/Short Term Course attended:

- Attended UHV Introductory workshop of AICTE at VSSUT.
- Attended one Week MDP at IIM Bangalore Dec 2015
- Attended one Week Short term course IIT, Kanpur
- Attended One Week, 4th SERC School on Micro and Nano Manufacturing DST-SERC at Jadavpur University.
- Recent Advances in Simulation Diagnostics and Control of Thermal System. (Three Week)

Debabrata Dhupal