

LIST OF PUBLICATIONS (Vivek Bajpai) TOTAL COUNT: 51

Patent:

1. “A machine structure to reduce vibration of micro-milling machine” Ref. Number: 201931049978, application number: TEMP/E-1/52858/2019-KOL, CBR number: 23304, Innovators: **Vivek Bajpai**, Arnab Das, Shashank Shukla, Chitransh Singh, Mohan Kumar, Madan Lal Chandravanshi, Status: Applied

Book Chapters:

2. Ramesh Singh and **Vivek Bajpai, (2015)** “Coolant and lubrication in machining”, Handbook of Manufacturing Engineering and Technology, Vol. 5 (Machining), Publisher: Springer, pp. 1-34
3. Shashank Shukla and **Vivek Bajpai (2019)** “Cryogenic machining” Innovation in manufacturing for sustainability published by Springer Nature Switzerland, pp. 29-52
4. Ravishankar Rai and **Vivek Bajpai, (2019)** “Optimization of manufacturing Processes” Advanced Manufacturing published by Springer International Publishing, Cham- Switzerland pp. 201-229
5. Ankit Jain and **Vivek Bajpai (2020)** “Introduction to High Speed Machining (HSM)” High speed machining published by Elsevier.
6. Rachit Ranjan, Ravishankar Rai and **Vivek Bajpai (2020)** “Advances in Conventional and Non-Conventional High Speed Machining” Handbook-I Advanced Machining and Finishing, published by Elsevier

Int. Journal papers:

Published (Q ranking based on the data base of Web of science)

7. Jaiswal, A., Khanna, N. and **Bajpai, V., (2020)** “Orthogonal machining of Heat Treated Ti-10-2-3: FE and Experimental” Materials and manufacturing process, 42(5) DOI: 10.1007/s40430-020-02296-4
8. Kumar, D., Singh, NK. and **Bajpai, V., (2020)** “Recent trends, opportunities and other aspects of micro-EDM for advanced manufacturing: a comprehensive review” Journal of the Brazilian Society of Mechanical Sciences and Engineering 42(5) DOI: 10.1007/s40430-020-02296-4
9. Shukla, S., and **Bajpai, V., (2020)** “Effect of cryogenic quenching on microstructure and microhardness of Ti-6Al-4V alloy” Materials Letters, 267, Q2, IF: 3.019
10. Jain A., and Bajpai, V.,(2019) “Mechanical micro-texturing and characterization on Ti6Al4V for the improvement of surface properties” Accepted in Surface & Coatings Technology, DOI: 10.1016/j.surfcoat.2019.125087 **Q1**
11. Kumar, M. and **Bajpai, V.,(2019)** “Experimental investigation on top burr formation in high-speed micro milling of Ti6Al4V alloy” Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, **Q3**
12. Jain A., Kumar, S., **Bajpai, V., Park, HW., (2019)** “Replacement of Hazard Lubricants by Green Coolant in Machining of Ti6Al4V: A 3D FEM Approach” International Journal of Precision Engineering and Manufacturing, 20 (6), 1027-1035 **Q3**
13. Maurya, M., Kumar, S. and **Bajpai, V., (2019)** “Assessment of the mechanical properties of aluminium metal matrix composite: A review” Journal of Reinforced Plastics and Composites, 38 (6), 267-298, IF: 1.471. **web of sc: not searching**

14. Jain, A., Khanna, N, and **Bajpai, V., (2018)** "FE simulation of machining of Ti-54M titanium alloy for industry relevant outcomes" *Measurement*, 129, 268-76, IF: 2.218 **Q2**
15. Kumar, P., Kumar, M., Bajpai, V. and Singh NK., **(2017)** "Recent Advances in characterization, Modeling and Control of Burr Formation in Micro-Milling, *Manufacturing letters*, 13, 1-5
16. Kumar, P., **Bajpai V.,** Singh R., **(2017)** "Burr height prediction of Ti6Al4V in high speed micro-milling by mathematical modeling", *Manufacturing letters*, 11, 12-16
17. Yadav, A., Kumar, M., **Bajpai V.,** Singh, NK. and Singh R. **(2017)** "FE Modeling of Burr Size in High- Speed Micro-Milling of Ti6Al4V", *Precision Engineering*, 49, 287-292, DOI: <https://doi.org/10.1016/j.precisioneng.2017.02.017> **Q2**
18. **Bajpai, V.,** Pratik Mahambare and Singh, R., **(2016)** "Effect of Thermal and Material Anisotropy of Pyrolytic-Carbon in Vibration-Assisted Micro-EDM Process", *Materials and Manufacturing Processes*, 31 (14), 1879-1888 DOI:10.1080/10426914.2015.1127937 **Q2**
19. **Bajpai, V.,** Prasad, B. and Singh, R., **(2016)** "Fabrication and functional characterization of engineered features on pyrolytic carbon", *Advances in Manufacturing*, 4(2), 134-141 **Q4**
20. Lee, **Bajpai, V.,** Moon, Byun, Lee, Park H.W. **(2015)** "Tool life improvement in cryogenic cooled milling of the preheated Ti-6Al-4V", *The International Journal of Advanced Manufacturing Technology*, 79 (1), pp. 665-673, DOI: 10.1007/s00170-015-6849-0, **Impact Factor: 1.779**©2013 Thomson Reuters, Journal Citation Reports® **Q2**
21. Kim, DM., **Bajpai, V.,** Kim, B.H. and Park, HW. **(2015)** "Finite Element modeling of hard turning process via a micro-textured tool", *The International Journal of Advanced Manufacturing Technology*, 78(9), pp. 1393-1405, DOI:10.1007/s00170-014-6747-x, **Impact Factor: 1.779**©2013 Thomson Reuters, Journal Citation Reports® **Q2**
22. **Bajpai, V.,** Lee, I., Park, H.W., **(2014)** "Finite element modeling of three-dimensional milling process of Ti-6Al-4V", *Material and Manufacturing Process*, 29 (5), pp. 564-571 **Impact Factor: 1.486**©2014 Thomson Reuters, 2013 Journal Citation Reports®
23. **Bajpai, V.,** and Singh, R., **(2014)** "Finite Element Modeling of Orthogonal Micromachining of Anisotropic Pyrolytic Carbon via Damaged Plasticity", *Precision Engineering* 38, pp. 300-310, 2011 **Impact Factor: 1.500**©2013 Thomson Reuters, Journal Citation Reports®
24. **Bajpai, V.,** and Singh, R., **(2013)** "Brittle Damage and Interlaminar Decohesion in Orthogonal Micromachining of Pyrolytic Carbon", *International Journal of Machine Tools and Manufacture* 64, pp. 20-30, 2011 **Impact Factor: 2.743**©2014 Thomson Reuters, Journal Citation Reports®
25. Ravi, L., **Bajpai, V.,** Singh, R., and Joshi S. S., **(2011)** "Characterization and Modeling of Burr formation in Micro-End Milling", *Precision Engineering*, 35(4), pp. 625-637, 2011 **Impact Factor: 1.500**©2013 Thomson Reuters, Journal Citation Reports®
26. **Bajpai, V.,** and Singh, R., **(2011)** "Orthogonal Micro-grooving of Anisotropic Pyrolytic Carbon", *Materials and Manufacturing Processes*, 26(10-12), pp. 1481-1493, 2011 **Impact Factor: 1.486**©2014 Thomson Reuters, Journal Citation Reports®

27. **Bajpai, V.**, Salhotra, G., and Singh, R., **(2011)** “Micromachining Characterization of Anisotropic Pyrolytic Carbon”, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 225(9) pp. 1591-1605, **Impact Factor: 0.661**©2012 Thomson Reuters, Journal Citation Reports®
28. Joshi, D., **Bajpai, V.**, Subrahmanyam, A., and Ravi, B., **(2009)** “Evaluating Application of Transient Thermal Analysis for the Assessment of Cooling Potential of Moulding Sands during Casting Solidification”, International Journal of Applied Engineering Research, 410, pp. 1955-1966, Impact factor: not rated

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29. Kumar, D., Singh, NK. **Bajpai, V., (2019)** "Synthesis and Characterization of Zinc Oxide Nano Flakes through Electrochemical Discharge Deposition and Growth Method" Proceedings of the International Conference on Precision, Meso, Micro & Nano Engineering (COPEN-11), IIT Indore, India. December 12-14, 2019.
30. Das, A. and **Bajpai, V., (2019)** "Fabrication of super-finished surfaces in high-speed turning and micro turning: A review" Proceedings of the International Conference on Precision, Meso, Micro & Nano Engineering (COPEN-11), IIT Indore, India. December 12-14, 2019.
31. Rai, R.S. and **Bajpai, V., (2019)** "Fabrication of ZnO nanostructures on woven carbon fiber via hydrothermal route and effect of synthesis conditions on morphology" Proceedings of the International Conference on Precision, Meso, Micro & Nano Engineering (COPEN-11), IIT Indore, India. December 12-14, 2019.
32. Rai, R.S. and **Bajpai, V., (2019)** "Fabrication and characterization of CuO/epoxy/woven carbon fiber hybrid composites with different CuO concentrations" Proceedings of the International Conference on Frontiers in Materials Processing Applications, Research and Technology (FIMPART 2019), Ahmedabad, India. December 12-14, 2019.
33. Kumar, M. and **Bajpai, V., (2019)** "Analysis of Top burr formation in down milling operation of Ti6Al4v alloy" Proceedings of the International Conference on Precision, Meso, Micro & Nano Engineering (COPEN-11), IIT Indore, India. December 12-14, 2019.
34. Jain, A. and **Bajpai, V., (2019)** "Surface Characterization of Micro-Textured Titanium Surfaces Fabricated by Micro-Milling" Proceedings of the Third World congress on Micro and Nano Manufacturing, Raleigh, NC, USA. September 9-12, 2019
35. Rai R., Singh, CP. and **Bajpai, V., (2019)** "Impact Behaviour of Hydrothermally Synthesized ZnO/Polyester Woven Carbon Fibre Hybrid Composites" Proceedings of the Third World congress on Micro and Nano Manufacturing, Raleigh, NC, USA. September 9-12, 2019
36. Ranjan, R. and **Bajpai, V., (2019)** "Graphene Reinforced Aluminium Matrix Composites an Innovative Approach" Proceedings of the Third World congress on Micro and Nano Manufacturing, Raleigh, NC, USA. September 9-12, 2019
37. Ranjan, R., Singh, NK., **Bajpai, V., (2018)** Metal matrix nano composites using graphene nano platelets indented on copper particle in aluminum matrix, Accepted in Advanced material world congress 04-08 Feb., 2018 at Singapore.
38. Jain, A., Bajpai, V., Lee, I and Park HW, **(2017)**, Development of a mathematical model for tool wear in dry machining of Ti6Al4V with coated cemented carbide tool, Accepted in COPEN in Dec. 2017 at IIT Chennai
39. Kumar, S. and Bajpai, V., **(2017)**, FE material modelling of Ti6Al4V at micro level to predict the macro mechanical behaviour. Accepted in ICN:3I-2017, 06-08 Dec., 2017 at IIT Roorkee
40. Kumar, R., Chandravanshi, ML., Bajpai, V., **(2017)** Modal analysis of micro milling machine and its parts using FEM technique, Materials today: Proceeding (ICAMMAS 2017)
41. Ranjan, P., Khanna, N and **Bajpai, V., (2017)** "Finite Element Modeling of Hard Turning through Micro Textured Tool" International conference on Advances in Materials and Manufacturing (ICAMM 17), At Indian Institute of Foundry Technology Ranchi, JH.
42. **Bajpai V.,** Lee, I. and Park, H.W. **(2015)** "FE Simulation of cryogenic cooled machining", Proceedings of the ASME 2015 international manufacturing science & engineering conference, Charlotte, North Carolina, USA, June 8-12, 2015

43. Khanna, N. and **Bajpai V. (2015)** "Finite Element Analysis of Machining Heat Treated Titanium Alloy Ti54M", Proceedings of 38th Advanced Manufacturing Technology Conference, Taiwan, March 28-30, 2015
44. Yadav, S., **Bajpai, V.**, Kashid, M. and Singh, R., **(2013)** "Micro-burr formation analysis at high speed micro drilling of Ti6Al4V", Proceedings of the 8th International Conference on MicroManufacturing, Victoria, Canada, March 25-28, 2013.
45. **Bajpai, V.**, Kushwaha, A. and Singh, R., **(2013)** "Burr formation and surface quality in high speed micromilling of titanium alloy (Ti6Al4V)", Proceedings of the ASME 2013 international manufacturing science & engineering conference, Madison, WI, USA June 10-14, 2013, doi:10.1115/MSEC2013-1216
46. **Bajpai, V.**, Lee, I., and Park, HW, "Finite element modeling of the three dimensional milling process of the titanium", Proceedings of the Korean Society of Mechanical Engineers 2013, PP. 3125-3126
47. **Bajpai, V.**, and Singh, R., "Finite Element Modeling of Orthogonal Micromachining of Anisotropic Pyrolytic Carbon via Damaged Plasticity", Proceedings of the 7th International Conference on MicroManufacturing, Evanston Ill, USA. March 12-14, 2012, pp 478-484. DOI: 10.13140/2.1.4542.8167
48. Piyush, A., **Bajpai, V.** and Singh, R., "Experimental study of micro-scale fiber laser based surface modification by texturing for biocompatibility", Proceedings of the 7th ICOMM, Evanston Ill, USA. March 12-14, 2012 pp 60-65.
49. Gupta, N., **Bajpai, V.** and Singh, R., "Characterization of Micro-EDM Process for Pyrolytic Carbon", Proceedings of the 7th International Conference on MicroManufacturing, Evanston Ill, USA. March 12-14, 2012, pp 204-207. DOI: 10.13140/2.1.1069.4089
50. Salhotra, G., **Bajpai, V.** and Singh, R. K., , "Finite element modeling of orthogonal cutting of pyrolytic carbon", Proceedings of the ASME international manufacturing science & engineering conference, June 13-17, 2011, Corvallis, Oregon, USA, pp 153-160
51. **Bajpai, V.**, Salhotra, G. and Singh, R. K., "Orthogonal micro-grooving of anisotropic pyrolytic carbon", Proceedings of the 5th International Conference on MicroManufacturing, Madison, Wisconsin, USA. April 5-8, 2010, pp. 511-516