

## **LIST OF PUBLICATIONS (Vivek Bajpai)**

### **Book Chapter:**

1. 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
2. Shashank Shukla and **Vivek Bajpai** (2019) "Cryogenic machining" Innovation in manufacturing for sustainability published by Springer Nature Switzerland, pp. 29-52
3. Ankit Jain and **Vivek Bajpai** "Introduction to High Speed Machining (HSM)" High speed machining published by Elsevier
4. Rachit Ranjan, Ravishankar Rai and **Vivek Bajpai** "Advances in Conventional and Non-Conventional High Speed Machining" Handbook-I Advanced Machining and Finishing, published by Elsevier
5. Ravishankar Rai and **Vivek Bajpai** "Optimization of manufacturing Processes" Advanced Manufacturing published by Springer International Publishing, Cham-Switzerland pp. 201-229

### **Int. Journal papers:**

#### **Published**

1. Jain A., and **Bajpai, V.**,(20XX) "Mechanical micro-texturing and characterization on Ti6Al4V for the improvement of surface properties" Accepted in Surface & Coatings Technology
2. Kumar, M. and **Bajpai, V.**,(20XX) "Experimental investigation on top burr formation in high-speed micro milling of Ti6Al4V alloy" Accepted in Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture
3. Jain A., Kumar, S., **Bajpai, V.**, Park, HW., (2019) "Replacement of Hazard Lubricants by Green Coolant in Machining of Ti6Al4V: A 3D FEM Approach" Accepted in International Journal of Precision Engineering and Manufacturing
4. Maurya, M., Kumar, S. and **Bajpia, 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. Q2
5. 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
2. 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
3. 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>
4. 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
5. **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
6. **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

7. 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®
8. 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®
9. **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®
10. **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®
11. **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®
12. 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®
13. **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®
14. **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®
15. 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

### Int. Conference papers:

1. 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
2. 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
3. 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
4. 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.
5. 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
6. 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
7. Kumar, R., Chandravanshi, ML., Bajpai, V., **(2017)** Modal analysis of micro milling machine and its parts using FEM technique, Materials today: Proceeding (ICAMMAS 2017)
8. 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.
9. **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
10. Khanna, N. and **Bajpai V. (2015)** "Finite Element Analysis of Machining Heat Treated Titanium Alloy Ti54M", Proceedings of 38<sup>th</sup> Advanced Manufacturing Technology Conference, Taiwan, March 28-30, 2015
11. 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.
12. **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
13. **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
14. **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
15. 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.
16. 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
17. 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
  18. **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