BIO-DATA : Baljinder Ram

1. Name :Dr. Baljinder Ram
2. Designation :Assistant Professor
3. Department :Mechanical Engineering
4. Date of birth :18.03.1980
5. Address for correspondence :Department of Mechanical Engineering,
   Punjabi University,
   Patiala.

Mobile: 9914339906

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6. Area of Specialization : Machine Design, Magnesium Metal Matrix Composites, Friction Stir Processing, Friction Stir Welding, Electrical Discharge Machining.
7. Academic Qualification

| S.No | Degree Held | Year | University | % of Marks | Div./Rank | Subject Taken |
|---|---|---|---|---|---|---|
| 1 | B.Tech | 2004 | PTU,Jalandhar | 74% | 1/2nd | Mech.Engg |
| 2 | M.Tech | 2011 | PTU,Jalandhar | 67% | 1 | Mech.Engg |
| 3 | Ph.D | 2019 | Punjabi University Patiala | NA | NA | Magnesium Based Metal Matrix Composites |

8. Member of Professional Bodies/Organizations
   i. Life Member: Indian Society forTechnical Education.
   ii. Life Member: Punjab Academy of Sciences
9. Detail of Experience:

| S.No | Institute/Employer | Position Held | Duration | Major Job Responsibilities and Nature of Experience |
|---|---|---|---|---|
| 1 | B.B.S.B.Engg,College ,Fatehgarh Sahib | Lecturer | 29.01.2005 to 20.12.2011 | Teaching and Research |
| 2 | Punjabi University Patiala | Assistant Professor | 21.12.2011 to Till Date | Teaching and Research |

10. Published Work
    a) Research Papers
       i.) International:14
       ii.) National:
    b) Conference :05

11. M.Tech Student Guided (Detail)

| S. No. | Name of the Students | Title of Thesis | Supervisors | Year of Completion |
|---|---|---|---|---|
| 1. | Lakhvir Singh | To study the mechanical behavior of aluminum based metal matrix composite reinforced with alumina | Baljinder Ram<br>Amandeep Singh | 2013 |
| 2. | Lakhvir Singh | Production and mechanical characterization of AL/Fly ash metal matrix composites by stir casting technique | Baljinder Ram<br>Amandeep Singh | 2013 |
| 3. | Bhavdeep Sharma | Experimental investigation of mechanical properties of friction stir processed aluminium alloy 7075 | Baljinder Ram<br>Amandeep Singh | 2014 |
| 4. | Sandeep Singh | Experimental investigation of wear behavior of hardfaced H13 die steel | Baljinder Ram<br>Avtar Singh | 2014 |
| 5. | Sunil Kumar | To study the effect of various process parameters on MRR and TWR using chemical assisted ultrasonic machining process | Baljinder Ram<br>Hashish Bansal | 2014 |
| 6. | Chamanjeet Singh | Fabrication of Magnesium based composite using friction stir processing | Baljinder Ram<br>Amandeep Singh | 2014 |
| 7. | Onkar Singh | To study the effect of friction stir processing on mechanical properties of AL 5251 alloy | Baljinder Ram<br>Amandeep Singh | 2014 |
| 8. | Manjinder Singh | To study the effect of different electrode material and machining parameters on HCHCR D2 steel using EDM | Baljinder Ram<br>Narinder Singh Jassal | 2015 |
| 9. | Gurvir Singh | "To study the effect of electrode rotational speed and machining parameters on MRR, EWR and SR using EDM | Baljinder Ram<br>Narinder Singh Jassal | 2015 |
| 10. | Gurdeep Singh | To study the effect of friction stir processing on mechanical properties and microstructure of AA5251/$B_4C$ based composite | Baljinder Ram<br>Amandeep Singh | 2015 |
| 11. | Parminder Singh | Fabrication and mechanical characterization of AL/$B_4C$ based metal matrix composites by stir casting technique. | Baljinder Ram<br>Amandeep Singh | 2015 |
| 12. | Navdeep | Experimental investigation of slurry | Baljinder Ram | 2016 |

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|---|---|---|---|---|
| | Singh | erosion behavior of HVOF sprayed NI-AL coatings on CA6MM Stainless steel | Sanjeev Bhandari | |
| 13. | Satwinder Singh | To Study The Effect of Machining Parameters on Machining Characteristics in Electrical Discharge Machining of DIN1.2714 Steel | Davinder Singh<br>Baljinder Ram | 2017 |
| 14. | Karanjit Singh | Comparative High Temperature Corrosion Behaviour of Different NiCr-$Cr_3C_2$ on T22 Boiler Steel at 900$^o$C Temperature. | Baljinder Ram<br>Rakesh Goyal | 2017 |
| 15. | Amandeep Singh | Comparative evaluation of hot corrosion behavior of different NiCr-Cr3C2 coatings on T22 steel | Baljinder Ram<br>Rakesh Goyal | 2017 |
| 16. | Gagandeep Singh | Experimental studies of friction stir welding of AA6061 and AA6101 aluminium alloys | Khushdeep Goyal<br>Baljinder Ram | 2018 |
| 17. | Sukhwinder Singh | Optimization of gating system for AZ91D casting alloy | Baljinder Ram<br>Nagraj CM | 2018 |
| 18. | Jashanbir Singh | Experimental investigation of ionic fluid based minimum quantity lubrication, soybean and canola oils | Roshan Lal Virdi<br>Baljinder Ram | 2019 |
| 19. | Sandeep Gora | Experimental investigation of minimum quantity lubrication grinding undersoyabean, ricebran and canola oil | Roshan Lal Virdi<br>Baljinder Ram | 2019 |
| 20. | Harpreet Singh | Exploration of effectiveness of ionic liquid adopted as an additive to the vegetable oils on surface grinding of AISI 52100 steel | Roshan Lal Virdi<br>Baljinder Ram | 2019 |
| 21. | Manjeet Singh | Experimental investigation of nano particle based minimum quantity lubrication grinding under sunflower, cottonseed and ricebran oils | Roshan Lal Virdi<br>Baljinder Ram | 2020 |

12. List of Courses Taught at U.G and P.G Level

| S.No | Course | Class |
|---|---|---|
| 1. | Machine Design-I | 4$^{th}$Sem |
| 2. | Machine Design-II | 5$^{th}$Sem |
| 3. | Machine Drawing | 3$^{rd}$Sem |
| 4. | Engineering Drawing | 1$^{st}$ year |
| 5. | Manufacturing Processes | 3$^{rd}$Sem |

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|---|---|---|
| 6. | Foundry Technology | M.Tech |

**Research Papers**

1. Baljinder Ram, Amandeep Singh, Geothermal energy resources and utilization, Innovative developments in engineering applications, national conference, 14-15 March, 2008.
2. Baljinder Ram, N.P. Singh Deo and Jasbir Singh Ratol,To Investigate the Performance of Silicon Carbide and Graphite Powder Dielectric in Powder Mixed EDM, Futuristic trends in mechanical engineering, 29-30/10/2010, Page 320-327.
3. Lakhvir Singh, Baljinder Ram and Amandeep Singh, "Optimization of process parameter for stir casted aluminium metal matrix composite using Taguchi Method", IJRET-International Journal of Research in Engineering and Technology,Aug-2013, Vol. 2, No. 8, pp. 250 – 278. (eISSN: 2319-1163 | pISSN: 2321-7308)
4. Bhavdeep Sharma, Baljinder Ram and Amandeep Singh, "Experimental investigation of mechanical properties of friction stir processed aluminium alloy 7075 by taguchi method", Journal of Emerging Trends in Engineering, Sciences and Technology,Dec-2014, Vol.1, No. 1, pp. 32 – 42. (ISSN: 1355-2511)
5. Lakhvir Singh, Lakhvir Singh, Amandeep Singh and Baljinder Ram, Optimization of Process Parameter For Al/Fly Ash Metal Matrix Composites By Taguchi Method National conference on Advances in Mechanical Industrial and Material Engineering 2015 November 6-7,2015409-424
6. Amandeep Singh, Baljinder Ram, NirajBala and Dharampal Deepak, Magnesium and its applications in automotive sector: An overview, National conference on Advances in Mechanical Industrial and Material Engineering 2015 November 6-7,2015495-502
7. Gurvir Singh, Manjinder Singh, Narinder Singh Jassal and Baljinder Ram, To study the effect of electrode rotational speed and machining parameters on MRR and SR using EDM, Advances In Materials And Manufacturing Technology Oct-2015, Volume : 4 ,Issue : 10, 87-90
8. Manjinder Singh, Gurvir Singh, Narinder Singh Jassal and Baljinder Ram, Experimental investigation of machining parameters using rotary electrode for edm of HCHCR d2 steel, Advances In Materials and Manufacturing Technology Oct-2015, Volume : 4 ,Issue : 10, 83-86
9. Chamanjeet Singh, Amandeep Singh and Baljinder Ram, Fabrication of Magnesium Based Composites Using Friction Stir Processing, Journal of Emerging Technologies and Innovative Research, 2017. 4(6): p. 358-362. (Published)
10. Onkar Singh, Amandeep Singh and Baljinder Ram, To study the effect of friction stir processing on mechanical properties of al 5251 alloy, Journal of Emerging Technologies and Innovative Research, 2017. 4(6): p. 341-346. (Published).
11. Sandeep Singh and Baljinder Ram, Improving Wear Resistance of Piston Die through Hardfacing,Journal of Emerging Technologies and Innovative Research, 2017. 4(7): p. 255-260. (Published)

12. Baljinder Ram, Dharmpal Deepak, and Niraj Bala, Effect of Friction stir processing variables on microstructure and mechanical properties of magnesium based materials: a review, 5th National Conference on Advancements in Simulation & Experimental Techniques in Mechanical Engineering (NCASEme-2018), 2018, p. 163-167. (Published)
13. Baljinder Ram, Dharmpal Deepak, and Niraj Bala, Microstructure and Mechanical Properties of Mg/SiC Metal Matrix Composites Casting Produced by Stir Casting Down Pouring Process. Journal of Emerging Technologies and Innovative Research, 2018. 5(8): p. 171-176.
14. Baljinder Ram, Dharmpal Deepak, and Niraj Bala, Role of friction stir processing in improving wear behavior of Mg/SiC composites produced by stir casting route. Materials Research Express, 2019. 6(2)
15. Baljinder Ram, Dharmpal Deepak, and Niraj Bala, Effect of hot extrusion on microstructure and tribological behavior of Mg and Mg/SiC metal matrix composite produced by stir casting route, Materials Research Express, 2019.
16. Baljinder Ram, Dharmpal Deepak, and Niraj Bala, Microstructural refinement and enhancement in mechanical properties of magnesium/SiC as cast composites via friction stir processing route, Transactions of the Indian Institute of Metals, 2019.
17. Sandeep Gora, Roshan Lal Virdi and Baljinder Ram, Experimental Investigation of Surface Roughness For Minimum Quantity Lubrication Grinding Under Soyabean, Ricebran and Canola Oil,Journal of Emerging Technologies and Innovative Research, 2019. 6(1): p. 318-326. (Published)
18. Avtar Singh, Niraj Bala, Baljinder Ram, Wear and Tensile Behavior of Titanium Carbide and Fly Ash–Reinforced Magnesium Matrix Composites, Materials Performance and Characterization, 2020.9(1):p. 293-308
19. Gagandeep Singh, Khushdeep Goyal, Baljinder Ram, Bal Krishan, Microstructural Characterization and Mechanical Properties in Friction Stir Welding of AA6061 and AA6101 Aluminum Alloys, Advanced Engineering Forum,2021. 40, p. 1-11

STC/FDP/refresher/orientation course attended

| S. No | Course | Topic | Duration | Dates |
|---|---|---|---|---|
| 1 | STC | Lean manufacturing: today and tomorrow | 2 week | 08/12/2008 to 19/12/2008 |
| 2 | FDP | Machine Design | 1 week | 5/07/2010 to 9/07/2010 |
| 3 | FDP | Emotional intelligence for organization excellence | 3 days | 12/07/2010 to 14/07/2010 |
| 4 | FDP | Human Values | 2 days | 16/07/2010 to 17/07/2010 |
| 5 | FDP | Dale Carnegie faculty empowerment programme | 1 week | 19/07/2010 to 23/07/2010 |
| 6 | | Induction cum training | 3 days | 03/01/2012 to |

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|---|---|---|---|---|
| | | programme | | 5/01/2012 |
| 7 | Refresher course | Mechanical Engineering | 3 weeks | 14/05/2012 to 02/06/2012 |
| 8 | Orientation Programme | - | 4 weeks | 07/04/2014 to 03/05/2014 |
| 9 | Refresher course | Emerging issues in information technology-mechanical engineering | 3 weeks | 10/05/2017 to 30/05/2017 |
| 10 | STC | CAD using CREO | 1 week | 15/07/2019 to 19/07/2019 |
| 11 | QIP | Theory of plasticity and its application | 1 week | 25/11/2019 to 29/11/2019 |
| 12 | STC | Entrepreneurship Development and Industrial Coordination Department | 1 week | 14/09/2020 to 18/09/2020 |