

Name of Faculty **Dr. RAHUL**
 Designation Assistant Professor
 Nature of Job/Appointment Regular
 Date of Joining 28 – 06 - 2019
 E-mail rahul_mech@cbit.ac.in



Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Ph.D)	Awarded
PG	M. Tech. (Materials Engineering) / MBA (HR)	First with Distinction Second
UG	B. E. (Mechanical Engineering)	First with Distinction

Work Experience

Teaching	07 Years
Research	06 years
Industry	--
Others	--

Area of Specialization Welding, Material Testing, Advanced Material Processing, Additive Manufacturing, Metal Matrix Composites

- Professional Memberships
1. The Institution of Engineers (India) (IEI) – Associate Member (AMIE)
 2. Indian Institute of Welding (IIW) – Life Associate Member
 3. Indian Institute of Metals (IIM) – Life Member (58107)
 4. Materials Research Society of India (MRSI) – Life Member (LMB3174)
 5. Powder Metallurgy Association of India (PMAI) – Life Member (L00978)
 6. Society for Failure Analysis (SFA) – Life Member (LM-SFA-0925)
 7. The Indian Society for Technical Education (ISTE) – Life Member (LM 138696)

Responsibilities held at Institution Level R&D coordinator - Mechanical Engineering department
https://www.cbit.ac.in/research_post/re-team/

Responsibilities held at Department Level Timetable In-charge from March 2020 to January 2024

Research Guidance --

Awards Received 1. Received Best Innovative Student Project Award 2013 at

Master's Level by Indian National Academy of Engineering (INAE), for my M.Tech. Research Work on "Development of Novel Nano Composites Using Unique Approaches and Their Mechanical and Tribological Characteristics".

2. Best Paper Award in National Conference on Innovations in Chemical Engineering 2013, Hyderabad, November 15-16, 2013.
3. Second Best Paper Award in IVBS 2013 (Welding Management for Sustainable Development), Visakhapatnam, November 22-23, 2013.
4. Presented a paper (invited talk) at International Institute of Welding, 5th IIW Welding Research & Collaboration Colloquium, Limburg, Germany, October 28-30, 2015.
5. Awarded Best Research Scholar 2018 by The Institution of Engineers (India), Telangana State Centre for my PhD on "Influence of Parent Metal Microstructure and Post Weld Heat Treatments on the Microstructure and Mechanical Properties of Ti-6Al-4V Friction Welds".
6. Awarded a Best Paper Award under Material Science and Engineering category, for the paper entitled "Effect of Grade 5 Titanium Interlayer on Microstructure and pitting Corrosion Behaviour of AA110/A36 Explosion Welds", in Material TECH 2022 (Second International Conference on Materials and Technologies), National Institute of Technology Raipur, 28th – 29th January, 2022.
7. Awarded Best paper award for the paper entitled "Insulation Behavior of Foamed Based Geopolymer as a Thermally Efficient Sustainable Blocks", in the Second International Conference on Construction Materials and Structures (1CCMS-2022), during 13-19 December, 2022.

Courses Handled at Under Graduate / Post Graduate Level. Materials Science and Metallurgy, Automobile Engineering, Additive Manufacturing, Principles of Management, Principles of Industry 4.0, Entrepreneurship, Basic Mechanical Engineering, Organizational Behaviour, Engineering Exploration, Product Design and Process Planning, Foundry Technology and Non-Destructive testing, Fuels, Furnaces and Refractories

No. of Papers Published	National Journals – 02	International Journals – 18
	National Conference – 03	International Conference – 17
Projects Carried out		--
Patents		02
Technology Transfer		--

Invited Speaker Presented a paper, Invited Talk at International Institute of Welding, 5th IIW Welding Research & Collaboration Colloquium, Limburg, Germany, October 28-30, 2015.

Publications:

1. Rahul, R., Rajulapati, K. V, Reddy, G.M., Mohandas, T., Bhanu Sankara Rao, K., "Studies on Effect of Parent Metal Condition on the Room Temperature Mechanical Properties of Ti6Al4V Friction Welds", Trans. Indian Inst. Met. 2017. <https://doi.org/10.1007/s12666-017-1084-z>
2. Koonna Bhavani, V.S.N. Venkata Ramana, Rahul, K. Sri Ram Vikas and Ch. Kishore Reddy, "Effect of Number of Passes on Surface Properties of Burnished Aluminium Alloy", IOP Conference Series: Materials Science and Engineering, 1112, 12003, 2021. Corresponding author: Dr. Rahul. <https://iopscience.iop.org/article/10.1088/1757-899X/1112/1/012011>
3. Ch. Kishore Reddy, M. Gopi Krishna, Rahul, V.S.N. Venkata Ramana and K. Sri Ram Vikas, "Optimization of dry sliding wear parameters of Al4Mg system reinforced with high strength alloy particulate (HSAp)", IOP Conference Series: Materials Science and Engineering, 1112, 12011, 2021. <https://iopscience.iop.org/article/10.1088/1757-899X/1112/1/012003>
4. Priyadarsini Morampudi, VSN Venkata Ramana, KSri ram Vikas, R Rahul and Chitrada Prasad, "Effect of nano ZrB₂ particles on physical, mechanical and corrosion properties of Al6061 metal-matrix nano composites through stir casting route", Eng. Res. Express 4 (2022) 025010. <https://iopscience.iop.org/article/10.1088/2631-8695/ac5f66>
5. Sri Ram Vikas, Rahul, Ch. Kishore Reddy, V.S.N. Venkata Ramana, Priyadarsini Morampudi, Ch. Prasad, "Effect of Grade 5 titanium interlayer on microstructure and pitting corrosion behaviour of AA1100/A36 explosion welds", Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2022.03.330>
6. Bhavani Koonna, V.S.N. Venkata Ramana, Ch. Prasad, Rahul, K. Sri Ram Vikas, "Comparison of microstructure and corrosion behaviour of AA2014 electron beam and friction stir welds", Materials Today: Proceedings, Volume 52, Part 3, 2022, Pages 1615-1621. <https://doi.org/10.1016/j.matpr.2021.11.272>
7. K Sri Ram Vikas, K Srinivasa Rao, Rahul, G Madhusudhan Reddy and VSN Venkata Ramana, "Influence of Heat Treatments on Microstructural and Mechanical Properties of Grade 5 Titanium Friction Welds", Eng. Res. Express 4 (2022) 025053. <https://doi.org/10.1088/2631-8695/ac7a0a>
8. Priyadarsini Morampudi, V.S.N. Venkata Ramana, K. Sriram Vikas, Rahul, Chitrada Prasad, "Enhancing wear properties of Al6061 metal-matrix composites by reinforcement of ZrB₂ nano particles", Materials Today: Proceedings. <https://doi.org/10.1016/j.matpr.2022.04.865>
9. Rahul R, K. V. Rajulapati, G. M. Reddy, T. Mohandas, K. B. S. Rao, "Effect of Post Weld Heat Treatments on the Elevated Temperature Mechanical Properties of Ti6Al4V Friction Welds", Cornell University e-print Archive, arXiv:1802.03363, arXiv preprint, <https://doi.org/10.48550/arXiv.1802.03363>
10. Rahul R, K. V. Rajulapati, G. M. Reddy, K. B. S. Rao, "Development of Aluminium Based Surface Nano Composites Using Friction Stir Processing", Cornell University e-print Archive, arXiv:1802.07913, arXiv preprint, <https://doi.org/10.48550/arXiv.1802.07913>
11. Priyadarsini Morampudi, V.S.N. Venkata Ramana, Chitrada Prasad, K. Sriram Vikas, Rahul, "Physical, mechanical and corrosion properties of Al6061/ZrB₂ metal matrix nano composites via powder metallurgy process", Materials Today: Proceedings. <https://doi.org/10.1016/j.matpr.2022.03.596>
12. K Sri Ram Vikas, K Srinivasa Rao, Rahul, G Madhusudhan Reddy and V S N Venkata Ramana, "Influence of heat treatments on microstructural and mechanical properties of Grade 5 titanium friction welds", Eng. Res. Express 4 025053, <https://iopscience.iop.org/article/10.1088/2631-8695/ac7a0a/meta>
13. Bhavani, K., Venkata Ramana, V.S.N., Rahul, R., Lakshmi Kanth, C., Sri Ram Vikas, K., Kishore Reddy, C. (2023). "Modification of Surface Properties of AA7075 by Friction Stir Processing". In: Srinivas, S., Satyanarayana, B., Prakash, J. (eds) Recent Advances in Applied Mathematics and Applications to the Dynamics of Fluid Flows. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-1929-9_27
14. Kishore Reddy, C., Venkata Ramana, V.S.N., Rahul, Sri Ram Vikas, K., Madhusudhan, D. (2023).

"Influence of Dry Sliding Wear Parameters on the Rate of Wear Al–Mg Matrix Composites Reinforced with Ternary Alloy Particulate". In: Srinivas, S., Satyanarayana, B., Prakash, J. (eds) Recent Advances in Applied Mathematics and Applications to the Dynamics of Fluid Flows. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-1929-9_30

15. K. Sri Ram Vikas, Rahul, V.S.N. Venkata Ramana, G. Madhusudan Reddy, K. Srinivasa Rao, "Influence of heat treatments on corrosion behaviour of Ti64 friction welds", Chemical Data Collections, Volume 42, 2022, 100940, ISSN 2405-8300, <https://doi.org/10.1016/j.cdc.2022.100940>
16. Ashwin Raut, Ranjit J. Singh, Y.S. Kannan, Rahul, "Insulation behaviour of foamed based geopolymer as a thermally efficient sustainable blocks", Materials Today: Proceedings, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.03.022>
17. Vikas, K.S.R., Rahul, Ramana, V.S.N.V. et al. "Effect of Heat Treatments on Tensile Fracture Behaviour of Ti-6Al-4V Alloy Friction Welds". J. Inst. Eng. India Ser. D (2023). <https://doi.org/10.1007/s40033-023-00549-9>
18. Priyadarsini Morampudi, Venkata Ramana V. S. N. , Prasad Chitrada, Sriram Vikas K, Rahul R, "Tribology and pitting corrosion behaviour of Al6061 / nano-ZrB2 metal matrix composites prepared via powder metallurgy process", Chemical Data Collections, Volume 48, 2023, 101082, ISSN 2405-8300, <https://doi.org/10.1016/j.cdc.2023.101082>

Articles:

1. B. Veerajothi, Rahul, V.Jaipal reddy, "Smart E-commerce application with secure block chain", IJMPERD, Vol10, no.3, pp 7209-7220, June 2020.
2. B. Veera Jyothi, P. Surender Reddy and Rahul, "Analysis and Prediction of The Stock Market Closing Prices", Sambodhi: Indological Research Journal of L. D. I. I. (print only), Lalbhai Dalpatbhai Institute of Indology, Vol-44 No.-01(XI), 107-110, 2021.

Conference Proceedings:

1. Rahul, K. Bhanu Sankara Rao, Koteswararao. V. Rajulapati, G. Madhusudhan Reddy, "Development of Al-W and Al-Al₂O₃ Surface Nano Composites Using Sequential Combination of Ball Milling and Friction Stir Processing", oral presentation at National Conference on Innovations in Chemical Engineering 2013, Hyderabad, November 15-16, 2013. ISBN: 978-81-7800-329-0.

Conference Presentations:

1. Rahul, K. V. Rajulapati, G. M. Reddy, T. Mohandas, K. Bhanu Sankara Rao, "Effect of Post Weld Heat Treatments on the Elevated Temperature Mechanical Properties of Ti6Al4V Friction Welds", poster presentation at IIW International Congress 2017, IIW Chennai, India, December 07-09, 2017.
2. Rahul, K. V. Rajulapati, G. M. Reddy, T. Mohandas, K. Bhanu Sankara Rao, "Effect of Post Weld Heat Treatment on the Tensile Properties of Ti6Al4V Friction Welds", oral presentation at A one day workshop on Challenges in Joining of Advanced Materials (CJAM), IIW Hyderabad, India, May 26, 2017.
3. Rahul, K. V. Rajulapati, G. M. Reddy, T. Mohandas, K. Bhanu Sankara Rao, "Influence of Parent Metal Microstructure on the Creep Behaviour of Ti6Al4V Friction Welds", poster presentation at International Conference on Metals and Materials Research, IISc Bangalore, India, June 20-22, 2016.
4. Rahul, K. V. Rajulapati, G. M. Reddy, T. Mohandas, K. Bhanu Sankara Rao, "Effect of Post Weld Heat Treatment on the Creep Behaviour of Ti6Al4V Friction Welds", poster presentation at International Institute of Welding, 6th Welding Research & Collaboration Colloquium, Hyderabad, India, April 7-9, 2016.
5. Rahul, G. Madhusudhan Reddy, Koteswararao. V. Rajulapati, K. Bhanu Sankara Rao, T. Mohandas, "Influence of Parent Metal History on Tensile Properties of Ti6Al4V Friction Welds", oral presentation (invited talk) at International Institute of Welding, 5th IIW Welding Research & Collaboration Colloquium, Limburg, Germany, October 28-30, 2015.

6. B. Naga Jeevani, M. Bathrinarayanan, S. Ramesh Kumar, Rahul, K. V. Rajulapati, G. M. Reddy, K. Bhanu Sankara Rao, "Strain Hardening Characteristics in Bulk Ultra Fine Grained Al-Cu Alloy Studied by Macro and Micro Indentation", poster presentation at IUMRS – ICA 2013 (International Union of Materials Research Societies – International Conference in Asia), Bangalore, December 16-20, 2013. ABS-510a-ICA.
7. S. Ramesh Kumar, Rahul, K. V. Rajulapati, G. M. Reddy, K. Bhanu Sankara Rao, "Fabrication of Bulk Ultra Fine Grained Al-Cu Alloy Using Friction Stir Processing", poster presentation at IUMRS – ICA 2013 (International Union of Materials Research Societies – International Conference in Asia), Bangalore, December 16-20, 2013. ABS-510-ICA.
8. Pardhu Yella, Kamal Mankari, Rahul, K. V. Rajulapati, K. Bhanu Sankara Rao, "Structure – Property Correlations of a Newly Developed Alloy 740", IUMRS – ICA 2013 (International Union of Materials Research Societies – International Conference in Asia), Bangalore, December 16-20, 2013. ABS-1033a-ICA.
9. Rahul, K. Bhanu Sankara Rao, Koteswararao. V. Rajulapati, G. Madhusudhan Reddy, "Development of Al-W and Al-Al₂O₃ Surface Nano Composites Using Sequential Combination of Ball Milling and Friction Stir Processing", oral presentation at IVBS 2013 (Welding Management for Sustainable Development), Visakhapatnam, November 22-23, 2013.
10. Rahul, K. Bhanu Sankara Rao, Koteswararao. V. Rajulapati, G. Madhusudhan Reddy, "Development of Novel Nano Composites Using Unique Approaches and Their Mechanical and Tribological Characteristics", poster presentation at International Conference on Heat Treatment and Surface Engineering 2013, Chennai, May 16-18, 2013.
11. Koteswararao. V. Rajulapati, Rahul, P.V.S.L. Narayana, V. Sreedevi, G.M. Reddy, K. Bhanu Sankara Rao, "Processing and Mechanical Behaviour of Nanostructured Bulk Aluminium Based Alloys", NMD – ATM 2012 (66th Annual Technical Meeting), Jamshedpur, November 16-19, 2012.
12. Rahul, "Effect of Number of Passes on Surface Properties of Burnished Aluminium Alloy", Two Day International E-Conference on Industry 4.0 Technologies in Civil & Mechanical Engineering (IC14TCME-2020), VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY, 2020.
13. Rahul, "Optimization of dry sliding wear parameters of Al4Mg system reinforced with high strength alloy particulate (HSAp)", Two Day International E-Conference on Industry 4.0 Technologies in Civil & Mechanical Engineering (IC14TCME-2020), VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY, 2020.
14. Kona Bhavani, V.S.N. Venkata Ramana, Rahul, Ch. Lakshmi Kanth, K. Sri Ram Vikas, Ch. Kishore Reddy, "Modification of surface properties of AA7075 by friction stir processing", 5th International Conference on Applications of Fluid Dynamics - ICAFD 2020, VIT – AP, pp 66, 2020. ICAFD 2020-P081.
15. Ch. Kishore Reddy, V.S.N. Venkata Ramana, Rahul, K. Sri Ram Vikas, Dasari Madhusudhan, "Impact of dry sliding wear parameters on the wear rate of Al-Mg based composites reinforced with ternary alloy particulate", 5th International Conference on Applications of Fluid Dynamics - ICAFD 2020, VIT – AP, pp 67, 2020. ICAFD 2020-P083.
16. K. Sri Ram Vikas, Rahul, Ch. Kishore Reddy, VSN Venkata Ramana, Priyadarsini Morampudi, Ch. Prasad, "Effect of Grade 5 Titanium Interlayer on Microstructure and Pitting Corrosion Behaviour of AA110/A36 Explosion Welds", in Material TECH 2022 (Second International Conference on Materials and Technologies), National Institute of Technology Raipur, 28th –29th January, 2022. MT2022-M21.
17. Kishore Reddy, K. Sri Ram Vikas, VSN Venkata Ramana, Rahul, P. Naga Vishnu, "Development of B4C Particulate Reinforced AA7075 Composite by Friction Stir Welding: Evaluation of Microstructure and Mechanical Properties", in Material TECH 2022 (Second International Conference on Materials and Technologies), National Institute of Technology Raipur, 28th –29th January, 2022. MT2022-MM14.
18. Priyadarsini Morampudi, V.S.N. Venkata Ramana, K. Sriram Vikas, Rahul, Chitrada Prasad, "Physical, Mechanical and Corrosion Properties of Powder Metallurgy Processed Al6061/ZrB₂ Metal Matrix Nano Composites", in Material TECH 2022 (Second International Conference on Materials and Technologies), National Institute of Technology Raipur, 28th –29th January, 2022. MT2022-MM38.
19. Priyadarsini Morampudi, V.S.N. Venkata Ramana, K. Sriram Vikas, Rahul, Chitrada Prasad, "Enhancing Wear Properties of Al6061 Metal-Matrix Composites by Reinforcement of ZrB₂ Nano Particles", in Material TECH 2022 (Second International Conference on Materials and Technologies), National Institute

of Technology Raipur, 28th –29th January, 2022. MT2022-MM39.

20. Ashwin Raut, Ranjit J. Singh, Y.S. Kannan, Rahul, "Insulation Behavior of Foamed Based Geopolymer as a Thermally Efficient Sustainable Blocks", in the Second International Conference on Construction Materials and Structures (1CCMS-2022), during 13-19 December, 2022

Patents:

1. Patent Grant: Design No. 390742-001, dated 12.10.2023, https://search.ipindia.gov.in/DesignQRStatus/PDF_Viewer.aspx?AppNo=MzkwNzQyLTAwMQ==&CNo=MTQ1NjM5
2. Patent Grant: Design No. 362555-001, dated 23.02.2023, https://search.ipindia.gov.in/DesignQRStatus/PDF_Viewer.aspx?AppNo=MzYyNTU1LTAwMQ==&CNo=MTI5Nzgy
3. Patent Grant: Design No. 394340-001, dated 08.11.2023, https://search.ipindia.gov.in/DesignQRStatus/PDF_Viewer.aspx?AppNo=Mzk0MzQwLTAwMQ==&CNo=MTQ4MTIw
4. Patent Application No. 352891-001. Design accepted and published. Journal No. 02/2022 and Journal date is 14/01/2022. <https://search.ipindia.gov.in/DesignApplicationStatus/>
5. Patent Application No. 202241023144. Patent Published.

