## Faculty Profile

### Basic Information:

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| NAME | : | **Dr. A. Hemantha Kumar** |
| DESIGNATION | : | **Professor** |
| DEPARTMENT | : | **Mechanical Engineering** |
| DATE OF BIRTH | : | **09-08-1974** |
| DATE OF JOINING | : | **02-09-2002** |
| EMAIL ID | : | **ahk@aitsrajampet.ac.in** |
| EMPLOYEE ID | : | **AITS031001** |

### Academic Profile:

| Qualification | Name of the Board/University | YEAR |
|---|---|---|
| Ph.D | Rayalaseema University | 2017 |
| M.Tech | S.V.U College of Engineering S.V university, Tirupati | 2000 |
| B.Tech | S.V.U College of Engineering S.V university, Tirupati | 1998 |

### Research Details:

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|---|---|---|
| 1. Areas of Specialization : | | Industrial & production Engineering |
| 2. No. of Publications : | | 32 |
| 3. Awards Received : | | - |
| 4. Research Guidance | | |
| | No. of PhD Guided: | - |
| | No. of M.Tech. Guided: | 8 |
| | No. of B.Tech. Guided: | 25 |
| 5. Details of Professional Membership: | | ISTE, IAENG |
| 6. Subjects Taught : | | 1. Optimization Techniques<br>2. Kinematics of Machinery<br>3. Dynamics of Machinery<br>4. Management Science<br>5. Engineering Graphics<br>6. Engineering Mechanics<br>7. Operations Research<br>8. Fluid Mechanics and Hydraulic Machinery |

## Publication Details:

| Title | Publisher | Published Year |
|---|---|---|
| 1. Mechanical Responses of Bio-Inspired 3D-Printed Concrete Structures: Improving Performance with Nature-Inspired Design | Springer, ICIDDM 2k25 Conference | 2025 |
| 2. Enhancing Remote Sensing Image Fusion with Deep Learning Attention Fusion Residual Approach | Discover Applied Sciences (Springer), Online Publication | 2025 |
| 3. Monte Carlo Tree Search Algorithm for Strategic Planning in Humanoid Robotics | IEEE Xplore, ICC-ROBINS, DOI: 10.1109/ICC-ROBINS60238.2024.10533937 | 2024 |
| 4. Deploying Healthcare Monitoring System for Elderly Patient Care using IoT & Neural Network Techniques | IEEE Xplore, AIC Conference, DOI: 10.1109/AIC61668.2024.10731003 | 2024 |
| 5. Simultaneous Scheduling of Machine and Tools without Tool Delay using Crow Search Algorithm | Institute of Engineers Maharashtra, RAMMML-2022 | 2022 |
| 6. Flexural and Impact Characterization of Polymer Laminated Composites Reinforced with Bi-Woven Glass Fibers | Journal of Optoelectronics Laser, Vol. 41, Issue 3, ISSN: 1005-00862 | 2022 |
| 7. Design of Collaborative Robots for Arc Welding Applications Using Motosim Software | Neuro Quantology, Vol. 20, Issue 11, pp. 4044–4052, DOI: 10.14704/Nq.2022.20.11.Nq66407 | 2022 |
| 8. Polymer Laminated Composites Reinforced with Bi-Woven Glass Fibers: Subjected to Tensile and Compression Loading | International Journal of Scientific Technology & Research, Vol. 9, Issue 2, pp. 6280–6284 | 2020 |
| 9. Mixed Stream of Viscoelastic Liquid through a Porous Medium Situated in a Vertical Channel with Permeable Walls | IJRTE, Vol. 8, Issue 5, pp. 17–21 | 2020 |
| 10. Free Convection Flow through a Porous Medium in the Third Grade Vertical Channel | IJAST, Vol. 29, No. 6, pp. 4825–4831 | 2020 |
| 11. Flexural Analysis of Smart Structural Composite Laminates Using a New Higher Order Theory | IJMPERD, Vol. 9, Issue 2, pp. 311–320 | 2019 |
| 12. Design and Fabrication of Low Cost Ball Milling Machine for Producing Nano Particles | International Journal of Engineering Research, Vol. 8, Issue 4, pp. 119–112 | 2019 |
| 13. Optimization of EDM Process Parameters in Machining through Hole Making of 17-4 PH Stainless Steel using Grey Taguchi Technique | International Journal of Engineering Research, Vol. 8, Issue 4, pp. 104–109 | 2019 |

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|---|---|---|
| 14. Design and Fabrication of Motorised Staircase Climbing Trolley | International Journal of Applied Engineering Research, Vol. 13, Issue 17, pp. 13380–13385 | 2018 |
| 15. Impact of Thermal in Stokes Second Problem for Unsteady Second Grade Fluid Flow | IJRA Tech, Vol. 6, No. 9, pp. 2420–2425 | 2018 |
| 16. Heat Transfer Effect on Oscillatory Flow of Jeffrey Fluid through Porous Medium in Tube | IJASRM, Vol. 3, Issue 12, pp. 149–153 | 2018 |
| 17. Design and Fabrication of 1800° Wheel Rotation Vehicle | Journal of Engineering Technologies and Innovative Research, Vol. 6, Issue 5 | 2018 |
| 18. Optimization of Process Parameters on Surface Roughness & MRR on AISI1042 with Coated Tools | I-Manager's Journal of Mechanical Engineering, Vol. 7, No. 2 | 2017 |
| 19. Comparison of Optimum Cutting Parameters in Machining Die-Steel (EN-31) | Manufacturing Technology Today | 2017 |
| 20. Investigation of Optimum Cutting Parameters for End Milling of H13 Die Steel | IJRA Tech, ISSN: 2321-9637 | 2017 |
| 21. Parametric Analysis of Optimum Cutting Parameters for AISI 1042 using PVD Tool | Manufacturing Technology Today, CMTI | 2016 |
| 22. Optimization Process Parameters and Dielectric Fluid on Machining EN 31 using TOPSIS | IJERA, Vol. 6, Issue 9, pp. 13–18 | 2016 |
| 23. Comparison of Optimum Cutting Parameters in Machining Die Steel (EN 31) | IJSRD, Vol. 4, Issue 7, pp. 517–523 | 2016 |
| 24. Determination of Optimum Parameters in EDM on Die Steel by Taguchi and GRA | ICICA 2016 (Springer) | 2016 |
| 25. Comparison of Optimum Cutting Parameters in Machining Die Steel (EN 31) | Manufacturing Technology Today | 2016 |
| 26. Comparison of Optimum Cutting Parameters for AISI 1042 in Turning Operation by GA and PSS | Applied Mechanics and Materials, Vols. 813–814, pp. 285–291 | 2015 |
| 27. Experimental Investigation and Analysis of Cutting Parameters for AISI1042 using CVD Tool | IJ Applied Engineering Research, Vol. 10, No. 17, pp. 38061–38065 | 2015 |
| 28. Experimental Investigation of EDM Process Parameters on Stainless Steel & En41B | ELSEVIER Procedia Engineering 97, pp. 1551–1564 | 2014 |

## Patent Details:

| Title of Patent | Submitted/Published/Awarded |
|---|---|
| 1. Application Date Status Fuzzy Logic and Deep Learning Approaches Enhancing Industry 4.0 Implementation In Manufacturing and Control Sector | Published |