

Dr. K Saraswathamma

Professor

Department of Mechanical Engineering

University College of Engineering, Osmania University, Hyderabad.

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Educational Qualifications:

1. **Ph. D. in Mechanical Engineering** from **IIT Delhi**, Hauz Khas, New Delhi, 2015.
 - **Thesis: Synthesis and Characterisation of Magnetorheological Fluid and Magnetorheological finishing of Silicon**
 - **Supervisors:** Prof. P.V. Rao and Prof. Sunil Jha, Department of Mechanical Engineering, IIT Delhi
2. **M. E. in Production Engineering** from **University College of Engineering, Osmania University, 2001.**
3. **B. E. in Mechanical Production and Industrial Engineering** from **GITAM College of Engineering**, Andhra University, 1998.

Professional Experience:

1. **Professor**, Department of Mechanical Engineering, University College of Engineering, Osmania University since January 2018
2. **Associate Professor**, Department of Mechanical Engineering, University College of Engineering, Osmania University from January 2015 to January 2018
3. **Assistant Professor**, Department of Mechanical Engineering, University College of Engineering, Osmania University from January 2001 to January 2015
4. **Lecturer**, Department of Mechanical Engineering, KITS Warangal from November 2000 to June 2001.

Research Supervision:

Ph. D.: 04 (In Progress)

M.E. Students Guided: 98 (10 on going)

Areas of Research:

- Conventional and Un-Conventional Machining
- Micro and Nano finishing

Research Projects:

- **Simulated and Experimental Investigation of Stretch Forming of AA2014 Aluminium Alloy** funded by CARS Project -ASL, DRDO for Rs. 9.98 lakhs for the academic year 2021-22.
(ASL/DD2/R/DD23/0119/20/2588/2515 dated on 08-06-2021)

Number of Publications:

- International / National Journals : 38
- International / National conferences : 17

International/ National Journals

1. G Vishnu Pramod Teja, **K. Saraswathamma**, P. Murali Krishna, G. Tejeswara Rao , “Experimental Investigation of Electro Discharge Machining on NIMONIC 80A through Response Surface Methodology”, Advances in Applied Mechanical Engineering, Lecture Notes in Mechanical Engineering. Springer, Singapore, 2020, 991-1000.
2. Sarat Kumar Sahoo, N. Thirupathi, K. Saraswathamma, “Experimental Investigation and Multi-Objective Optimization of Die sink EDM Process Parameters on Inconel-625 alloy by using Utility Function Approach”, Materials Today: Proceedings, Volume 24, Part 2, 2020, Pages 995-1005.
3. Mithun Kasturi, **Saraswathamma K**, Dhanesh Kant Verma “Effect of Post Weld Heat Treatment Soaking Time on Microstructure and Mechanical Properties of TIG Welded Grade 91 Steel” Journal of Metals, Materials and Minerals, Vo.29, No.2 (2019), 42-50.
4. N Hima Varsha and K Saraswathamma, “ Effect of Aluminium Powder suspended dielectric and Silver Coated Copper Electrode on Electrical Discharge Machining Characteristics of Inconel 718”, Learning and Analytics in Intelligent Systems,. Springer, Cham. vol 2, (2019) 682-689.
5. Vishnu Pramod Teja G, **Saraswathamma K** and Padmalatha T.S.R.V, “Machining characteristics of Electro Discharge Machining on Nimonic 80A by Response Surface Methodology”, Learning and Analytics in Intelligent Systems,. Springer, Cham. vol 2, (2019) 645-652.
6. D. Venkateshwarlu, Sriram Venkatesh, **K Saraswathamma**, Sanganabhatla Swetha Bhagirathi, Shiva Dharshan Vanapalli, “Evaluation of Wear rate of different Liner materials used in Bunkers and Silos using Dry Abrasion Wear Test”, Learning and Analytics in Intelligent Systems,. Springer, Cham. vol 2, (2019) 712-720.
7. K.L.Uday Kiran , Sanar Zuhair Abbas , **K.Saraswathamma**, G.Chandra Mohan Reddy , A.M.K.Prasad, “Parametric Optimization During Wire EDM Taper Cutting on AISI D2 Steel Using Desirability Function” , Learning and Analytics in Intelligent Systems,. Springer, Cham. vol 2, (2019) 568-576.
8. KL Uday Kiran, P Sarath, **K Saraswathamma**, G Chandra Mohan Reddy “Prediction of Angular Error in wire EDM taper cutting of AISI D2 tool Steel by RSM approach” Materials Today: Proceedings, Vol.5 , Issue 13, Part 3 (2018) 27043-27050.
9. B. Venugopal Rao, N. Aravindan, **K. Saraswathamma**, “Experimentation of effect of process parameters on mechanical properties in SAW Process” Materials Today: Proceedings, Vol.5 , Issue 13, Part 3 (2018) 26961-26967.

10. K. L. Uday Kiran, **K Saraswathamma**, A.M.K.Prasad, G.Chandra Mohan Reddy, “Effect of process parameters on angular error in wire-EDM taper cutting of AISI D2 tool steel” International Journal of Engineering and Science Invention (IJESI), Vol .7, Issue 1 (2018), 78-83.
11. K. L. Uday Kiran, **K Saraswathamma**, A.M.K.Prasad, G.Chandra Mohan Reddy, “Study on Wire-EDM Taper Cutting Process: A Review” International Journal of Technical Innovation in Modern Engineering & Science, Vol .3, Issue 12(2017), 268-274.
12. B.Laxmi, T.Nagaveni, TSRV Padmalatha , **K Saraswathamma**, “Influence of tool geometry and process parameters on performance characteristics of EN-19 steel in sink type EDM using Taguchi method” International Journal of Engineering Science and Technology, Vol. 9, No.05(2017), 299-310.
13. **K Saraswathamma**, Sunil Jha, P.V. Rao, “Rheological behaviour of Magnetorheological polishing fluid for Si polishing”, Materials Today: Proceedings, Vol.4 , Issue 2, Part A (2017), 1478-1491.
14. **K Saraswathamma**, TSRV Padmalatha, “Model for the prediction of surface finish in Ball End Magnetorheological finishing process”, International Journal of Engineering and Technology. Vol 9, No 3 (2017), 1582-1590.
15. TSRV Padmalatha, Madhavi J, **K Saraswathamma**, “Influence of Process Parameters of Surface Grinding on Maraging Steel” International Journal of Materials Science, Vol.12, Issue No.1 (2017), 127-135.
16. TSRV Padmalatha, T Nagaveni, **K Saraswathamma**, “Optimization of Process Parameters for CNC EDM on OHNS tool steel using Desirability Function”, International Journal of Engineering Science and Technology, Vol. 9 , Issue No.03 (2017), 145-151.
17. TSRV Padmalatha, T Nagaveni, **K Saraswathamma**, K Chandravathi, “Multi objective optimization Of micro-EDM drilling on Maraging steel by Genetic Algorithm” International Journal of Engineering Science and Technology, Vol. 9 , Issue No.03 (2017), 133-144.
18. Bhargavi Baaji, **K Saraswathamma**, Radhakrishna Madabhushi, Shankarachar Sutar, “Design and Analysis of Spherical Pressure Vessels with Pressure and Thermal Effects” International Journal of Mechanical Engineering and Automation, Vol. 3, No. 6 (2016), 239-248.
19. **K Saraswathamma**, Sunil Jha, P.V. Rao “Experimental Investigation into Ball End Magnetorheological Finishing of Silicon” Precision Engineering, Vol. 42 (2015), 218-223.
20. **K Saraswathamma**, Sunil Jha, P.V. Rao “Rheological characterization of MR polishing fluid for Si polishing” Materials and Manufacturing processes, Vol. 30, issue 5, (2015) 661-668.
21. **K.Saraswathamma**, Sunil Jha, P.V. Rao “Design of Parallel Plate Magnetorheometer for evaluation Rheological properties of Magnetorheological polishing fluid”, Materials Today: Proceedings 2 (2015) 3251 – 3259.

22. **K.Saraswathamma**, “Magnetorheological finishing: A Review” International Journal of Current Engineering and Technology, Special Issue-2, (February 2014), 168-173

Presented/ Published in International Conferences:

23. G Vishnu Pramod Teja, K. Saraswathamma, P. Murali Krishna, G. Tejeswara Rao , “Experimental Investigation of Electro Discharge Machining on NIMONIC 80A through Response Surface Methodology” 1st International Conference on Applied Mechanical Engineering Research (ICAMR-2019), May 2 - 4, 2019, NIT Warangal.
24. D. Venkateshwarlu, Sriram Venkatesh, **K Saraswathamma**, Sanganabhatla Swetha Bhagirathi, Shiva Dharshan Vanapalli, “Evaluation of Wear rate of different Liner materials used in Bunkers and Silos using Dry Abrasion Wear Test” International Conference on Emerging Trends in Engineering (ICETE2019), 22-23 March 2019, University College of Engineering, Osmania University, Hyderabad.
25. Sanar Zuhair Abbas , K.L.Uday Kiran , **K.Saraswathamma**, G.Chandra Mohan Reddy , A.M.K.Prasad, “Multi Objective Optimization of WireElectrical Discharge Machining Taper Cutting on AISI D2 Steel Using Response Surface Methodology” International Conference on Emerging Trends in Engineering (ICETE2019), 22-23 March 2019, University College of Engineering, Osmania University, Hyderabad.
26. Vishnu Pramod Teja G, **Saraswathamma K** and Padmalatha T.S.R.V, “Machining characteristics of Electro Discharge Machining on Nimonic 80A by Response Surface Methodology” International Conference on Emerging Trends in Engineering (ICETE2019), 22-23 March 2019, University College of Engineering, Osmania University, Hyderabad.
27. N Hima Varsha and K Saraswathamma, “ Effect of Aluminium Powder suspended dielectric and Silver Coated Copper Electrode on Electrical Discharge Machining Characteristics of Inconel 718” International Conference on Emerging Trends in Engineering (ICETE2019), 22-23 March 2019, University College of Engineering, Osmania University, Hyderabad.
28. B. Swathi, M. Sangeetha, **K. Saraswathamma**, “Experimental study on effect of process parameters of wire EDM on Maraging steels using plain brass wire” National Conference on Advances in Mechanical Engineering and Nanotechnology (NCAMENT2018), 29-30 June, 2018, MED, University College of Engineering, Osmania University, Hyderabad.
29. S. Swethabhagirathi, Kasturi Mithun, K. Saraswathamma “Effect of post weld heat treatment soaking time on mechanical properties of TIG welded grade 91 steel” National Conference on Advances in Mechanical Engineering and Nanotechnology (NCAMENT2018), 29-30 June, 2018, MED, University College of Engineering, Osmania University, Hyderabad.
30. K.L.Uday Kiran, K.Saraswathamma, A.M.K.Prasad, G.Chandra Mohan Reddy “ Prediction of Angular Error and Surface Roughness in Wire-EDM Taper cutting of AISI D2 Tool Steel” National Conference on Advances in Mechanical Engineering and Nanotechnology (NCAMENT2018), 29-30 June, 2018, MED, University College of Engineering, Osmania University, Hyderabad.

31. KL Uday Kiran, Thallapalli Nagaveni, **K Saraswathamma**, AMK Prasad, G Chandra Mohan Reddy, “Multi-objective optimization of WEDM process parameters for taper cutting of AISI D2 tool steel” International Conference on Recent Trends in Engineering & Sciences (ICRTES-2018), 20-21 February 2018.
32. KL Uday Kiran, P Sarath, **K Saraswathamma**, G Chandra Mohan Reddy “Prediction of Angular Error in wire EDM taper cutting of AISI D2 tool Steel by RSM approach” International Conference on Advances in Materials and Manufacturing (ICAMM-2016), 8-10 December 2016.
33. B Venugopal Rao, N Aravindan, **K Saraswathamma**, “Experimentation of Effect of Process parameters on Mechanical Properties in SAW process”, International Conference on Advances in Materials and Manufacturing (ICAMM-2016), 8-10 December 2016.
34. **K Saraswathamma**, Madhu Durgam, “Parametric Analysis of CNC EDM on OHNS Tool Steel”, 5th International & 26th AIMTDR 2014, 12-14 December 2014, IIT Guwahati.
35. **K Saraswathamma**, Sunil Jha, P.V. Rao, “Parametric Analysis of Ball end Magnetorheological finishing of Silicon wafer” 15th International Conference on Precision Engineering (ICPE-2014), Kanazawa city, Japan, 22-25 July 2014.
36. **K Saraswathamma**, G Venkateswarlu, S Venkatarami Reddy, “Optimization of Surface roughness in Roller burnishing process using RSM and desirability function” Abhinav Hitech College of Engineering, Hyderabad, 24-25 February 2014.
37. **K Saraswathamma**, S Venkatarami Reddy “Analysis and Optimization of surface roughness in the dry machining of Ti-6Al -4V with PVD coated insert using RSM and desirability function”, Abhinav Hitech College of Engineering, Hyderabad, 24-25 February 2014.

Presented/ Published in National Conferences:

38. **K Saraswathamma**, Sunil Jha, P.V. Rao , “Effect of fluid composition parameters of MRP fluid in Ball end Magnetorheological finishing of silicon” National conference on Emerging Trends in Mechanical Engineering (ETIME-14) Department of Mechanical Engineering, UCE, OU, 29-30 December 2014.
39. **K Saraswathamma**, L Praveen, “Experimental Investigation into a CNC EDM of Ti alloy with reverse polarity” National Conference on Recent Innovations in Mechanical Engineering, MVSR College of Engineering, 21-22 December 2014.

Courses taught at UG and PG level:

U.G. Theory	U.G. Laboratory
Engineering Drawing I & II Metal Cutting and Machine Tools Finite Element Methods Manufacturing processes	Work Shop Practice Manufacturing processes Lab Metrology and Machine Tools Lab

Non-Destructive Techniques Operations Research	
P.G. Theory	P.G. Laboratory
Finite Element Techniques Advanced Manufacturing Technology Machining Science Non-Destructive Evaluation Techniques Advanced Metrology Optimization Techniques	Computational Lab Production Engineering Lab

Additional Responsibilities:

- Additional chief warden, Girls Hostel Engg. & Tech, Osmania University from 31-8-2018 to till date
- Assistant chief warden, Girls Hostel Engg. & Tech, Osmania University from 31-8-2017 to 31-08-2018
- Internal Complaints committee member, University College of Engineering, Osmania University from 02-06-2017
- Member, Departmental Committee, Dept. of Mechanical Engineering. From 21-01-2017.
- In-charge, Central Workshop, Dept. of Mechanical Engineering from 2015 to 2019.
- Faculty Adviser, M.E. (Production Engineering), Dept. of Mechanical Engineering from 2013 to 2019.
- Committee member in the introduction of Engineering Graphics using AutoCAD for the Academic Year 2015-16.
- Involved in Moderation of M.E syllabus for the Academic Year 2015-16
- Faculty Adviser, M.E. (Automation & Robotics), Dept. of Mechanical Engineering from 2004 to 2007.
- Department Convener, M.E./M.Tech. Admissions, Dept. of Mechanical Engineering for the academic year 2005-06
- Department Convener, M.E (PTPG) Admissions, Dept. of Mechanical Engineering for the academic year 2006-07
- Faculty Adviser, Dept. of Mechanical Engineering for the academic year , NIPUNA-2005 (National Level Students Technical Symposium)
- General Warden, CHW-1 Hostel, Osmania University from 2002 to 2004.
- General & Mess Warden, CHW-1 Hostel, Osmania University from 2004 to 2006

- Department Coordinator for preparation of statistical reports, Handbooks, Annual reports, etc., Dept. of Mechanical Engineering, from 2002 to 2006.

Conferences/STTP/ Seminars/Workshops/Training Programmes Organized:

- Two day work shop on Training the Trainer, 20-21 November 2016.
- One Day workshop on Women for Excellence (WE 2016), 9th March 2016.
- International Conference on Advances in Materials and Manufacturing (ICAMM-2016), 8-10 December 2016.

Conferences/STTP/ Seminars/Workshops/Training Programs Attended:

- Third SERC School on Micro Machining, IIT Kanpur, 20-25 July 2009.
- Analysis of Modern Manufacturing Processes (QIP Short term course), IIT Bombay, 29th November to 12th December, 2006.
- Computer Aided Engineering, Faculty Development Programme, MVSR Engineering College, 3-7 July 2006.
- Value Education, Academic Staff College, Osmania University, 2nd January 2003 to 1st February 2003.
- 3rd SERC School on Precision Engineering, IIT Kanpur, 10-19 June 2002.
- Two day work shop on Research Methodologies and Report Writing, Osmania University, 27-28 June, 2003.
- One day work shop on Advances in Plant Engineering & Management, Osmania University, 31st October 2006.
- Two day Work shop on Non-Destructive Testing (NDT), Osmania University, 23-24 September, 2006.
- Two day Work shop on Productivity Summit 2006, IMTA Bangalore, Chennai, 20-22 April, 2006.
- Two day workshop on Inviting into Future, Osmania University, 9-10 November. 2006
- Two day workshop on Networking Activities for TEQIP Institutions, Osmania University, 25-26 September 2006
- Application of Renewable Energy Sources (QIP Short term course), IIT Delhi, 11-17 December 2013.
- MSE NASTRAN Hands on Experience, Faculty Development Programme, Osmania University, 12-17 May 2014.
- Microcontrollers & their Applications, Faculty Development Programme, Osmania University, 30th June to 5th July 2014.
- Three day workshop on Fundamentals of Finite Element Method: Overview, Theory & Concepts with Demonstrations, IIT Hyderabad, 23-25 July 2015.
- Two day workshop on Production Technology and Metrology, JNTU Hyderabad, 4-5 December 2015.
- Two day workshop on Teaching, Learning and Assessment Methodologies, Osmania University, 13-14 December 2016.
- Faculty Development Programme in Entrepreneurship, Osmania University, 18-30, April 2016.

- GIAN course on Nonlinear Dynamics of Classical Magnetic Systems, Osmania University, 23rd November to 22nd December 2017.
- Modelling, Simulation & Experimental approaches of Unconventional Manufacturing Techniques (QIP Short term course), IIT Madras, 13-18, March 2017.
- Two day workshop on Leadership & Research challenges for Professional Women, Osmania University, 4-5 January 2019.
- Two day workshop on Preparing for NBA Accreditation & SAR filling, JNTU Hyderabad, 18-19 February 2019.
- Professional Development Training, IIM Indore, 27 May - 31 May 2019.
- Recent Advances in Materials Characterization Techniques (online FDP), Department of Metallurgical and Materials Engineering, NIT Andhra Pradesh, 19 – 23 October, 2020.
- Advanced Materials (Fabrication, Characterization & Applications) (online FDP), School of Mechanical Engineering, Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, 20-25 July, 2020.
- Advanced Optimization Techniques and hands-on with MATLAB/SCILAB (online FDP), Electronics and ICT Academies, Ministry of Electronics and Information Technology (MeitY), Government of India, 13 – 24 July 2020.
- Internet of Things (IOT) & It's application in Industry (online FDP), Ramrao Adik institute of Technology, June 8-12, 2020.
- ROAD - Response Effectiveness, Organising Self, Attitudinal Shift, Decision Making" AICTE Training And Learning (ATAL) Academy Online FDP at University College of Engineering, Osmania University from 07-09-2020 to 11-09-2020.
- 3D Printing & Design , AICTE Training And Learning (ATAL) Academy Online FDP at University College of Engineering, Osmania University from 02-11-2020 to 06-11-2020
- Professional Development Training, Indian Institute of Management Raipur , during February 08-10, 2021 under TEQIP-III

Expert Lectures Delivered at Various STTP/FDP/Seminars/Workshops:

- Finite Element Analysis and Applications, Geethanjali College of Engineering and Technology, 30th November -5th December 2015.
- Engineering Graphics with CAD, Methodist College of Engineering & Technology, 28th July to 3rd August 2016.
- Finite element applications in Mechanical and Civil engineering, CBIT, 23 - 28 January, 2017.
- Engineering Drawing - An effective teaching methodology, Malla Reddy Engineering College, 02 - 07 July 2018.

Reviewer

- Precision Engineering published by Elsevier
- International Journal of Precision Engineering and Manufacturing.
- Materials and Manufacturing Processes published by Taylor & Francis
- Reviewer and Editor for ICAMM 2016 conference proceedings

- Reviewer and Editor for NCAMENT 2018 conference proceedings.