


Name of the Teaching Staff	Dr. S. Mohanasundaram				
Designation	Assistant Professor				
Department/ School	Robotics Engineering/ SET				
Date of Joining the Institution	01 – 06 – 2011				
Qualification with Class / Grade	UG	PG	Ph.D.		
	I Class with Distinction	I Class	Highly Commendable		
Other Qualifications	Diploma in Industrial Safety				
Area of Specialization	CAD/CAM, Additive Manufacturing, Design & Manufacturing				
Research Interests	<ul style="list-style-type: none"> • Digital Manufacturing • Additive Manufacturing, • Surface Composites • FRP Composites 				
Total Experience in Years	Teaching		Industry		Research
	12 years & 6 Months		3 Years & 10 months		3 Years
Papers Published	National			International	18
Papers Presented in Conference	National	1		International	4
Seminars/ Workshops Participated	20				
FDP/ STTP/MDP/ Summer/Winter School attended	11				
Ph.D. Projects Guided	Ph.D.s		-	Project at Masters Level	2
Professional Memberships	<ul style="list-style-type: none"> • LIFE MEMBER IIPE • IAENG 				
Educational Details	<ul style="list-style-type: none"> • Karunya University – Coimbatore, Tamilnadu, <i>Ph.D. in Mechanical Engg, September 2020</i> • Karunya University – Coimbatore, Tamilnadu, <i>M.Tech in Engineering Design, May 2011</i> • Bharathiyar University – Coimbatore, Tamilnadu, <i>B.E. Mechanical Engg, May 2004</i> • PSG Polytechnic – Coimbatore, Tamilnadu, <i>Diploma in Mechanical Engg. May 1999</i> 				
Experience	16 Years & 4 Months				

<p>Contact Details</p>	<p>Dr. S. Mohanasundaram Assistant Professor, Division of Robotics, Karunya Institute of Technology and Sciences mohanasundaram@karunya.edu</p>
<p>Papers Published</p>	<ul style="list-style-type: none"> • “Effect of magnetorheological fluid on tool wear during hard turning with minimal fluid application”, P. Sam Paul, A. S. Varadarajan, S. Mohanasundaram, Archives of Civil and Mechanical Engineering, Volume 15 (1), January 2015, Pages 124-132 • “A Review on Developing Surface Composites using Friction Surfacing” S. Mohanasundaram, S. J. Vijay, M. Karthikeyan., Applied Mechanics and Materials, Trans Tech Publications Ltd, Volume 852, September 2016, Pages 402-410. • “Enhancement of a four-cylinder HCNG mixed fuel engine with control of NOx emission using lean burn concept” M. Suresh, S. Mohanasundaram, R.S. Rai, K. Balasubramanian, S. S. Thipse, International Journal of Mechanical Engineering and Technology, Volume 9, Issue 11, November 2018, Pages 2206 – 2212 • “Comparative Study of Cutting Fluid Application Methods to Improve Machining Conditions During Surface Grinding on AISI 1040 Steel” Kantharaj, M. Sekar, X. Ajay Vasanth, S. Mohanasundaram, Advances in Manufacturing Processes, Lecture Notes in Mechanical Engineering. Springer Nature, Singapore, September 2018, Pages 71-79 • “A Study on Friction Stir Welding of Al 6061-ZrB₂ Metal Matrix Composites, Advances in Manufacturing Processes, Christy, T. V., Emmanuel Sam Franklin, D., Nelson, R., Mohanasundaram, S., Lecture Notes in Mechanical Engineering. Springer Nature, Singapore, September 2018, Pages 267-277. • “Experimental investigation on the mechanical properties of LM6 Aluminium Alloy reinforced with Boron Carbide and Titanium hybrid composites” Prabhu Rubesh George, I. Kantharaj, S. Mohanasundaram, G. Babu Rao, Hiran Gabriel D. J, International Journal of Mechanical Engineering and Technology, ISSN: 0976-6359, Volume 10 (2), February 2019, Pages 1584-1593. • “Novel solid-state metal additive manufacturing technique: Experiments and investigations” P. Ramkumar, S. J. Vijay, S. Mohanasundaram, International Journal of Mechanical Engineering and Technology, ISSN: 0976-6359, Volume 10 (2), February 2019, Pages 809-816. • “Synthesis and Characterisation of B₄C reinforced Al 6061 Friction Stir Processed Surface Composites” S. Mohanasundaram, S. J. Vijay, Rajakumar S. Rai, D. Emmanuel Sam Franklin, International Journal of Engineering and Advanced Technology, ISSN: 2249-8958, Volume-9 Issue-1, October 2019, Pages 2883-2887. • “Uncertainty Error Analysis on Micro Hardness of Al 6061-B₄C Surface Composites Produced by Friction Surfacing” S. Mohanasundaram, S. J. Vijay, Ajay Vasanth. X, P. Ramkumar, International Journal of Engineering and Advanced Technology, ISSN: 2249-8958, Volume-9 Issue-2, December 2019, Pages 1895-1900. • “Experimental Investigations on Activated - TIG Welding of Inconel 625 and AISI 304 Alloys” S. J. Vijay, S. Mohanasundaram, P. Ramkumar, Kim H.G., Tugirumubano A., Go S.H., Advances in Materials and Manufacturing Engineering, Lecture Notes in Mechanical Engineering. Springer, Singapore, January 2020, Pages 311-317. • “Effect of ZnO Particles on Microstructure, Microhardness and Wear Behaviour of AA7068 Metal Matrix Composites Synthesized by Powder Metallurgy” K. John Joshua, S. J. Vijay, P. Ramkumar, S. Mohanasundaram, Materials Science Forum, Trans Tech Publications Ltd, Volume 979, March 2020, Pages 68-73. • “Multi Response Optimization of process parameters of friction stir welded AA6061 T6 and AA 7075 T651 Using Response Surface Methodology” R Raja,

	<p>Sabitha Jannet, S. Mohanasundaram, Journal of Scientific and Industrial Research, ISSN: 0975-1084, Volume-79, March 2020, Pages 232-234.</p> <ul style="list-style-type: none"> • “Optimization of hardness and wear of friction stir processed Al6061-B4C surface composites” S. Mohanasundaram, S. J. Vijay, Ajay Vasanth .X, Prabhu Rubesh, International Journal of Advanced Science and Technology, ISSN: 2005-4238, Volume- 29, No-8s, April-2020, Pages. 3450-3461 • “Optimization of coating thickness and coating width for friction surfaced Al6061-B4C over Al 6061” S. Mohanasundaram, S. J. Vijay, Ajay Vasanth .X, Rajakumar S. Rai, I. Kantharaj, Materials today proceeding, July 2020. • “Microhardness and Microstructural Behavior of AA7068/SiC Metal Matrix Composites Synthesized by Powder Metallurgy” K. John Joshua, P. Ramkumar, S. J. Vijay, S. Mohanasundaram, Lecture Notes in Mechanical Engineering. Springer, Singapore, August 2020, Pages 101-109 • “Effect of Compaction Loads in Machining of Short Carbon Fiber-Reinforced Aluminum Composite” S. Mohanasundaram, S. J. Vijay, Rajakumar S. Rai, I. Kantharaj, A. S. Melwyn, S. Theophilus, Lecture Notes in Mechanical Engineering. Springer, Singapore, August 2020, Pages 157-165 • “Experimental Investigation on Heat Pipe-Assisted Cooling During Milling Process of AISI 1040” Kantharaj, D. J. Hiran Gabriel, Julius Benedict Prakash, S. Mohanasundaram, Lecture Notes in Mechanical Engineering. Springer, Singapore, August 2020, Pages 601-609 • “Investigations on GTAW and FSW of Al6061-ZrB2-Fly ash hybrid metal matrix composites” D. Emmanuel Sam Franklin, S. J. Vijay, S. Mohanasundaram, R. Nelson, D. J. Hiran Gabriel, Materials today proceeding, June 2021 • “A study on plasma keyhole welding of stainless-steel grade 316” D. Emmanuel Sam Franklin, S. J. Vijay, S. Mohanasundaram, R. Nelson, D. J. Hiran Gabriel, Materials today proceeding, June 2021 • “Semiconductor Materials for Solar PV Technology and Challenges towards Electrical Engineering” M. Siva Ramkumar, R. Felshiya Rajakumari, Nithiyananthan Kannan, R. Premkumar, S. Mohanasundaram, S. Purushotham, D. Ramya, and Kavitha Rajan, Advances in Materials Science and Engineering Volume 2022, July 2022 • “Experimental Wear Analysis of Al 7090 Alloy Reinforced with Zirconium Oxide Nanoparticles using Hybrid Machine Learning Algorithms” T. Prakash, D. Murali, G. Mahendran, A. Kadirvel, S. Mohanasundaram, S. Prabakaran, Mukuloth Srinivasnaik, Yashapl Singh, European Chemical Bulletin, June 2023, Volume 12(Special Issue 4), 15763 – 15776
<p>Conferences</p>	<ul style="list-style-type: none"> • Ajith George Pulickal, Mohanasundaram, Vijay S.J., “Metallurgical characterization of Aluminium 6061-Boron Carbide composite consumable rod for friction surfacing”, Proceedings of the International Conference on Advances in Materials and Materials Processing (AMMP '15), Karunya University, Coimbatore, 22-23 January 2015, Page No. 369-376 • Karthikeyan M, Ajith George Pulickal, Mohanasundaram, Vijay S.J., “A study on Friction Stir Surfacing of Al-B4C MMCs over Al Substrate” International Conference on Advances in Cutting, Welding & Surfacing (CWS-2015), CIT, Coimbatore, 5-7 August 2015, Page No. 246-250 • S. Mohanasundaram, S. J. Vijay, M. Karthikeyan., “A review on Developing Surface Composites using Friction Surfacing” International Conference on Mechanical Engineering Design, SSN College of Engineering, Chennai, 25-26 April 2016 • S. Mohanasundaram, E. Kirubakaran, S.J. Vijay, Rajkumar S. Rai., “Al6061-B4C Surface coating over Al6061” National Conference on Mechanical Engineering Design, Karunya University, Coimbatore, 2017

	<ul style="list-style-type: none"> • S. Mohanasundaram, S. J. Vijay, Rajakumar S. Rai, I. Kantharaj, Melwyn A.S, Theophilus. S, “Effect of compaction loads in machining of short carbon fiber reinforced aluminium composite” International Conference on Mechanical Engineering Design, SSN College of Engineering, Chennai, 25-26 April 2019
Book Chapters	<ul style="list-style-type: none"> • “Heat pipe-embedded tooling for sustainable manufacturing” Kantharaj, I., Vijay, S.J., Vasanth, X.A., Mohanasundaram, S., Rai, R.S., Sustainable Manufacturing and Design, 2021, pp. 63–81 • “Effect of ZnO particles on microstructure, microhardness and wear behaviour of AA7068 metal matrix composites synthesized by powder metallurgy”, John Joshua, K., Vijay, S.J., Ramkumar,P., Mohanasundaram, S., Materials Science Forum, 2020, 979 MSF, pp. 68–73