

Name of the Faculty		Dr. U. Elaiyaran					
Designation		Assistant Professor					
Contact Details	Intercom	3026					
	Email	elaiyaran.u@eec.srmmp.edu.in					
Qualification	UG	B.E	Mechanical Engineering				
	PG	M.E	Manufacturing Engineering				
	PG	MBA	Human Resource Management				
	Ph.D.		Manufacturing Engineering				
Specialization/ Major areas of Research		Non-traditional machining, surface Engineering, powder metallurgy and composite materials					
Experience		Teaching: 4.5 Years	Industry: Nil	Research: 3 Years			
Professional Memberships		IAENG, IIOR, IRED					
Papers Published in Journals		International : 30	National : 02				
Papers Presented in Conferences		International : 24	National :08				
*Citations : 100		h-index :6	i-10 index :2				
Awards / Achievements / Funded Projects / Consultancy							
<ul style="list-style-type: none"> ✚ Awarded National Fellowship by University Grant Commission, New Delhi in the year 2017 ✚ Awarded Best Paper Award in international conference held at Panimalar Institute of Technology, Chennai in the year 2017 ✚ Organized one national conference, International conference and Faculty development programme. ✚ Reviewer for various Science citation indexed (SCI) and clarivative analytic journals. ✚ Chairing various National and International conferences. ✚ Invited talk on Research aptitude and Internship in Winter Training Programme'2019. ✚ Publication of book chapter titled "Emerging Trends in Engineering and Technology". ✚ Research Supervisor recognition by Anna University with ref no. 3820006 ✚ Research Guidance: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Ph. D : 0</td> <td style="width: 33%;">P.G Guidance:02</td> <td style="width: 33%;">U.G Guidance :10</td> </tr> </table> 					Ph. D : 0	P.G Guidance:02	U.G Guidance :10
Ph. D : 0	P.G Guidance:02	U.G Guidance :10					
Country visited							
<ol style="list-style-type: none"> 1. University of Malaya, Malaysia for international conference held on 08.09.2019. 2. Mongkuts University of Technology, North Bangkok, Thailand for Research collaboration on 28.12.2022 to 31.12.2022 							

Recent publications in SCI journal

1. **Elaiyaran, U.**, Satheeshkumar, V., Senthilkumar, C. and Nandakumar, C., 2022. Mathematical and artificial neural network model in composite electrode assisted electrical discharge coating. *Surface Topography: Metrology and Properties*, 10(2), p.025004. <https://doi.org/10.1088/2051-672X/ac63d7>. **IF: 2.185**
2. Srikanth, S., Senthilkumar, C. and **Elaiyaran, U.**, 2023. Modeling and optimization of electro discharge coating parameters for coating of aluminum alloy using WC/Ni electrode. *CIRP Journal of Manufacturing Science and Technology*, 41, pp.465-476. <https://doi.org/10.1016/j.cirpj.2023.01.010>. **IF: 3.56**
3. Saravanan, G., Bhaskar, G.B., **Elaiyaran, U.** and Alagu, R.M., 2023. A study on mechanical and microstructure behaviour of carbon and glass fibre reinforced Al 2024-T3 laminated composite. *Metallurgical Research & Technology*, 120(2), p.203. <https://doi.org/10.1051/metal/2023001>. **IF: 1.09**
4. Rajaravi, C., **Elaiyaran, U.**, Gobalakrishnan, B. and Srinivasan, R.G., 2022. Surface roughness and microstructure analysis on drilling of titanium diboride in-situ aluminium metal matrix composite. *Surface Topography: Metrology and Properties*, 10(2), p.025034. <https://doi.org/10.1088/2051-672X/ac7a54>. **IF: 2.185**
5. Ananthi, N., **Elaiyaran, U.**, Satheeshkumar, V., Senthilkumar, C., and Sathiyamurthy, S., 2022. Effect of WC-Cu composite electrodes on materials deposition rate, micro hardness and microstructure of electrical discharge coated magnesium alloy. *Surface review and letters*. <https://doi.org/10.1142/S0218625X22500500>. (In press) **IF: 1.240**
6. **Elaiyaran, U.**, Satheeshkumar, V. and Senthilkumar, C., 2021. Effect of parameters on microstructure of electrical discharge coated ZE41A magnesium alloy with tungsten carbide-copper composite electrode. *Surface Topography: Metrology and Properties*, 9(2), p. 025006. <https://doi.org/10.1088/2051-672X/abf326>. **IF: 2.185**
7. **Elaiyaran, U.**, Satheeshkumar, V. and Senthilkumar, C., 2021. An investigation on electrical discharge metal matrix coating of ZE41A magnesium alloy. *Metallurgical Research & Technology*, 118(3), p.314. <https://doi.org/10.1051/metal/2021034>. **IF: 1.09**
8. **Elaiyaran, U.**, Satheeshkumar, V. and Senthilkumar, C., 2021. Surface modification of a magnesium alloy by electrical discharge coating with a powder metallurgy electrode. *Materials Testing*, 63(4), pp.360-367. <https://doi.org/10.1515/mt-2020-0054>. **IF: 2.528.**
9. Ananthi, N., **Elaiyaran, U.**, Satheeshkumar, V., Senthilkumar, C., Sathiyamurthy, S. and Nallathambi, K., 2021. Parametric effect on material removal rate and surface roughness of electrical discharge machined magnesium alloy. *Metallurgical Research & Technology*, 118(6), p.615. <https://doi.org/10.1051/metal/2021089>. **IF: 1.09**
10. **Elaiyaran, U.**, Satheeshkumar, V. and Senthilkumar, C., 2021. A Study on Tribological Behaviour of Electro Discharge Deposited ZE41A Magnesium Alloy Using Wear Map. *Archives of Metallurgy and Materials*, 66. <https://doi.org/10.24425/amm.2021.135870>. **IF: 0.767**
11. **Elaiyaran, U.**, Satheeshkumar, V. and Senthilkumar, C., 2019. Microstructure study on electro discharge deposited magnesium alloy with semi sintered and sintered electrode. *Materials Research Express*, 6(12), p.126533. <http://dx.doi.org/10.1088/2053-1591/ab560e>. **IF: 2.025**

12. **Elaiyaran, U.,** Satheeshkumar, V. and Senthilkumar, C., 2018. Experimental analysis of electrical discharge coating characteristics of magnesium alloy using response surface methodology. *Materials Research Express*, 5(8), p.086501. DOI: <http://dx.doi.org/10.1088/2053-1591/aad11f>. **IF: 2.025.**

Overseas conferences

1. A paper titled "An experimental study on the formation of Al₂O₃ and TiO₂ layer on AA6061-T3 alloy using Sol-Gel dip coating" has been presented in the 2nd International Architectural Sciences and Applications Symposium held on September 09-11, 2022 /**Baku Engineering University Baku, Azerbaijan.**
2. A paper titled "Investigation on wear behaviour of AZ31B biodegradable magnesium alloy deposited by electro discharge coating process" has been presented in the 6th Ankara International Congress on Scientific Research held on April 1 -3, 2022 / **Ankara, Turkey.**
3. A paper titled "Optimization in electrical discharge coating parameters using RSM based grey relation analysis" has been presented in the International Afghanistan Interdisciplinary Research Conference held at Taj Institute of Higher Education on August 19, 2021/Mazar-i-**Sharif, Afghanistan.** ISBN: 978-625-7464-08-6.
4. Elaiyaran, U., Satheeshkumar, V. and Senthilkumar, C., 2019. An experimental study on electrical discharge coating of ZE41A magnesium alloy using WC/Cu powder metallurgy electrode, 25th International Multi-Disciplinary Conference on science and technology held at **University of Malaya, Kuala Lumpur, Malaysia** on 08.09.2019. pp. 174-182. ISBN: 978-81-944235-3-9.

Talk delivered

1. One day webinar on Overview on Surface Modification of Aircraft alloys" delivered at **Mohammed Sathak Engineering College, Ramanathapuram** on 28.09.2022.
2. FDP on Recent trends in Composite materials and its application "Surface characteristics of light alloys processed using Non-Traditional machining method" **CK College of Engineering and Technology, Cuddalore** on 24.08.2022
3. Workshop on Advanced Materials and Micromachining, the topic titled "Electrical Discharge Alloying of Titanium alloy", **St. Josephs College of Engineering, Sriperumbudur, Chennai** on 11.10.2021.
4. Webinar on "Surface coating of light weight alloys using electrical discharge processing" in three days faculty development programme on product design and Manufacturing conducted by **Care College of Engineering, Trichy** on 06.10.2021.
5. Webinar on "surface modification on magnesium alloy using electrical discharge coating" in the webinar conducted by **King College of Engineering, Pudukkottai** on 24.05.2021.