

FACULTY PROFILE

Name of Teaching Staff / RMK ID	Dr. S. D. Sekar / T0639		
Designation	ASSOCIATE PROFESSOR		
Department	MECHANICAL ENGINEERING		
Date of Joining the Institution	27.05.2011 (Regular)		
Qualifications	B.E (Mechanical Engineering)	M.E (I.C. Engineering)	Ph.D
Total Experience	Overall : 23Yrs 4 Months		in RMK : 14Yrs 6 Months
Papers Published in Journal	Overall : 35		After Joining RMK : 34
List of Papers Published	1. V. Velukumar, S.D. Sekar, T. Mothilal (2026), CFD and experimental study of cyclone heat exchanger performance: NTU-effectiveness analysis, Applied Thermal Engineering, Volume 289, Part 2, 2026, 129590, https://doi.org/10.1016/j.applthermaleng.2025.129590. (SCI), [IF = 6.9, Anna University Listed Journal]. 2. S. Rajesh, S. Madhankumar, P.M. Arunkumar, T. Vignesh, S.D. Sekar (2025), Drying kinetics, energy, exergy, and economic aspects of indirect solar dryer with phase change material, Solar Energy, Volume 305, 2026, 114287, https://doi.org/10.1016/j.solener.2025.114287 (SCI/WoS), [IF = 6, Anna University Listed Journal]. 3. Velukumar, V. , Sekar, S. D. and Mothilal, T. (2025). Numerical and Experimental Analysis of Heat Transfer Rate and Effectiveness of Gas-solid Cyclone Heat Exchanger. Journal of Applied Fluid Mechanics, 19(1), 3189-3201. doi: 10.47176/jafm.19.1.3688, (SCI), [IF = 1.22, Anna University Listed Journal]. 4. Subramanian, Karthikeyan & Sathiyagnanam, A.P. & Dillikannan, Damodharan & S D, Sekar. (2025). Optimizing Thermal Efficiency in Diesel Engines: Predicting Performance with Ternary Blends, Variable Injection Pressures and EGR Using LSTM Machine Learning. Journal of Thermal Science and Technology. 45. 272-284, (SCI/WoS), [IF = 0.9, Anna University Listed		

	Journal]. 5. G. A. Nisha, S. P, S. A, K. Manickam, S. K. Jagannathan and Sekar. S D (2025), "Optimizing Logistics in E-Commerce Using Deep Random Forest for Enhanced User Satisfaction," 2025 International Conference on Automation and Computation (AUTOCOM), Dehradun, India, 2025, pp. 1573-1580, doi: 10.1109/AUTOCOM64127.2025.10956957. 6. S. Rajesh, S. Sekar, S.D. Sekar, S. Madhankumar (2024) "Drying kinetics, energy, statistical, economic, and proximate analysis of a greenhouse dryer using different glazing materials for Coccinia grandis drying", Solar Energy, Solar Energy 284 (2024) 11304, https://doi.org/10.1016/j.solener.2024.113047. (SCI/WoS), [IF = 6, Anna University Listed Journal]. 7. J. Srinivas , S. Bharani Kumar , S.D. Sekar , S. Sekar , J. Jeevamalar , R. Saravanan , G. Anbuezhayan (2024) "Effect of varying temperature on sintering SiC/B4C reinforced Al6061 alloy composites using vacuum sintering method", Materials Today: Proceedings. DOI: 10.1016/j.matpr.2024.06.015 8. P J Lokesh Kumar, P Sevvil, S Shankaranarayanan, C Jayabalan, S D Sekar and K Sengottaiyan (2024), " Impact of Tool Rotating Speeds on The Mechanical Characteristics of Dissimilar Friction Stir-Welded AZ80AMg– AA6061-Al Joints", Journal of Polymer & Composites, Volume 12, DOI (Journal): 10.37591/JoPC, (SCI/WoS). 9. P J Lokesh Kumar, S Shankaranarayanan, C Jayabalan, S D Sekar, K Sengottaiyan and R Suresh Kumar (2024), "A Review of Recent Advancements in The Field of Friction Stir Welding of Dissimilar Joints Made of Aluminium and Magnesium", Journal of Polymer & Composites, Volume 12, DOI (Journal): 10.37591/JoPC, (SCI/WoS). 10. S. Bharani kumar, J. Srinivas, S.D.Sekar, S Sekar, J. Jeevamalar, R. Saravanan, G. Anbuezhayan (2024) "Examining the mechanical behaviour of B4C/SiC reinforced Al-Si alloy hybrid composites using solid state processing method", Materials Today Proceedings, https://doi.org/10.1016/j.matpr.2024.04.014 11. S. D. Sekar, S. Sekar P. Duraimurugan N. Mohanrajhu; S. Bharani Kumar; S. Rajesh (2023) "Mathematical modeling of thin layer drying characteristics of Okra (Abelmoschus Esculentus)", AIP Conf. Proc. 2914, 020018, https://doi.org/10.1063/5.0176298
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	12. S. D. Sekar, S. Sekar, S. Rajesh, P. J. Lokesh Kumar, S. Bharani Kumar and M. Vinosh (2023) "Performance Analysis of Thin Layer Drying of Okra(<i>Abelmoschus Esculentus</i>)" AIP Conf. Proc. 2914, 020003, https://doi.org/10.1063/5.0176297. 13. R.Ganesamoorthy , N. Mohanrajhu , S.D.Sekar , K. Vimalanathan , G. Suresh, C. M. Meenakshi and M. Puviyarasan (2023) "Influence of water absorption on physical characteristics of cotton fiber reinforced polyester composites", AIP Conference Proceedings 2747, 020010 (2023) https://doi.org/10.1063/5.0132679. 14. L. Natrayan, S. Kaliappan , S. Chinnasamy Subramanian, Pravin P. Patil, S. D. Sekar, Y. Sessa Rao and Melkamu Beyene Bayu (2023) "Optimization of Activated Carbon Fiber Preparation from Hemp Fiber through Dipotassium Hydrogen Phosphate for Application of Thermal Storage System" Adsorption Science & Technology, Volume 2023, https://doi.org/10.1155/2023/7228408 [IF = 4.37, Anna University Listed Journal]. 15. M.Babu, M.Naresh Babu, S.D.Sekar (2023) "Effect of Silane-treated Nanosilica on the Grape Seed Oil-blended Epoxy Nanocomposite Coating and its Characterization", Biomass Conversion and Biorefinery, https://doi.org/10.1007/s13399-023-03857-y [IF = 4.1, Anna University Listed Journal]. 16. S. Bharani Kumar, S. D. Sekar, G.Sivakkumar, S. Mohamed Abbas, J. Jeevamalar, C. M. Meenakshi & G. Suresh (2022) "Jute Fibre IPN Graphite filled: An Experimental Investigation and Prediction of wear Behaviour" Recent Advances in Materials and Modern Manufacturing,PP-337-346. 17. J. Jeevamalar, S. Mohamed Abbas, S. Bharani Kumar, G. Sivakkumar, S. D. Sekar, C. M. Meenakshi & G. Suresh (2022) "Influence of Nanoclay Dispersion on Mechanical and Vibration Properties of E-Glass Fiber-Reinforced IPN Composites", Recent Advances in Materials and Modern Manufacturing, 255-263 18. S.D. Sekar, S. Sekar, T.N. Valarmathi. M. Mudhu Krishnan, A Godwin Antony (2022) "Mathematical Modelling of thin layer drying characteristics and proximate analysis of turkey berry (<i>Solanum torvum</i>)", ThermalScience,https://doi.org/10.2298/TSCI200312075S [IF = 1.57, Anna University Listed Journal] 19. Kumar, S. Bharani, S. D. Sekar, T. Mothilal, G. Sivakkumar, R. Lavanya, C. M. Meenakshi, and S. Manivannan (2021) "Experimental investigation on physical properties of banana/E-glass fiber reinforced hybrid interpenetrating polymer network composites." Materials Today: Proceedings 45 (2021): 5029-5033.
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	20. Kumar, S. Bharani, S. D. Sekar, G. Sivakumar, J. Srinivas, R. Lavanya, and G. Suresh (2021) "Modern concepts and application of soft robotics in 4D printing." In Journal of Physics: Conference Series, vol. 2054, no. 1, p. 012056. IOP Publishing, 2021. 21. Sekar Sivakumar Dana, Nainar Nithin Srinivas Sai , Kari Venkata Krishna Kumar, Deepak G (2021) "Mechanical Behavior of Hybrid Composites Moulding" International Journal of Mechanical Engineering, vol 06, 1551-1556. 22. Sivakumar G, Karthikeyan S, Jayachandran G, Mageshwaran G, Sekar S D (2021) "Vehicle Overload Management System" Pensee Journal, vol 51, 89-93. 23. Sekar Sivakumar Dana, Jothikrishnan Ayadurai Solaialagan, Kirubanandhan, Krishna Kumar Karunanidhi (2021) "Automated Waste Disposal system using Sludge Vacuum Pump" International Journal of Mechanical Engineering, vol 06, 1531-1534. 24. Subramani, Sekar, Dana Sekar Sivakumar, Natesan Valarmathi Thirumalai, and Mary Lionus Leo George (2020) "Energy and exergy analysis of greenhouse drying of ivy gourd and turkey berry." Thermal Science 24, no. 1 Part B: 645-656. [IF = 1.57, Anna University Listed Journal]. 25. S.D.Sekar , S.Sekar , K.Partheeban , T.N.Valarmathi (2020) "Recent Developments in Renewable Solar Energy based drying Systems: A Review" Test Engineering and Management, vol 82, pp: 14907 – 14915. 26. S.D.Sekar , S.Sekar , T.N.Valarmathi , S.Bharanikumar (2020) "Reduction Of Nox In DI Diesel Engine Using Metal Salt Solution" Pensee Journal, vol 50, 1663-1667. 27. S.D. Sekar, B. Sarath kumar, N. Sherin kumar, S. Vijaya sarathy (2019) "Design And Analysis Of Leaf Spring Suspension System Using High Carbon Steel And Aluminum Six Series Alloys" International Research Journal of Engineering and Technology, ISSN: 2395-0056 Volume: 06 Issue: 04. 28. G Sivakkumar, S D Sekar, CG Krishna, NL Reddy (2019) "Fabrication And Analysis Of Composite Based Industrial Safety Helmet" International Research Journal of Engineering and Technology, ISSN: 2395-0056 Volume: 06 Issue: 05 29. Valarmathi, T. N., Sekar, S., Purusothaman, M., Saravanan, J., Balan, K. N., Sekar, S. D., & Mothilal (2018) " Design and thermal analysis of coated and uncoated exhaust manifold". International Journal of Ambient Energy, vol 41, no 2, 157-160. 30. Kumar R, S., M, T., R, G., Srinivasan, , V, R., Manuel D, J. & S.D. Sekar, (2018). Investigation on the Effect of Tio2 Nanoparticle Additives on the Properties of 10w-40 Engine Oil. International Journal of Mechanical and
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	Production Engineering Research and Development, 8(4):1187–1196. doi: 10.24247/IJMPERDAUG2018122 31. S.D. Sekar, S. Sekar, T.N. Valarmath (2018) “Performance Improvement of a Passive Greenhouse dryer for drying Turkey berry’ Taga Journal, Vol. 14, pp. 1932- 1939. [IF=4.46, Anna University Listed journal] 32. T.N. Valarmathi¹ , S.Sekar , M. Purushothaman , S.D. Sekar , MaddelaRamaSharath Reddy , Kancham Reddy Naveen Kumar Reddy (2017) “Recent developments in drying of food products” Frontiers in Automobile and Mechanical Engineering, 197, 1-10. 33. S.D.Sekar , Dr S.Sekar , Dr T.N.Valarmathi , Dr T.Mothilal (2017) “Experimental Analysis on DieselEnginefueled with Nerium biodiesel oil and Diesel” American Journal of Engineering Research (AJER), Volume-6, Issue-12, pp-29-34. 34. Valarmathi, T. N., S. Sekar, S. D. Sekar, A. Aditya, R. Cawin, and J. Kishore Kumar (2015) "Recent developments in solar energy-based absorption cooling systems." Progress in Industrial Ecology, an International Journal 9, no. 2, 135-143. 35. Partheeban K, Sekar S D, Sekar Saravanan (2015) “Optimization and Modelling Techniques of Various Dryer- A Review” Vol. 10 No.50, 861-873.	
Papers Presented in Conferences (Scopus / WoS indexed only)	Overall : 03	After Joining RMK : 03
Ph.Ds / Projects Guided	Ph.Ds Guided : Currently guiding 1 Scholar	Student Projects Guided : 40
	Ph.D Guideship : Recognized as Supervisor by Centre for Research, Anna University. Ref. No- 4120103	
Books Published :	Count : 03	
	1. Engineering Graphics – Vinayaga Publications. 2. Basic Civil and Mechanical Engineering – Vinayaga Publications 3. “Fundamentals of Heat Transfer”, Dr. M. Karthigairajan, Dr. T. Mothilal, Mr. Rajarshi Chakraborty, Dr. S. D. Sekar, Scientific International Publishing House, 978-93-6132-219-8, 2024.	
Patents	Published Count : 04	Granted Count :-
	List : 1. Preliminary Cooling of Moulding sand by Pre cooling setup 2. Low-Cost Fatigue Test Rig 3. Method For Creating Cover Blocks For Reinforced Steel Insertion Using Smart Materials (Scrap Plastics And Fly Ashes) 4. Soil Moisture Monitoring System Using Arduino Uno	
Professional Memberships	Count : 04	

	List : 1.MISTE 2. IEEE 3.SDWIC 4.IAENG
Consultancy Projects Completed	Count : 02 1. TREND Instrumentation and Automation Pvt Ltd- "Cable Route Marker fabrication and supply with one coat of Red oxide paint". 2. D.S.R Engineering works and D.S.R Trailors - "Design and Fabrication of a Greenhouse Dryer"
Awards Received	Count :- 04 List : ➤ "Best Faculty Advisor Award 2025" by The Institution of Engineers (India), Hosur Local Centre. ➤ "Best Faculty Advisor Award 2023" by The Institution of Engineers (India), Hosur Local Centre. ➤ "Academic Excellence Award 2023" by The Institution of Engineers (India), Hosur Local Centre. ➤ Best Paper Award in International Conference on Innovations in Robotics, Intelligent Automation and Control (ICIRIAC 2022) for the paper titled "Performance Analysis of Thin Layer Drying of Okra (Abelmoschus Esculentus)".
Research grants Received	-
Orchid Link / ID	ID : 0000-0002-2611-6779
Google Scholar Link / ID	https://scholar.google.com/citations?hl=en&user=3QYk4hEAAAAJ
Vidwan Link / ID	ID : 305239
Research Gate Link / ID	https://www.researchgate.net/profile/Sd-Sekar
Scopus Link / ID	https://www.scopus.com/authid/detail.uri?authorId=55341515300