

Faculty Profile

Dr. R. Meenal

Assistant Professor (AGP 8000)

Department of Electrical and Electronics Engineering

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Google Scholar: scholar.google.co.in/citations?user=BeuAEyAAAAAJ

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Researcher ID (Web of Science) :D-7958-2018



1. Educational Details:

B.E, Electrical and Electronics Engineering, Annamalai University, 1994

M.E, Power Electronics and Drives, Periyar Maniammai University, 2009

Ph.D., Renewable Energy, Karunya Institute of Technology and Sciences, 2018

2. Professional Experience:

Teaching: 21 Years

Research: 7 Years

3. Publications: 34

Scopus: 24

Web of Science: 8

4. Events Attended:

Conference: 18

Faculty Development Program: 25

Workshops: 20

Online Courses: 4

5. Research Interest:

AI/ML applications for Renewable energy systems

Data Science

Solar Energy forecasting

6. Collaboration:

Appsmart Pty Ltd., Australia

India Meteorological Department, Pune

National Institute of Wind Energy, Govt. of India, Chennai

7. Honors & Awards:

Received two best paper awards in International Conferences

Received best poster award in research colloquium

8. Journal Reviewer

- Energy Conversion and Management
- Renewable and Sustainable Energy Reviews
- SN Applied Sciences (SNAS) –Springer Nature
- Information Processing in Agriculture
- IEEE Access

9. Funded Project:

Received Rs. 90,000 funding from ISTE towards AICTE-ISTE sponsored STTP.

10. Professional Membership: Indian Society for Technical Education – ISTE

11. Academic Performance Index

- Publications in International Journals - 16
- Publications in International Conferences - 13
- Publications in National Conferences / Seminars - 6
- Participation in FDP / Workshops / STTP / Seminars / Guest Lectures - 45
- FDP / Workshops / Seminars / Guest Lectures Organized - 4
- Awards and achievements - 4
- Ph.D. Guiding - 3
- Consultancy - 1
- UG / PG Project Guided - 30
- Short-Term Grants received - 2
- Books / Chapters published - 3

12. Recent Web of Science Publications

- Meenal, R., *et al.* Weather Forecasting for Renewable Energy System: A Review. *Archives of Computational Methods in Engineering, Volume 29*, 2875–2891(2022).<https://doi.org/10.1007/s11831-021-09695-3> (**Impact Factor - 7.302**)
- Michael, P.A., Dharmaraj, P., Meenal, R., Penetration Estimation in SEM, EDAX Dental Imaging Systems for Desensitization Application, *Electronics (Switzerland)*, 2022, 11(19), 3234
- Meenal, R., Immanuel Selvakumar, A. (2018) “Assessment of SVM, Empirical and ANN based solar radiation prediction models with most influencing input parameters” Elsevier -Renewable Energy Vol.121, 324-343, (**Impact Factor: 8.001**)
- Meeenal, R., Immanuel Selvakumar, A. (2018) “Solar mapping of India using Support Vector Machine” Journal of Physics: Conference Series 1142(1)012010.

Scopus Publications

- R.Meenal *et al.*, Weather prediction using random forest machine learning model, Indonesian Journal of Electrical Engineering and Computer Science, Vol. 22, No. 2, May 2021, pp. 1208~1215. (CiteScore : **0.97**, SNIP : **0.724**, SJR : **0.238**)
- R.Meenal *et al.*, Sensitivity analysis based artificial neural network approach for global solar radiation prediction in India, Indonesian Journal of Electrical Engineering and Computer Science, 2020, 20(1), pp. 31-38.(CiteScore : **0.97**, SNIP : **0.724**, SJR : **0.238**)
- R.Meenal *et al.*, Power Monitoring and Theft Detection System using IoT, November 2019, Journal of Physics Conference Series 1362:012027, DOI: [10.1088/1742-6596/1362/1/012027](https://doi.org/10.1088/1742-6596/1362/1/012027) (CiteScore: **0.7**, SNIP : **0.574**, SJR : **0.227**)
- Meenal. R., Immanuel Selvakumar. A. (2019) "Review on mathematical models for the prediction of solar radiation" - Indonesian Journal of Electrical Engineering and Computer Science Vol. 15, No. 1, July 2019, pp. 54~59. (SNIP - 0.724, SJR -0.238)
- Meeenal. R., Immanuel Selvakumar. A. (2017) "Global Solar Radiation prediction using Genetic Algorithm" Journal of Electrical Engineering, Vol.17/Edition: 4, 632-639.
- Meenal.R., Immanuel Selvakumar. A., Boazina. PG.(2016) "Temperature based Radiation Models for the Estimation of Global Solar Radiation at Horizontal Surface in India", Indian Journal of Science and Technology 9 (46),2016, Impact Factor: 2.108.

Book Chapters

- Akash, R., Rangaraj, A.G., Meenal, R., Lydia, M., Day-ahead wind power forecasting using machine learning algorithms, Advances in Intelligent Systems and Computing, 2021, 1227, pp. 329-341.
- Meenal, R., Immanuel Selvakumar, A. (2019). Assessment of Solar Energy Potential of Smart Cities of Tamil Nadu Using Machine Learning with Big Data. Advances in Big Data and Cloud Computing. Advances in Intelligent Systems and Computing, vol 750. Springer, Singapore. https://doi.org/10.1007/978-981-13-1882-5_3.

13. Recent Courses Taught

- Data Analytics and Visualization
- Modern Forecasting Techniques
- Solar Energy Forecasting
- Internet of Things
- Microprocessor and Microcontrollers
- Programming for Problem solving
- Renewable Energy
- Electrical Circuit Theory
- Measurements and Instrumentation
- Environmental Studies
- Electronic Circuits
- Digital Electronics