

Dr Phani Kumar Polasi

Professor & Head - ECE Department
 SRM Institute of Science & Technology
 Ramapuram Campus
 (Deemed to be University Under section 3 of UGC Act 1956)
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Area of interest Signal Processing, Wireless Communications
 Total Experience 20 years

Scopus ID 57216916913

Academic Qualifications

Qualifying Examination	University	Specialization	Year of Passing	Total Marks /Percentage
Ph D	JNTUH Hyderabad	Speech Processing	2017	Degree Awarded
	Thesis Title: Classification & Identification of Audible Voice Data of Indian Languages			
M Tech (ECE)	Acharya Nagarjuna University	Communication & Radar Systems	2004	72.80 I Class with distinction
B E (ECE)	University of Madras	Electronics & Communication Engineering	2002	66.40 I Class
Intermediate	Board of Intermediate Education, AP	M P C	1998	77.80 I Class
X	ICSE, New Delhi	-	1996	66.00 I Class

Lab Establishment – Funding from AICTE under MODROB scheme

Received an amount of Rs 17.41 Lakhs from AICTE under MODROB for the establishment of Advanced Communication Laboratory in ECE Department during 2022-2023

List of Publications**SCI/WOS**

1. Devi, K Durga and Maheswari, P Uma and Polasi, Phani Kumar and Preetha, R and Vidhyalakshmi, M, "Pattern Matching Model for Recognition of Stone Inscription Characters", The Computer Journal, 2022 Volume 66, Issue 3, March 2023, Pages 554–564, <https://doi.org/10.1093/comjnl/bxab177>
2. Kapileswar, Nellore, and P. Phani Kumar. "Energy efficient routing in IOT based UWSN using bald eagle search algorithm." Transactions on Emerging Telecommunications Technologies 33.1 (2022): e4399. SCI (Impact Factor : 3.41)
3. Nellore Kapileswar, and Phani Kumar Polasi "An improved underwater wireless sensor network communication using Internet of Things and signal to noise ratio analysis." Transactions on Emerging Telecommunications Technologies 33.9 (2022): e4560. (SCI (Impact Factor : 3.41)
4. Simon, Judy & Kapileswar, N. & Polasi, Phani & Mathiyalakendran, Aarthi. (2022). Hybrid intrusion detection system for wireless IoT networks using deep learning algorithm. Computers and Electrical Engineering. 102. 108190. 10.1016/j.compeleceng.2022.108190.

5. Ravi Raja A, Phanu Kumar Polasi, A new automatic sleep stage classification model using swarm intelligence-based hybrid transfer learning architecture, *Signal, Image and Video Processing*, Springer (Accepted for Publication) 2023
6. Simon, Judy & Kapileswar, N. & Polasi, Phani & Mathiyalakendran, Aarthi. (2022). ARO-RTP: Performance analysis of an Energy Efficient Opportunistic routing for Underwater IoT Networks, *Peer to Peer Networking and Applications*, Springer Nature (Accepted for Publication) 2023
7. Nellore Kapileswar, and Phani Kumar Polasi "Deep Learning Aided Robust Channel Estimation and Signal Detection for underwater IoT Networks" (SCI Paper submitted for Review – Completed Review 1)
8. Polasi, Phani Kumar, and Kalva Sri Rama Krishna. "Combining the evidences of temporal and spectral enhancement techniques for improving the performance of Indian language identification system in the presence of background noise." *International Journal of Speech Technology* Springer(2015): 1-11.

Scopus Indexed Journals

1. Polasi, Phani Kumar, and Kalva Sri Rama Krishna, "Combining the Evidences of Temporal and Spectral Enhancement Techniques for Improving the Performance of Indian Language Identification System in the presence of time varying noises" *International Journal of Applied Engineering Research*, ISSN 0973-4562 Vol. 10 No.5 (2015) pp. 3979-3985. (**Scopus Indexed**)
2. **P. Phani Kumar**, K.S.N Vardhan and Dr. K. Sri Rama Krishna "Performance Evaluation of MLP for Speech Recognition in Noisy Environment using MFCC and Wavelets", *International Journal of Computer Science and Communication*, Vol.1, No.2, pp. 321-325, July- Dec. 2010.
3. N. Suresh Kumar, **P. Phani Kumar**, M. Kantikiran and Dr K.Sri Rama Krishna "Improved Impulse Noise Detector for Adaptive Switching Median Filter", *International Journal of Electronics and Communication Technology*, ISSN:2230-9543, Vol. 02, Issue No. 2, June 2011.
4. Ravi Raja A, V H Prasad Reddy, Dr. Sk Fayaz Ahamed, **Dr. Phani Kumar Polasi** and Venkata Ratna Prabha K. (2020). Development and Validation of Low Cost, Wi-Fi Integrated Transponder as Data Logger for IoT Based Personal Healthcare in Smart Zones. *International Journal of Advanced Science and Technology*, 29(06), 5419 - 5430. **Elsevier (Scopus Indexed)** Vol. 29 No. 06 (2020)
5. **Dr. Phani Kumar Polasi**, R. Veera Amudhan, Dr.D.Manoj Kumar, Suwetha .I. G. (2020). Compact Health Care System. *International Journal of Advanced Science and Technology*, 29(10s), 6950 - 6954. **Elsevier (Scopus Indexed)**
6. Vinothkumar G, Dr Phani Kumar Polasi, "Controlling the Occurrence of Noise-Induced Hearing Loss using Hybrid Algorithm, *Journal of Huazhong University of Science and Technology* VOLUME 50 ISSUE 03 – 2021, **Elsevier**

International Conferences

1. **P Phani Kumar**, Dr K Sri Rama Krishna, : Improved Emotion Recognition using GMM-UBMs", SPACES – 2015, *IEEE* International Conference on Signal Processing And Communication Engineering Systems, organised by Department Of Electronics And Communication Engineering (DST-FIST, Sponsored Department), K L University, Vaddeswaram, Guntur Dist., Andhra Pradesh, India, during 2nd & 3rd January, 2015
2. Polasi, Phani Kumar, and Kalva Sri Rama Krishna, "Performance of Speaker Independent Language Identification System under Various Noise Environments, The Third International Conference on Information Systems Design and Intelligent Applications 2016 (INDIA-2016), January 8-9, 2016. (**Springer**)
3. Raja, Ravi, and Phani Kumar Polasi. "Analysis of noise reduction techniques for electrooculography signals for automatic sleep stage scoring application." *Recent Trends in Communication and Electronics: Proceedings of the International Conference on Recent Trends in Communication and Electronics (ICCE-2020)*, Ghaziabad, India, 28-29 November, 2020. CRC Press, 2021.
4. N. Kapileswar, P. P. Kumar, N. U. Reddy, D. P. S. Teja, V. S. Rajam and B. A. J. Reddy, "Adaptive OFDM Non-Uniform Modulation for Underwater Acoustic Communication," *2020 5th International*

- Conference on Computing, Communication and Security (ICCCS)*, Patna, India, 2020, pp. 1-7, doi: 10.1109/ICCCS49678.2020.9277352.
5. Pandey S., Barik R.K., Karan A., **Phani Kumar P.**, Haripriya D., Kapileswar N. (2020) Socio-medic Drone with Integrated Defibrillator. In: Sharma D., Balas V., Son L., Sharma R., Cengiz K. (eds) *Micro-Electronics and Telecommunication Engineering. Lecture Notes in Networks and Systems*, Vol 106. Pp 659 – 667, **Springer**, Singapore Print ISBN 978-981-15-2328-1
 6. Nellore Kapileswar, and Phani Kumar Polasi "Deep Learning Aided Robust Channel Estimation and Signal Detection for underwater IoT Networks" (SCI Paper submitted for Review)
 7. N. Kapileswar and P. Phani Kumar, "Self-Configured Energy Efficient Protocol for IoT Enabled Underwater WSNs," 2022 4th International Conference on Inventive Research in Computing Applications (ICIRCA), Coimbatore, India, 2022, pp. 398-403, doi: 10.1109/ICIRCA54612.2022.9985651.
 8. N. Kapileswar and P. Phani Kumar, Energy efficient reliable communication routing using forward relay selection algorithm for IOT based Underwater Networks , 5th International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV 2023), Tirunelveli, India
 9. C. Shaik, R. RajaA, S. S. Kalapala, C. S. Lakshmi Nrusimhi, S. N. Devi Duth Kolusu and P. K. Polasi, "A Comprehensive Review on Compressive Sensing," 2022 *International Conference on Applied Artificial Intelligence and Computing (ICAAIC)*, Salem, India, 2022, pp. 1723-1727, doi: 10.1109/ICAAIC53929.2022.9792767.
 10. N. Kapileswar and P. P. Kumar, "Self-Configured Energy Efficient Protocol for IoT Enabled Underwater WSNs," 2022 4th International Conference on Inventive Research in Computing Applications (ICIRCA), Coimbatore, India, 2022, pp. 398-403, doi: 10.1109/ICIRCA54612.2022.9985651.
 11. N. U. Reddy, P. V. Kumar, N. Kapileswar, J. Simon and **P. P. Kumar**, "A Prediction Model for Minimization of Flood Effects using Machine Learning Algorithms," 2022 *Sixth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC)*, Dharan, Nepal, 2022, pp. 593-597, doi: 10.1109/I-SMAC55078.2022.9987332.
 12. Ramesh, B., **Polasi, P.** (2023). EEG—Brainwaves Signal Based BCI Control Wheel Chair System. In: Bhateja, V., Mohanty, J.R., Flores Fuentes, W., Maharatna, K. (eds) *Communication, Software and Networks. Lecture Notes in Networks and Systems*, vol 493. Springer, Singapore. https://doi.org/10.1007/978-981-19-4990-6_37
 13. Kumar, N.M., **Polasi, P.** (2022). Deep Q Network-Based Spectrum Sensing for Cognitive Radio. In: Mallick, P.K., Bhoi, A.K., González-Briones, A., Pattnaik, P.K. (eds) *Electronic Systems and Intelligent Computing. Lecture Notes in Electrical Engineering*, vol 860. Springer, Singapore. https://doi.org/10.1007/978-981-16-9488-2_69
 14. T. R. Sri, R. R. A, J. Madala, S. L. Duddukuru, R. Reddipalli and **P. K. Polasi**, "A Systematic Review on Deep Learning Models for Sleep Stage Classification," 2022 *6th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2022, pp. 1505-1511, doi: 10.1109/ICOEI53556.2022.9776965.
 15. N. Kapileswar, P. Prudhvi Raj, M. Krishna Kanth, D. Upendra, **P. Phani Kumar**; Deep learning algorithm for classification and prediction of COVID-19 Pneumonia using CT scan images. *AIP Conference Proceedings* 5 April 2022; 2405 (1): 020028. <https://doi.org/10.1063/5.0073037>
 16. Kapileswar, N., Sankeetha, B., Harini, V., Abinaya, S. K., & **Kumar, P. P.** (2022, April). Linear discriminant analysis based stage wise breast cancer identification. In *American Institute of Physics Conference Series* (Vol. 2405, No. 1, p. 020027).
 17. P. K. Polasi, A. S, K. P and M. K. Momin, "An IoT-based duplex mode Remote Health Monitoring System," 2023 *International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence (RAEEUCCI)*, Chennai, India, 2023, pp. 1-5, doi: 10.1109/RAEEUCCI57140.2023.10134141.
 7. T.R. Sri, R. R. A, J. Madala, S. L. Duddukuru, R. Reddipalli and P. K. Polasi, "A Systematic Review on Deep Learning Models for Sleep Stage Classification," 2022 *6th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2022, pp. 1505-1511, doi: 10.1109/ICOEI53556.2022.9776965.

Patents Published:

1. Design patent granted “Wall Mounted face Mask Detecting Device Integrated with Touch Free Sanitized Dispenser” on 14/01/2023. (Design No.377423001).
2. Design patent granted “IoT based rail track inspection vehicle” on 02/03/2023. (Design No.380666001).
3. Filed a patent” Monitoring and Design of Underwater Sea Robot Using IOT and AI Technology” on 15/09/2022. (Filing No.202241052832 A)
4. Filed a patent” IOT AI-based Smart Underwater Wireless Communication Using ML Algorithms” on 21/04/2022. (Filing No.202241023527 A)
5. Filed a Patent “Power Sharing and Eco-Friendly Smart Connected Vehicle System Driven by Hybrid Renewable Energy and IoT for Highways” on 13/11/2021. (Filing No: 202141052137 A)