

Personal Information

Name	Dr. Santhosh Veeramalla
Years of Experience	10 years
Email Id	santhosh.v@bvrithyderabad.edu.in
Areas of Specialization	Biomedical Signal Processing, Theoretical and Computational Neuroscience, EEG based Source localization and connectivity, Signal Processing with MATLAB



Educational Qualifications

Doctoral Degree	Ph.D.	ECE
PG Degree	M.E.	E & C
UG Degree	B.Tech.	ECE

Patent Published:

1. An Efficient Enhanced VLSI Architecture of Montgomery Modular Multiplication
Application No. 202141028654
Published on 09/07/2021

Papers Published

International Journal Publications

1. Santhosh Kumar Veeramalla, V. Hindumathi. (2022), A Framework for Solving the Source Localization of the EEG Measurements with the Application of Particle Filtering with Branching Resampling. Journal of Circuits, Systems, and Computers (Online Ready)
Available at: <https://doi.org/10.1142/S021812662250181X>
2. Santhosh Kumar Veeramalla (2022), Brushless DC Motor Modeling and Simulation in the MATLAB/SIMULINK Software Environment. Advances in Modelling and Analysis B, Vol. 64, No. 1-4, pp. 27-33.
Available at: https://doi.org/10.18280/ama_b.641-404
3. Veeramalla, S.K. and Talari, V.H.R. (2020), Neural source localization using particle filter with optimal proportional set resampling. ETRI Journal, 42, pp. 932-942.
Available at: <http://dx.doi.org/10.4218/etrij.2019-0020>.
4. Santhosh Kumar Veeramalla, Hanumantha Rao T.V.K. (2020), Assessment of Directional Connectivity between Neural Sources Using Effective Connectivity Measures and Particle Filters. Journal of Circuits, Systems, and Computers, 30(08), pp.2150149.
Available at: <https://doi.org/10.1142/S0218126621501498>.
5. Veeramalla, S.K. and Talari, V.K.H.R. (2020), Multiple dipole source localization of EEG measurements using particle filter with partial stratified resampling. Biomedical Engineering Letters, 10(2), pp.205–215.

Available at: <http://dx.doi.org/10.1007/s13534-020-00149-6>.

6. Veeramalla, S.K. and Talari, V.H.R. (2019), Estimation of Neural Sources from EEG Measurements Using Sequential Monte Carlo Method. *Ingénierie des systèmes d'information*, 24(4), pp.411–417.

Available at: <http://dx.doi.org/10.18280/isi.240408>.

7. Veeramalla, S.K. and Talari, V.H.R. (2019), Resampling schemes within a particle filter framework for brain source localization, *International Journal of Biomedical Engineering and Technology*, (In press).

International Conference Publications

1. Santhosh Kumar Veeramalla, T.V.K. Hanumantha Rao. (2016) "Resampling schemes for Rao-Blackwellization Particle Filters," 2016 International Conference on Computing, Analytics and Security Trends (CAST), Pune, IEEE, 2016, pp. 377-382. doi: 10.1109/CAST.2016.7914998
2. Santhosh Kumar Veeramalla, T.V.K. Hanumantha Rao (2017), "Functional Brain Connectivity analysis using Coherent Measures," In EMBEC 2017, NBC 2017 Finland. IFMBE Proceedings, vol 65. **Springer**, Singapore
3. Santhosh Kumar Veeramalla (2021), Simulation and modelling of a brushless DC motor using the MATLAB/ SIMULINK application environment. 2021 3rd International Symposium on Material and Electrical Engineering Conference (ISMEE), pp. 207-210, doi: 10.1109/ISMEE54273.2021.9774052.
4. Santhosh Kumar Veeramalla (2022), Energy efficient memory architecture for High performance and low power applications under sub- threshold regime. 7th International Conference on information System Design and Intelligent Applications (INDIA - 2022) (Accepted-yet to publish)
5. Santhosh Kumar Veeramalla (2022), Adaptive Resource Allocation in Wi-MAX Networks for Improved Quality of Service (QoS). 7th International Conference on information System Design and Intelligent Applications (INDIA - 2022) (Accepted-yet to publish).

Books & Book Chapter

1. Santhosh Kumar Veeramalla, T.V.K. Hanumantha Rao. (2021), "Neural Source Connectivity Estimation Using Particle Filter and Granger Causality Methods." In *Handbook of Artificial Intelligence in Biomedical Engineering*, pp. 493-507. Apple Academic Press, 2021.
2. Santhosh Kumar Veeramalla (2022), Automatic Detection Of COVID-19 from chest X-ray images using Convolution Neural Network. *Internet of Medical Things in Smart Healthcare: Post Covid 19 Pandemic Scenario- CRC Press book* (Accepted)

FDP's Attended

1. Participated in A One Week Online GIAN Course On Technology-driven approaches for Neurodevelopmental and Neurodegenerative Disorders, from March 26 to 30, 2022.
2. Participated in SPARC-sponsored International Workshop on Neurobiology of Pain & Itch is being organized by IIT (BHU) Varanasi, from 29th June 2021 to 03rd July 2021.
3. Attended AICTE Training And Learning (ATAL) Academy Online FDP on "Artificial Intelligence" from 2020-10-19 to 2020-10-23 at Indian Institute of Technology Patna.

4. Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "AI applications in Biomedical Engineering" from 02/08/2021 to 06/08/2021 at National Institute of Technology Calicut.
5. Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on "Computer Science & Biology" from 2020-10-12 to 2020-10-16 at NIT Silchar.
6. Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Telemedicine and Digital Healthcare: Opportunities & Threats" from 2021-05-17 to 2021-05-21 at Rabindranath Tagore University
7. Attended a "GIAN Course on Beyond the Kalman Filter: Bayesian Recursive Filtering in Engineering and Finance" at IIT Patna held from January 1, 2018, to January 5, 2018.
8. Attended a "The 23rd EEGLAB Workshop" at All India Institute of Speech and Hearing, Mysuru held from January 16, 2017, to January 20, 2017
9. Attended a 6 Day GIAN Course on "Biomedical Signal Analysis" at NIT Warangal held from October 10, 2016, to October 15, 2016.

Any other Achievements

- Invited as a resource person for the FDP on “Deep Learning and Machine Learning in Biomedical Signal Processing” conducted by E & ICT Academy, National Institute of Technology, Warangal.

Topic of the Lecture: Preprocessing and Localization of EEG data

Date: 26/08/2021