

# PATHIPATI SRIHARI

# Curriculum Vitae

## Education

- 2012 Ph.D., Andhra University, Andhra Pradesh, .
- 2002 M.S, University of Plymouth, England, UK, .
- 2000 B.Tech, Sri Venkateshwara University, Andhra Pradesh, .

## Experience

- 2004–2004 **Assistant Professor**, *GMRIT Institute of Technology*, Srikakulam district.
- 2004–2006 Assistant Professor, GITAM Institute of Technology, Visakhapatnam.
- 2006–2013 **Associate Professor and Head**, *DADI Institute of Engineering & Technology*, Visakhapatanam.
- 2013—present **Assistant Professor(Grade-I)**, *National Institute of Technology Karnataka*, Mangalore.

#### Honours and Awards

- 2021 **Fellowship**, Institution of Engineers (India).
- 2021 **Overall best Paper Award**, (Academia) of 2021 IEEE CONNECT Conference, Bangalore.
- 2021 **Best Paper Award of Track 9**, (Women in Engineering at the IEEE CONECCT 2021.
- 2021 **Best Paper Award of Track 18**, *Navigation and Surveillance in Aerospace at the IEEE CONECCT 2021*.
- 2013 Fellowship, Institution of Electronic and Telecommunication Engineers (IETE.
- 2013 **ACM Senior Membership**, Association of Computing Machinery, USA.
- 2013 Man Engineer Award, IET Chennai Local Network Young Professionals.
- 2013 DA Rajan Promotional Award, IET Chennai Local Network Young Professionals.
- 2010 **IEEE Asia Pacific Outstanding Branch Counsellor Award**, *Institution of Electrical and Electronic Engineers*, *USA*.
- 2010 **IEEE Senior Membership**, Institution of Electrical and Electronic Engineers , USA.

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- 2009 **JNTU Kakinada Best Teacher Award**, Institution of Electrical and Electronic Engineers, USA.
- 2009 JNTU Kakinada Best Researcher Award, JNTU Kakinada.

#### Doctoral Theses Guided

- 2021 Seven students are currently pursuing PhD under the guidance of Dr. Pathipati Srihari.
- 2018 **Algorithms for Track Stitching and Un-Switching**, *National Institute of Tech-nology Karnataka*, *Raghu J*.
- 2017 Efficient Tracking Algorithms with Phased Array Radars in The Presence of Electronic Counter Measures, National Institute of Technology Karnataka, G N Satapathi.

## Membership in Professional Bodies

- o 2013 Association of Computing Machinery (ACM), Senior Member
- o 2011 Indian Society of Technical Education (ISTE), Life member
- o 2011 IEEE Aerospace and Electronic Systems Society, Senior Member
- o 2011 Indian Science Congress Association, Life member
- o 2011 Acoustical Society of India, Life member
- o 2011 Cryptographical Society of India, Life member
- 2010 Institution of Electrical and Electronic Engineers Inc (IEEE), USA Senior Member
- o 2007 IEEE Signal Processing Society, Senior Member
- o 2006 The Institution of Engineering and Technology, Member
- o 2004 Bio-Medical Engineers Society of India (BMESI), Life member

#### Membership in Committees

- 2021 High power Selection committee of Defence India Start-up Challenge, Academic Expert
- 2021 Preliminary design Review Committee on Multi Static System(MSS), Academic Expert
- o 2021 IEEE Radar Conference TPC Reviewer
- o 2019 IEEE Radar Conference TPC Reviewer
- o 2018 NITK Academic Space Audit Committee Member
- o 2017 Critical Design Review Committee for AESA Radar, Academic Expert
- o 2017 Standing Committee for dual mode Radar Seeker, Academic Expert
- o 2017 Software Design Review Committee for AESA Radar, Academic Expert
- o 2016 NITK Library Advisory Committee, Member
- o 2015 Defence Science Journal Editorial Committee, Reviewer
- o 2015 Defence Science Journal Editorial Committee, Reviewer
- o 2013 IEEE Vizag Bay Sub-Section Executive Committee, Treasurer

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- o 2013 IET AP State Young Professorial Section, Co-ordinator
- o 2013 DIET IET YP Student Chapter, Advisor
- 2013 IET Bangalore Local Network, YP Joint Secretary ( Academics and New initiatives)
- o 2013 NITK IET Student Chapter, Advisor
- o 2012 IEEE Vizag Bay Sub-Section Student Activities Committee, Chair
- o 2011 IEEE Hyderabad Section Student Activities Committee, Chair
- 2010 IEEE Hyderabad Section Graduates of Last Decade Affinity Group, Vice Chair
- o 2007 IETE Visakhapatnam Centre, Executive Member
- o 2006 DIET IEEE Student Branch Committee, Counsellor

## Research Projects

- Study and simulation of track detect before schemes for radar Role: Principal Investigator Year 2020.
  - Amount: 6.49 Lakhs Status: Ongoing
- DRDO (RCI) Consultancy Project: "Study of Various Bias Estimation Techniques for Multi-Sensor Multi-Target Tracking". Role: Principal Investigator Year 2017. Amount: 9.75 Lakhs Status: Completed.
- CRL-BEL Consultancy Project: "Automatic Bias Estimation Technique for 2D/3D Surveillance radar using Networked Radar Data". Role: Principal Investigator Year 2019.
  - Amount: 8.26 Lakhs Status: Completed
- LRDE CARs Project: "Sigma Delta Space Time Adaptive Processing for GMTI for AESA radar". Role: Co-Principal Investigator Year 2018.
  - Amount: 9.63 Lakhs Status: Completed.
- DST SERB Project: "Development and Performance Evaluation of Efficient Tracking Algorithms for Phased Array Radars in the Presence of Electronic Counter Measures". Role: Principal Investigator Year 2016
  - Amount: 13.1 Lakhs Status: Completed.
- DRDO (Research Centre Imarat (RCI)) Consultancy Project: "Study of Optimal Pulse Compression Radar Waveforms Suitable for Sea and Ground Clutter". Role: Principal Investigator Year 2016.
  - Amount: 9.775 Lakhs Status:Completed
- DRDO (RCI) Consultancy Project: "Study of advanced radar signal processing and tracking approaches to detect low RCS targets in heavy sea clutter".
   Amount: 9.76 Lakhs Status: On going.
- LRDE Consultancy Project: Algorithm to Reduce Measurement Errors Due to Sea Surface Multipath and Sea Clutter Role:Principal Investigator Year:2021-2022 Amount: 9.44 Lakhs Status: On going

# Publications: 8 Journal Papers and 27 Conference Papers

- [1] Pathipati Srihari John D' Souza Paramananda Jena Ashoka Chakravarthi Mahipathi, Srinath Gunnery. Nonlinear frequency modulated waveform optimization for a cooperative radar communication. Best track paper award.
- [2] Vikas Baghel, Ganapati Panda, P Srihari, K Rajarajeswari, and Babita Majhi. An efficient multi-objective pulse radar compression technique using rbf and nsga-ii. In 2009 World Congress on Nature & Biologically Inspired Computing (NaBIC), pages 1291–1296. IEEE, 2009.
- [3] Pardhasaradhi Bethi, Srihari Pathipati, and P Aparna. Gnss intentional interference mitigation via average kf innovation and pseudo track updation. In 2020 IEEE 17th India Council International Conference (INDICON), pages 1–5. IEEE, 2020.
- [4] Pardhasaradhi Bethi, Srihari Pathipati, and P Aparna. Impact of target tracking module in gps spoofer design for stealthy gps spoofing. In 2020 IEEE 17th India Council International Conference (INDICON), pages 1–6. IEEE, 2020.
- [5] Pardhasaradhi Bethi, Srihari Pathipati, and P Aparna. Stealthy gps spoofing: Spoofer systems, spoofing techniques and strategies. In 2020 IEEE 17th India Council International Conference (INDICON), pages 1–7. IEEE, 2020.
- [6] Pardhasaradhi Bethi and Pathipati Srihari. Stealthy gps spoofer design by incorporating processing time and clock offsets. In *Paper has been accepted in the IEEE INDICON-2021 Conference*.
- [7] Balarami Reddy BN, Srinath Gunnery, Pardhasaradhi Bethi, and Srihari Pathipati. Quantized directional cosine measurements based localization. In 2021 10th IEEE International Conference on Communication Systems and Network Technologies (CSNT), pages 99–104. IEEE, 2021.
- [8] Pathipati Srihari Shripathi U. Acharya G.V.K Sharma D S L Praharshita, Bethi Pardha Saradhi. High-frequency and low-latency dsp architecture for information matrix fusion. In *Paper has been presented in the IEEE CONNECT-2021 Conference*. Best track paper award.
- [9] Garivi Haritha, P Aparna, Pathipati Srihari, and Gnane Swarnadh Satapathi. Analysis of real-time tracking filters implementation in fpga. In *2018 IEEE Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER)*, pages 158–162. IEEE, 2018.
- [10] Kagitha Naga Lakshmana Kumar, Pathipati Srihari, Gnane Swarnadh Satapathi, and Gollakota Venkata Krishna Sharma. A high speed complementary pulse compressor and its implementation of fpga. In 2017 IEEE Radar Conference (RadarConf), pages 1379–1382. IEEE, 2017.
- [11] Pathipati Srihari D Sheshagiri Vishal Mahajan Kumuda D K, Ashwitha K Shetty and Peter Joseph. Multiple target detection using sigma delta stap in the presence of airborne clutter. In *Paper has been presented in the IEEE CONNECT-2021 Conference*.

- [12] Pratik Laddha, Rathna Prasad, U Sripathi Acharya, Pathipati Srihari, S Prasad, and PH Rao. Study of 2d localization using simo antenna. In *2016 International Symposium on Antennas and Propagation (APSYM)*, pages 1–4. IEEE, 2016.
- [13] S Rohan Nagarad, AS Sourabh, U Sripathi Acharya, Pathipati Srihari, S Prasad, and PH Rao. 3-d radar imaging using extended 2-d range migration technique. In 2017 IEEE Applied Electromagnetics Conference (AEMC), pages 1–2. IEEE, 2017.
- [14] A Vengadarajan Paramananda Jena and Pathipati Srihari. Design of unimodular long length polyphase code for cw radar for doppler tolerance. In *Paper has been accepted in the IEEE INDICON-2021 Conference*.
- [15] Bethi Pardhasaradhi, Pathipati Srihari, and P Aparna. **Navigation in GPS spoofed environment using m-best positioning algorithm and data association**. *IEEE Access*, 9:51536–51549, 2021.
- [16] Bethi Pardhasaradhi, Pathipati Srihari, and P Aparna. Spoofer-to-Target Association in Multi-Spoofer Multi-Target Scenario for Stealthy GPS Spoofing. IEEE Access, 9:108675–108688, 2021.
- [17] Adithya Jayan Anvith M. Medidi Anurag Pathipati Srihari, Vikas Kumar Dewangan and Bethi Pardhasaradhi. Knowledge aided tracker: Multi-target tracking in the presence of electromagnetic absorbers. In *Paper has been accepted in the IEEE INDICON-2021 Conference*.
- [18] Vandana G S Pathipati Srihari. Experimental study 24ghz sense2go1 pulse radar sensor for human vital sign measurement. In *Paper has been presented in the IEEE CONNECT-2021 Conference*.
- [19] Vandana G S Pathipati Srihari and Raghavendra B S. Measurement and evaluation of human vital sign using 77ghz awr1642 fmcw radar sensor. In *Paper has been presented in the IEEE CONNECT-2021 Conference*.
- [20] Bethi Pardhasaradhi Gunnery Srinath Purushottama Lingadevaru, Pathipati Srihari. A conceptual framework for knowledge aided passive radar system. In *Paper has been presented in the IEEE CONNECT-2021 Conference*. Overall Best Paper Award and Best track paper award.
- [21] Jayaramu Raghu, Pathipati Srihari, Ratnasingham Tharmarasa, and Thiagalingam Kirubarajan. Comprehensive track segment association for improved track continuity. *IEEE Transactions on Aerospace and Electronic Systems*, 54(5):2463–2480, 2018.
- [22] B SashiKanth, P Kiranmayee, and P Srihari. Lms adaptation for assaying power profile delay estimation in mimo-ofdm tactics. In *Proceedings of IEEE International Conference on Computer Communication and Systems ICCCS14*, pages 187–190. IEEE, 2014.
- [23] Gnane Swarnadh Satapathi and Srihari Pathipati. Waveform agile sensing approach for tracking benchmark in the presence of ECM using IMMPDAF. Radioengineering, 26(1):227, 2017.

- [24] Gnane Swarnadh Satapathi and Pathipati Srihari. All neighbor fuzzy relational data association for multitarget tracking in the presence of ecm. In 2016 IEEE Annual India Conference (INDICON), pages 1–5. IEEE, 2016.
- [25] Gnane Swarnadh Satapathi and Pathipati Srihari. **Soft and evolutionary computation based data association approaches for tracking multiple targets in the presence of ECM**. *Expert Systems with Applications*, 77:83–104, 2017.
- [26] Gnane Swarnadh Satapathi and Pathipati Srihari. Rough fuzzy joint probabilistic association for tracking multiple targets in the presence of ECM. Expert Systems with Applications, 106:132–140, 2018.
- [27] Gnane Swarnadh Satapathi and Pathipati Srihari. **STAP-based approach for target tracking using waveform agile sensing in the presence of ECM**. *Arabian Journal for Science and Engineering*, 43(8):4019–4027, 2018.
- [28] GVK Sharma and K Raja Rajeswari. Mimo radar ambiguity analysis of phase coded pulse waveforms. In *2012 International Conference on Radar, Communication and Computing (ICRCC)*, pages 101–106. IEEE, 2012.
- [29] GVK Sharma, P Srihari, and K Raja Rajeswari. Mimo radar ambiguity analysis of frequency hopping pulse waveforms. In *2014 IEEE Radar Conference*, pages 1241–1246. IEEE, 2014.
- [30] H Prashanth Kumar Dr. R. Tharmarasa T. Kirubarajan Srinath G, Pathipati Srihari. Coherent radar target detection with in-band cyclostationary wireless interference. In *Paper has been accepted in IEEE Access*.
- [31] Prashantha Kumar H Srinath Gunnery, Pardhasaradhi Bethi and Srihari Pathipati. Target performance improvement in cooperative radar and communication system spectrum sharing. In *Paper presented in 12th International Conference on Computing Communication and Networking Technologies*, pages 1291–1296. IEEE, 2009.
- [32] B Gopala Swamy, U Sripati Acharya, P Srihari, and B Pardhasaradhi. Systolicarchitecture-based matrix multiplications and its realization for multi-sensor bias estimation algorithms. *Advances in Communications, Signal Processing, and VLSI: Select Proceedings of IC2SV 2019*, page 263, 2021.
- [33] VVS Avinash Teja, S Venkata Chaitanya, Uday Akula, Pathipati Srihari, and VR Sastry. Blast vibration signal analysis using s-transform. In 2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), pages 4182–4186. IEEE, 2016.