

Recent Publications from TelWiSe Group

- ❑ S. Sruti, A. Anil Kumar and K. Giridhar, "Joint Association and Localization of Multiple Targets in an OTFS-Based Multistatic ISAC System," accepted for publication in *IEEE Trans. on Aerospace and Electronic Systems*, June 2025.
- ❑ P. Surendar and K. Giridhar, "Simultaneous Multi-Beam Radar with Full Range Resolution exploiting Space-Code Beamforming," [arxiv 2505.01265](https://arxiv.org/abs/2505.01265) , May 02, 2025.
- ❑ M. Kavi Priya and K. Giridhar, "New Collision-Free Balanced Frequency Hopping Sequences for Frequency Hopping Mobile Ad-Hoc Networks," *Proc. of IEEE Vehicular Technology Conference (VTC 2025-Spring)*, Oslo, Norway, June 2025.
- ❑ S. Sruti and K. Giridhar, "Emerging Trends in Radar: Perspective on Future Integrated Multi-static Radar," in Special Issue on Emerging Trends in Radar in *IEEE Aerospace and Electronic Systems Magazine*, 2025.
- ❑ S. Sruti and K. Giridhar, "Non-Parametric Multi-Target Data Association and Tracking for Multi-static Radars", in *IEEE Journal of Selected Areas in Sensors*, vol. 2, pp. 28-39, 2025.
- ❑ A. Harivignesh, A. Anbukani and K. Giridhar, "On Reducing the Search Complexity for PMI Selection in Codebook-based 5G NR Systems", *Proc. of IEEE Vehicular Technology Conference (VTC 2024-Spring)*, Singapore, Jun. 2024.
- ❑ S. Sowmya, M. Gokularam, and K. Giridhar, "Low-Complexity Linear Decoupling of Users for Uplink Massive MU-MIMO Detection", *Proc. of IEEE Vehicular Technology Conference (VTC 2024-Spring)*, Singapore, Jun. 2024. (arXiv: [2403.03271v2](https://arxiv.org/abs/2403.03271v2)).
- ❑ M. Gokularam, S. Sruti and K. Giridhar, "Using DCFT for Multi-Target Detection in Distributed Radar Systems with Several Transmitters", *Proc. of IEEE Radar Conference (RadarConf24)*, Denver, CO, USA, May 2024. (arXiv: [2212.09657](https://arxiv.org/abs/2212.09657)).
- ❑ A. Anbukani, A. Harivignesh, and K. Giridhar, "Exploiting CSI-RS Structure for Efficient Fronthaul Functional Split in 5G O-RAN and Low Complexity Channel Estimation", accepted for presentation in *IEEE Wireless Communications and Networking Conference (WCNC-2024)*, Dubai, UAE, Apr. 2024.
- ❑ S. Sweta and K. Giridhar. "A Novel Local and Hyper-Local Multicast Services Transmission Scheme for Beyond 5G Networks." [arXiv 2402.03963 \(2024\)](https://arxiv.org/abs/2402.03963).
- ❑ S. Banerjee, S. Desai, Y. Krishna Madan, H. A. M. L. Narayana, and K. Giridhar, "On Provisioning Link Margin for High Bit Rate Q/V Band LEO Communication for Autonomous Vehicles," *IEEE Vehicular Technology Conference (VTC2023-Fall)*, Hong Kong, Oct. 2023.
- ❑ R. Vignesh and K. Giridhar, "Novel Preamble for Accurate Synchronization of Frequency Hopped OFDM Links," *IEEE Vehicular Technology Conference (VTC2023-Spring)*, Florence, Italy, Jun. 2023.
- ❑ M V Abhay Mohan and K. Giridhar, "Interference-Managed Local Service Insertion for 5G Broadcast," [TechRxiv. March 17, 2023](https://arxiv.org/abs/2303.03000).

- ❑ C. Ramanathan, S. Y. Desai, S. Banerjee and K. Giridhar, "Frequency Projection: A Review and its application in channel modelling," *National Conference on Communications (NCC-2023)*, Guwahati, India, Feb. 2023.
- ❑ S. Sruti, A. Anil Kumar, and K. Giridhar, "RCS-Based Imaging of Extended Targets for Classification in Multistatic Radar Systems", *IEEE Radar Conference (RadarConf23)*, San Antonio, TX, USA, May 2023.
- ❑ R. Preethi, M. V. Abhay Mohan, and K. Giridhar, "Exploiting Implicit OVFS Structure in DM-RS for Improved Channel Estimation in 5G NR Systems," *IEEE Vehicular Technology Conference (VTC2022-Spring)*, Helsinki, Finland, Jun. 2022.
- ❑ S. Sruti, K. Teja, and K. Giridhar, "Non-Parametric Adaptive Thresholding for Channel Estimation of OTFS-Based 6G Communication Links," *IEEE Global Communications Conference (GLOBECOM-2022)*, Rio de Janeiro, Brazil, Dec.2022.
- ❑ S. Sruti, K. Teja, and K. Giridhar, "Performance Comparison of OTFS and MC-CDMA with Channel Estimation and Power Back-Off," *IEEE Military Communications Conference (MILCOM-2022)*, Washington DC (National Capital Region), Nov.2022.
- ❑ M. V. Abhay Mohan and K. Giridhar, "Interference-Aware Accurate Signal Recovery in sub-1 GHz UHF Band Reuse-1 Cellular OFDMA Downlinks," *IEEE Open Journal of the Communications Society*, 10.1109/OJCOMS.2022.3219557, Nov.2022.
- ❑ S. Sruti, C. Deepti, and K. Giridhar, "Non-Parametric and Geometric Multi-Target Data Association for Distributed MIMO Radars," *IEEE Military Communications Conference (MILCOM-2021)*, San Diego, CA, Nov. 2021.
- ❑ C. Ramanathan, C. R. Venkatesh, and K. Giridhar, "Mitigating Blockage of Transmission and Reception due to Rotor Blades in Air-to-Air Data Link using Single-Carrier Block Modulation," *IEEE Military Communications Conference (MILCOM-2021)*, San Diego, CA, Nov. 2021.
- ❑ D. Basak, S. Sruti, and K. Giridhar, "Comparing Precoded MC-CDMA and OTFS for High-Speed V2X Communications," *IEEE Vehicular Technology Conference (VTC2021-Fall)*, online mode, Sep.-Oct., 2021.
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- ❑ S. Desai and K. Giridhar, "Low Complexity Quasi-MLM Modulation Classification based Optimal Overloaded MU-MIMO Receiver," *IEEE Vehicular Technology Conference (VTC2020-Spring)*, online mode, June 2020.
- ❑ S. A. Nambi and K. Giridhar, "Index and Constellation Order Lowering for OFDM with Index Modulation," in *IEEE Communications Letters*, Feb. 2020.
- ❑ S. A. Nambi and K. Giridhar, "Modified CI and Modulation Order Replacement for Enhancing OFDM-IM Performance," in *IEEE Journal of Selected Topics in Signal Processing*, vol. 13, no. 6, pp. 1286-1300, Oct. 2019.
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- ❑ S. Parthasarathy, S. Kumar, R. K. Ganti, S. Kalyani and K. Giridhar, "Error Vector Magnitude Analysis in Generalized Fading with Co-Channel Interference," in *IEEE Trans. on Communications*, vol. 66, no. 1, pp. 345-354, Jan. 2018.
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