

2025 International Conference on Localization and GNSS (ICL-GNSS 2025)

**Rome, Italy
10-12 June 2025**



**IEEE Catalog Number: CFP2593N-POD
ISBN: 979-8-3315-1114-2**

**Copyright © 2025 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2593N-POD
ISBN (Print-On-Demand):	979-8-3315-1114-2
ISBN (Online):	979-8-3315-1113-5
ISSN:	2325-0747

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Chirp Interference Mitigation in Snapshot GNSS Receivers Using the Time-Frequency Ridge-Assisted Fractional Fourier Transform	1
<i>Xavier Álvarez-Molina, Gonzalo Seco-Granados, José A. López-Salcedo</i>	
ML-Based Blind Authentication with LEO Signals of Opportunity.....	8
<i>Francesco Ardizzon, Laura Crosara, Nicola Laurenti</i>	
Federated Few-Shot Zone Learning for Indoor Localization	15
<i>Amir Fathalizadeh, Vahideh Moghtadaiee, Mina Alishahi</i>	
Estimating the Probability of Galileo I/Nav Navigation with Osnma: “If You Can Navigate, Can You Authenticate?”	22
<i>Ignacio Fernandez-Hernandez, Cillian O'Driscoll, Jon Winkel, Tom Willems, Aleix Galan-Figueras, Gonzalo Seco-Granados</i>	
Reporting Message Repetitions Over Noisy Channels and Application to GNSS	28
<i>Ignacio Fernandez-Hernandez, Carlos Martinez-Ferreira, Cillian O'Driscoll</i>	
A Comparative Study on Indoor Ranging Accuracy of LEO-PNT Systems	34
<i>Guillem Foreman-Campins, José A. López-Salcedo, Elena Simona Lohan</i>	
Evaluating ML Robustness in GNSS Interference Classification, Characterization & Localization	41
<i>Lucas Heublein, Tobias Feigl, Thorsten Nowak, Alexander Rügamer, Christopher Mutschler, Felix Ott</i>	
Vae-Based Feature Disentanglement for Data Augmentation and Compression in Generalized Gnss Interference Classification.....	48
<i>Lucas Heublein, Simon Kocher, Tobias Feigl, Alexander Rügamer, Christopher Mutschler, Felix Ott</i>	
Deep Neural Network-Based Gnss Multipath Assisted Positioning Algorithm in Urban Environment	55
<i>Huiying Li, Ye Tian, Wenyin Dai, Ao Peng</i>	
Emergency Call Positioning Via Assisted-GPS Using the LPP Protocol on Smartwatches	62
<i>Roger Carolino B. Monteiro, Renan F. Da Silva, João Bezerra Da R. Neto, David Alan De O. Ferreira, Maria G. Lima Damasceno, Jussif J. Abularach Arnez, Janisley Oliveira De Sousa</i>	
Lie Group Based Approach for GNSS Signal Phase Modeling.....	68
<i>Esteban Morales-Aguirre, Samy Labsir, Benoît Priot, Clément Gazzino, Gaël Pages</i>	
Statistical Acquisition of DVB-S2X Signal for Positioning in LEONTN	74
<i>Harshal More, Idir Edjekouane, Ernestina Cianca, Mauro De Sanctis, Jorge Querol, Ottavio Picchi, Francesco Menzione</i>	
Validation of Beamforming Techniques for Interference Mitigation in GNSS Handheld Receivers with Skydel Simulator	80
<i>Lucía Pallarés-Rodríguez, Gonzalo Seco-Granados, José A. López-Salcedo</i>	
Pseudorange-Based Multi-Modal Transport Classification with Raw GNSS Android Data	87
<i>Yelyzaveta Pervysheva, Jari Nurmi, Elena Simona Lohan</i>	

5G-DIL: Domain Incremental Learning with Similarity-Aware Sampling for Dynamic 5G Indoor Localization	94
<i>Nisha L. Raichur, Lucas Heublein, Christopher Mutschler, Felix Ott</i>	
Enhancing Direction-Of-Arrival Estimation Via Sliding Window and Filtering of Phase-Differences	101
<i>Moises Ramires, Fernando J. Aranda, Joaquín Torres-Sospedra, Adriano Moreira, Filipe Meneses</i>	
Electromagnetic Interference from Consumer Electronics on GNSS Performance in Smartphones.....	108
<i>Mikhael Russo, Cristian Carallo, Riccardo Tommasi, Andrea Nardin</i>	
Cancellation and Monitoring of GNSS Spoofing Using Loose INS Coupling.....	115
<i>Albin Westlund, Erik Axell</i>	
A Simplified Solution Separation Method for GNSS Fault Detection in Challenging Environments.....	122
<i>Yingying Jiang, Ni Zhu, Valerie Renaudin</i>	
Robust and Efficient Bayesian Approach for Snapshot Radio Slam	129
<i>Xi Zhang, Ossi Kallio, Yu Ge, Henk Wymeersch, Mikko Valkama</i>	
Evaluation of Galileo Has-SIS and ICD Channel Impact on the User Performance.....	136
<i>Paolo Zoccarato, Antoine Grenier, Ciro Gioia, Joaquim Fortuny Guash, Francesco Menzione, Matteo Paonni</i>	

Author Index