MUHAMAMD AMJAD IQBAL

Early-Stage Researcher (ESR)

C[redacted]

Full-time Research Assistant at
CEOSpaceTech Lab
UPB

[redacted]

PUBLICATIONS

i. **M. A. Iqbal**, A. Anghel, M. Datcu, A. Bathelt, and S. Sieger, "Exploiting Inverse Sar Images And Dual-pol Decomposition For The Estimation Of Tree Scattering Properties," *IGARSS 2023* . **(Presented).**

ii. **M. A. Iqbal**, M. H. Conde A. Anghel and M. Datcu, "Sparse Reconstruction for High Resolution Inverse SAR Imaging," *in ETTI Doctoral School Symposium*, 2023.**(Presented).**

iii. **M. A. Iqbal,** A. Anghel, M. Datcu, I. Ederra , and J. C. Iriarte, "Assessment of mm-Wave High Resolution Inverse SAR Imaging both with Compact and Sparse Data", *20th European Radar Conference (EuRAD),* 2023. **(Presented).**

iv. **M. A. Iqbal**, RM. Asiyabi, O. Ghozatlou, A. Anghel, M. Datcu, " Towards Complex-Valued Deep Architectures with Data Model Preservation for Sea Surface Current Estimation from SAR Data", 20th CBMI conference, 2023. **(Presented).**

v. **M. A. Iqbal**, A. Anghel and M. Datcu, "Ice Cover Delineation Over Devon Iceland Using Sentinel Polarimetric SAR and Optical Data," *in IEEE MetroSea*, 2023. **(Presented).**

vi. **M. A. Iqbal**, A. Anghel and M. Datcu, "Coastline Extraction from SAR Data using Doppler Centroid Images," *in IEEE Geoscience and Remote Sensing Letters*, 2022 **(Published).**

vii. **M. A. Iqbal**, A. Anghel and M. Datcu, "On the De-Ramping of SLC-IW Tops SAR Data and Ocean Circulation Parameters Estimation," *IGARSS-2022 Kuala Lumpur,* pp. 6817-6820 **(Published).**

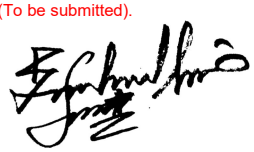
viii. **M. A. Iqbal**, A. Anghel and M. Datcu, "Doppler Centroid Estimation for Ocean Surface Current Retrieval from Sentinel-1 SAR Data," *18th European Radar Conference (EuRAD),* 2021, pp. 429-432 **(Published).**

ix. **M. A. Iqbal,** Zhao, Z., ZhiYong, X., & Rehman, S. U. (2020, May). 3-D Localization of UAV and Detection based on Harmonics Index and Spectral Entropy Criteria. "*In IOP Conference Series: Materials Science and Engineering"* (Vol. 853, No. 1, p. 012037). IOP Publishing **(Published).**

x. Rehman, S. U., & **M. A. Iqbal.** (2019, December). "Feature extraction and classification of UAV's acoustic signal using 4-microphones array in a real noisy environment". "*In Eleventh International Conference on Signal Processing Systems"* (Vol. 11384, pp. 93-98). SPIE **(Published).**

xi. **M.A. Iqbal,** M.H. Conde, A. Anghel, and M. Datcu, "Coarse-to-fine Estimation: Compressive Sensing for Higher High Resolution Inverse SAR Imaging", in 15th IEEE EuSAR 2024. (Submitted)

xii. **M. A. Iqbal**, A. Anghel and M. Datcu, "Subaperture Decomposition for Ship Detection and Velocity Estimation Exploiting SLC SAR data," *in IEEE Geoscience and Remote Sensing Letters*, 2023. (To be submitted).



I seek for a full-time researcher in a team of future researchers and scientists, where I apply my research expertise and scientific skills to project and mutual developments. Necessitating excellent verbal, analytical, and coordination skills.

LINKS

LinkedIn, ORCID
ResearchGate

WORK EXPERIENCE

Research Assistant at CEOSpaceTech Lab

University Politehnica of Bucharest (UPB), Romania.
Jan 2021 – Jan 2024
http://ceospacetech.pub.ro/

- Working in CEO SpaceTech lab of UPB under MENELAOS-NT Project for "Sparse Reconstruction for high-resolution inverse SAR imaging", (ESR7), https://www.menelaos-nt.eu/team/
- SAR products and data analysis from Sentinel-1 and 2.
- Study of data types and SAR pre-processing methods and tools.
- Critical analysis of state-of-the-art methods for ocean remote sensing. Employing Doppler centroid estimation, for ocean circulation parameter estimation and coastline estimation.
- Elaboration of novel ISAR imaging techniques from X-band radar using sub-aperture processing and adapting CS algorithms.
- Benchmark and demonstration for ocean surface currents / eddies.
- Develop a target classification/recognition technique based on ISAR images.

Software Test Engineer

CIENET Technologies Nanjing, Jiangsu, China
https://www.cienet.com/
Jul – Dec 2019

- Ericsson RBS management.
- Cease alarm on site.
- Network node Analysis.
- Backup the RBS.
- BEM tool-based operations.
- SW test for quality assurance.
- Problem analysis and solving skills.
- GIT, JIRA and Jenkins's tools-based analysis

LANGUAGES

English

Urdu

Chinese

Romanian

REFERENCES

- **Prof. Andrei Anghel**
  University Polytechnic Bucharest (UPB)
  andrei.anghel2407@upb.ro
- **Prof. Mihai Datcu**
  DLR (EOC) German Aerospace Center.
  mihai.datcu@dlr.de
- **Dr. Miguel Heredia Conde**
  Center for Sensor Systems (ZESS) University of Siegen
  heredia@zess.uni-siegen.de

SECONDMENTS

- **UPNA**

Universidad Pública de Navarra
Nov – Dec 2021 (2 months)
✓ Visiting ESR .
✓ Conducted Inverse SAR experiments in THz domain.

- **FHR**

Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR
May – June 2022 (2 months)
✓ Visiting ESR.
✓ Adapt Inverse SAR data for scattering measurements.

- **ZESS**

Center for Sensor Systems, University of Siegen
Jan – June 2023 (6 months)
✓ Visiting ESR.
✓ Learning Compressive sensing with hands on exercises.
✓ Apply compressive sensing for Inverse SAR imaging.

[redacted]

Lab Engineer

Bahauddin Zakariya University, Multan,
Electrical Engineering Department.
Multan, Punjab, Pakistan
https://www.bzu.edu.pk/
Feb – Sep 2017

- Design and conduct labs in the Microprocessor and Digital Design area as per departmental requirements.
- Operation, maintenance and inventory management of lab equipment and consumables.
- Preparation and grading of laboratory and other exams.
- Selection and upgrading of lab equipment as required.
- Any other duty assigned by the department/supervisor.

EDUCATION

- **PH.D. Electronics and Telecommunication Engineering (Jan 2021 – Jan 2024)**

University Politehnica of Bucharest, Romania.
Thesis topic: Sparse Reconstruction for high resolution inverse SAR imaging

- **MASTERS OF SCIENCE, Communication and Information Systems Engineering (Sep 2017 – June 2020)**

Nanjing University of Science and Technology, China.
Thesis topic: Study of Real-Time UAV Localization and Detection using Pyramid Microphone Array.

- **BACHELOR OF SCIENCE, Electrical Telecommunication Engineering (Sep 2011 – Aug 2015)**

Government College University Faisalabad, Pakistan
Thesis topic: Alive human body detection robot.

SOFTWARE SKILLS

- MATLAB all versions
- Python - PyCharm
- C/C++
- SNAP tool for SAR data processing
- MS office
- LaTeX – for writing research paper
- Origin-plots – statistical analysis
- QGIS – Remote sensing applications

HOBBIES AND INTERESTS

- Travelling
- Hiking
- Culture exchange