

**ISLANDS**
MSCA DOCTORAL NETWORK

PROJECT NEWSLETTER

In this newsletter, we will keep you informed about our progress, milestones, and the people driving this project forward. From groundbreaking research to exciting real-world applications, we invite you to join us on this exciting venture as we shape the future of sensing communication and 6G wireless.

PROJECT DATA

This project has received funding from the European Union Horizon Europe (HORIZON) Marie Skłodowska-Curie Actions Doctoral Networks (MSCA-DN).

Project acronym: ISLANDS

Call: HORIZON-MSCA-2022-DN-01

Topic: HORIZON-MSCA-2022-DN-01-01

Type of action: HORIZON TMA MSCA Doctoral Networks

GA Number: 101120544

Coordinator: CNIT (Consorzio Nazionale Interuniversitario per le Telecomunicazioni)

Coordinator person: Dr. Stefano Buzzi

Project starting date: Jan 2024

Project duration: 48 months

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**Funded by
the European Union**

PROJECT PARTNERS

ISLANDS has 7 beneficiaries: 5 from academia (CNIT, ACG-RC, CHAL, TAU, UCL) and 2 from industry (NOKIA, WUP)

It has 10 Associated Partners: 6 from academia (UNICLAM, UNISI, UCY, KIT, UCSD, SEU), 3 from industry (NOK-FR, OTE, EMI) and 1 research center (SAC).

Beneficiaries



**CONSORZIO NAZIONALE
INTERUNIVERSITARIO
PER LE TELECOMUNICAZIONI**
CNIT - Coordinator (Italy)



**AMERIKANIKO KOLLEGIO ELLADOS,
KENTRO EREVNAS**
ACG-RC - Beneficiary (Greece)



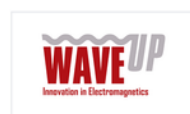
**CHALMERS TEKNISKA
HÖGSKOLA AB**
CHAL - Beneficiary (Sweden)



**TAMPEREEN
KORKEAKOULUSÄÄTIÖ SR**
TAU - Beneficiary (Finland)



**NOKIA SOLUTIONS AND NETWORKS
GMBH & CO KG**
NOKIA - Beneficiary (Germany)



WAVE UP SRL
WUP - Beneficiary (Italy)



**UNIVERSITY COLLEGE
LONDON**
UCL - Beneficiary (UK)

Associated partners



**UNIVERSITÀ DEGLI STUDI DI
CASSINO E DEL LAZIO MERIDIONALE**
UNICLAM - Associated Partner (Italy)



UNIVERSITÀ DEGLI STUDI DI SIENA
UNISI - Associated Partner (Italy)



UNIVERSITY OF CYPRUS
UCY - Associated Partner (Cyprus)



**KARLSRUHER INSTITUT FÜR
TECHNOLOGIE**
KIT - Associated Partner (Germany)



**NATIONAL AND KAPODISTRIAN
UNIVERSITY OF ATHENS**
NKUA - Associated Partner (Greece)



**ORGANISMOS TILEPIKOINONION TIS
ELLADOS OTE AE**
OTE - Associated Partner (Greece)



**SATELLITE APPLICATIONS
CATAPULT LIMITED**
SAC - Associated Partner (UK)



SOUTHEAST UNIVERSITY
SEU - Associated Partner (China)



EMICKERS AB
EMI - Associated Partner (Sweden)



NOKIA NETWORKS FRANCE
NOK-FR - Associated Partner (France)





ISLANDS TRAINING

In recent months, training activities within the ISLANDS project have continued in parallel with the ongoing research work, confirming the project's strong commitment to the development of highly qualified early-stage researchers. As part of the structured training program foreseen by ISLANDS, two major initiatives have been successfully implemented: the third complementary course and the third Doctoral School. These activities represent key milestones in the project's training pathway, contributing to the enhancement of both scientific expertise and transferable skills of the Doctoral Candidates, while fostering interaction, exchange, and collaboration across the network.

COMPLEMENTARY COURSES

Training on Standards and Patent

Title of the course: Training on Standards

Lead Organizer: UCL, NOKIA

Date: Jun, 9, 2026

Venue: Online

Instructors: Javier Lorca Hernando

Course Overview

As part of the ISLANDS training programme, the doctoral candidates took part in a dedicated session on standards and the role of standardization in shaping future 6G technologies.

The training introduced the fundamentals of technical standards and the work of major standardization bodies such as ETSI and 3GPP, exploring how technical specifications are developed, discussed and approved. Particular attention was given to Integrated Sensing and Communications (ISAC) and its ongoing development within the 6G ecosystem.

A key focus of the session was the link between

research and standardization: the doctoral candidates learned how research results can contribute to pre-standardization activities and, ultimately, to the development of future technical standards. The session also provided practical guidance on how to prepare and structure technical contributions, using real examples from ETSI and 3GPP.

The training concluded with a hands-on assignment, giving the researchers the opportunity to develop a contribution to the ETSI ISAC Industry Specification Group, connecting their own research topics with ongoing standardization activities in ISAC and 6G.



Title of the course: Training on Patents

Lead Organizer: NOKIA

Date: July, 15, 2026

Venue: Online

Instructors: Silvio Mandelli

Course Overview

The course will provide an overview of how standardization works within major international bodies and industry consortia, including 3GPP, ITU, IEEE and ETSI, and how these processes interact with innovation and intellectual property.

A central part of the training will focus on patent writing and intellectual property, introducing the structure and language of patents, inventive steps, patent classification, Standard Essential Patents (SEPs), and key concepts such as foreground and background knowledge and IPR infringement.

Through this training, the doctoral candidates will develop the skills needed to recognize the patenting potential of their research ideas and better understand how innovative research can be protected and positioned within the broader technological and standardization landscape.

DISSEMINATION ACTIVITIES

ISLANDS Doctoral Candidates at IEEE SPAWC 2026, Athens, Greece

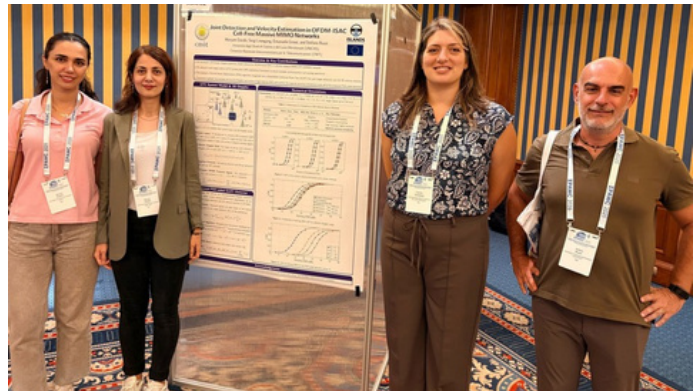
The ISLANDS research community was represented at the 2026 IEEE 27th International Workshop on Signal Processing and Artificial Intelligence in Wireless Communications (IEEE SPAWC 2026), held in Athens.

Three ISLANDS Doctoral Candidates — **Maryam Darabi**, **Nima Imani** and **Mubashar Sarfraz** — took part in the event, presenting research developed within the ISLANDS Doctoral Network and sharing their work with the international scientific community.

Maryam Darabi presented the paper "Joint Detection and Velocity Estimation in OFDM-ISAC Cell-Free Massive MIMO Networks" exploring advanced approaches to integrated sensing and communication in cell-free massive MIMO networks.

Nima Imani and Mubashar Sarfraz presented their joint paper, "V2V Sidelink-Aided Block-Sparse Recovery for Joint Pilot Reduction and Throughput Enhancement in Vehicular ISAC" focusing on innovative approaches to improve sensing efficiency and throughput in vehicular ISAC systems.

Participation in IEEE SPAWC 2026 offered the ISLANDS researchers an opportunity to present their ongoing research, exchange ideas with experts and fellow researchers, and contribute to discussions on the development of future wireless communication and 6G technologies.



Prof. Luca Venturino participated in IEEE SAM 2026 in Shenzhen

With the support of the ISLANDS MSCA Doctoral Network, **Prof. Luca Venturino**, supervisor of the Doctoral Candidate Mehri Nikzad, participated in IEEE SAM 2026 in Shenzhen, contributing to the tutorial "Metasurface-Aided Sensing: A Signal-Processing Perspective." His presentation also showcased research developed jointly within Islands MSCA Doctoral Network on RIS-enabled ambient backscatter communications using radar signals, highlighting new opportunities at the intersection of sensing, communications, and reconfigurable intelligent surfaces.

ISLANDS 5G-NR ISAC Demo at EuCNC & 6G Summit

At the EuCNC & 6G Summit in Málaga, the SWIFT Lab at the The American College of Greece Research Center, partner of the ISLANDS MSCA Doctoral Network, showcased a practical 5G-NR Integrated Sensing and Communications (ISAC) demonstrator.

The demo was presented by **Prof. Constantinos Papadias** and ISLANDS DC **Nima Imani**, highlighting the integration of sensing and communication using sub-6 GHz 5G-NR technology in an indoor environment.

The demonstration addressed an important challenge in the development of practical ISAC systems: while much research has focused on high-frequency platforms such as millimeter-wave and terahertz bands, the ISLANDS demo explores an approach compatible with existing 5G infrastructure, contributing to the development and future integration of ISAC technologies towards 6G.



A milestone in Yuhao Zhang's PhD journey

May 2026 marked an important milestone for ISLANDS doctoral candidate Yuhao Zhang, who successfully completed his half-way seminar at Chalmers University of Technology.

The half-way seminar is a key moment in a PhD journey: it provides an opportunity to take stock of the research carried out so far, present the results achieved, and look ahead to the next stages of the doctoral project.

During his seminar, Yuhao presented his work on advanced positioning and localization techniques for wireless communication systems, with a particular focus on challenging environments where signals may reach a receiver directly or be obstructed by buildings and other obstacles.

His research explores how different localization approaches can be combined to provide more accurate positioning without relying on large amounts of labelled training data. By combining information about the physical environment with data-driven techniques, the proposed approach aims to maintain accurate positioning even when signal conditions are complex.

The results presented by Yuhao are particularly promising: the proposed methods significantly improve positioning accuracy compared with individual approaches, while achieving results comparable to methods that require fully labelled training data.

Beyond the technical results, the half-way seminar represents an important step in Yuhao's development as a researcher. It is an opportunity to reflect on the progress made so far and to define the direction for the second half of his PhD journey.

Congratulations to Yuhao on reaching this important milestone! We look forward to following the next steps of his research within the ISLANDS project.



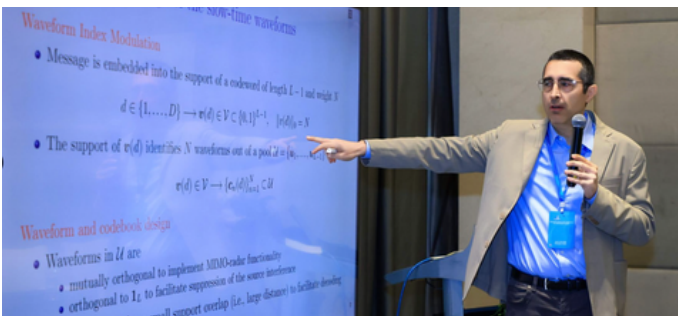
Ahmed Elloumi presents his research at ETSI ISAC Plenary Meeting

In July 2026, ISLANDS doctoral candidate **Ahmed Elloumi**, hosted by CNIT and enrolled in the PhD programme at the University of Cassino and Southern Lazio, presented his latest research at the **ETSI ISAC Plenary Meeting in Bologna, Italy**.

His contribution, "TRIS-Assisted XL-MIMO Beampattern Design for Near-Field Vehicular ISAC," co-authored with Carmen D'Andrea, Emanuele Grossi, Luca Venturino and Stefano Buzzzi, explores a novel approach to near-field Integrated Sensing and Communications (ISAC) based on a Transmissive Reconfigurable Intelligent Surface (TRIS).

The presentation provided an opportunity to share Ahmed's research with experts from academia and industry and to contribute to ongoing discussions on ISAC research and standardization for future wireless systems.

PHOTO GALLERY



In the next issue

The next issue will contain a description of the further training and dissemination activities carried out within the ISLANDS project.

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