

Welcome to the PREDICT-6G newsletter!

We foresee to change the networking paradigm by creating a deterministic 6G network:
reliable, time sensitive and predictable.
How are we doing it? Keep reading!

PREDICT-6G – Advancing Network Determinism and Time-Sensitive Communication



Editorial by Antonio de la Oliva, PREDICT-6G coordinator

The PREDICT-6G project has made significant strides in the development of deterministic, predictable and time-sensitive network systems over the past year. It has **moved from analysing 6G use cases to building a unified data plane** that integrates technologies such as 3GPP and IEEE 802.1 to deliver seamless, time-sensitive services. The project has also developed a control plane to efficiently manage these technologies. Demonstrations in Spain

and Hungary will showcase real-time applications such as gesture-based robot control and critical digital twin services, validating the potential of these advances for 6G networks.

Antonio de la Oliva, coordinator of the project, analyses in this editorial what PREDICT-6G has achieved in its year and a half of operation but, above all, **comments and previews what we can expect** from the project in the coming months, now that PREDICT-6G is in its last year.

[Read the editorial](#)



PREDICT-6G's PhDs: at the crossroads of industry and academia

In the rapidly changing world of technology, **cooperation between academia and industry drives innovation** and creates tangible societal benefits. The European Commission's '[New Codes of Practice for industry-academia co-creation and citizen engagement for knowledge valorisation](#)' encourages collaboration between research institutions and businesses. PhD students, at the intersection of deep academic knowledge and practical industry needs, play a pivotal role in bridging the gap.

PREDICT-6G nurtures a thriving research-industry collaboration, especially through the involvement of young researchers. As **interviews with some of the PhD students involved in the project** show, the experience can be transformative for them, offering

them the **opportunity to shape the future of technology** participating in cutting-edge projects while at the same time perfecting their research skills.

[Read the full article](#)

SCIENTIFIC CONTRIBUTION



PREDICT-6G continues to help shape 6G standardisation

By Sebastian Robitzsch (InterDigital Europe Ltd), with the collaboration of Rafael Rosales (INTEL), Petro Giardina (Nextworks), and Luis M. Contreras (Telefónica)

One of the key exploitation routes in PREDICT-6G is the impact of relevant Standardisation Development Organisations (SDOs) on the topic of deterministic networking. For that purpose, the project conducted a thorough assessment of the architectural proposition as well as their Multi-Domain Data Plane (MDP) and AI-Driven Control Plane (AICP). The outcome of this assessment resulted in a scientific paper which was accepted for presentation at the GLOBECOM 2024 Workshop on 6G Architecture ([6G Arch](#)) that will take place in December 2024 in South Africa. The [paper](#) provides a holistic drawing of PREDICT-6G system proposition with the considered domains DetNet-Enabled 3GPP, TSN-Enabled 3GPP, Wi-Fi and TSN.

INTERNATIONAL EVENTS

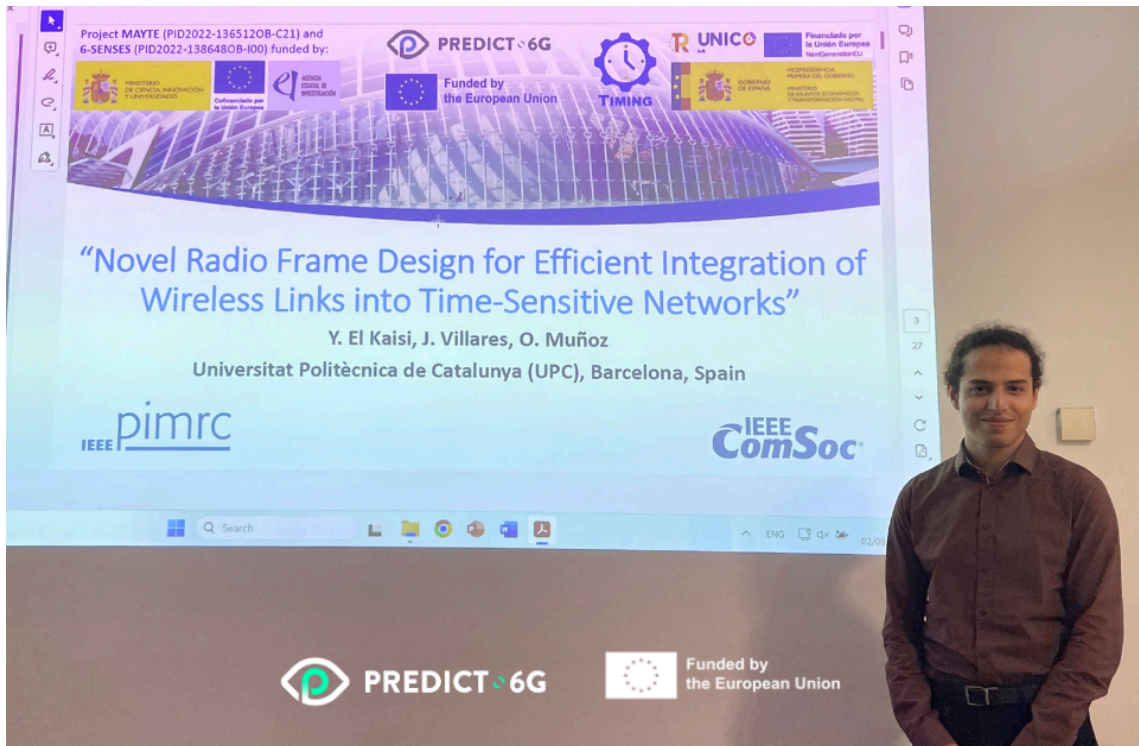


PREDICT-6G at ETFA 2024

The 29th **IEEE International Conference on Emerging Technologies and Factory Automation (ETFA)** 2024 took place from 10 to 13 September 2024 in Padova, Italy. This conference brings together professionals from industry and academia to share cutting-edge concepts, recent developments, research results, and practical achievements in industrial and factory automation. The key goal is to foster the enhancement and application of scientific techniques, models, and tools that support the efficient design and operation of industrial and factory automation systems.

Several PREDICT-6G partners were there to present work related to the project: [Pietro Giuseppe Giardina](#) from [Nextworks](#), [Claudio Zunino](#), principal investigator of [Consiglio Nazionale delle Ricerche \(CNR\)](#), and INTEL, CNR and the University of Padova presented the '[Time-Sensitive Networking for Trajectory Tracking of an Unmanned Ground Vehicle over Wi-Fi](#)' paper in the Special Session – Exploring the limits of Time Sensitive Networking.

Discover more



IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC) 2024

IEEE International Symposium on Personal, Indoor and Mobile Radio Communications ([PIMRC](#)) took place on the 2-5 September 2024 in Valencia, Spain. Under the theme “Elevating 6G Beyond Connectivity”, PIMRC is one the **flagship conferences for IEEE Communications Society** with a special focus on cutting-edge wireless technology research and innovations.

PREDICT-6G was represented by two consortium partners: [Universitat Politècnica de Catalunya](#) presented the paper ‘Novel Radio Frame Design for Efficient Integration of Wireless Links into Time-Sensitive Networks’, and [Politecnico di Torino](#) presented the paper ‘Target Wake Time Scheduling for Time-Sensitive Networking in the Industrial IoT’.

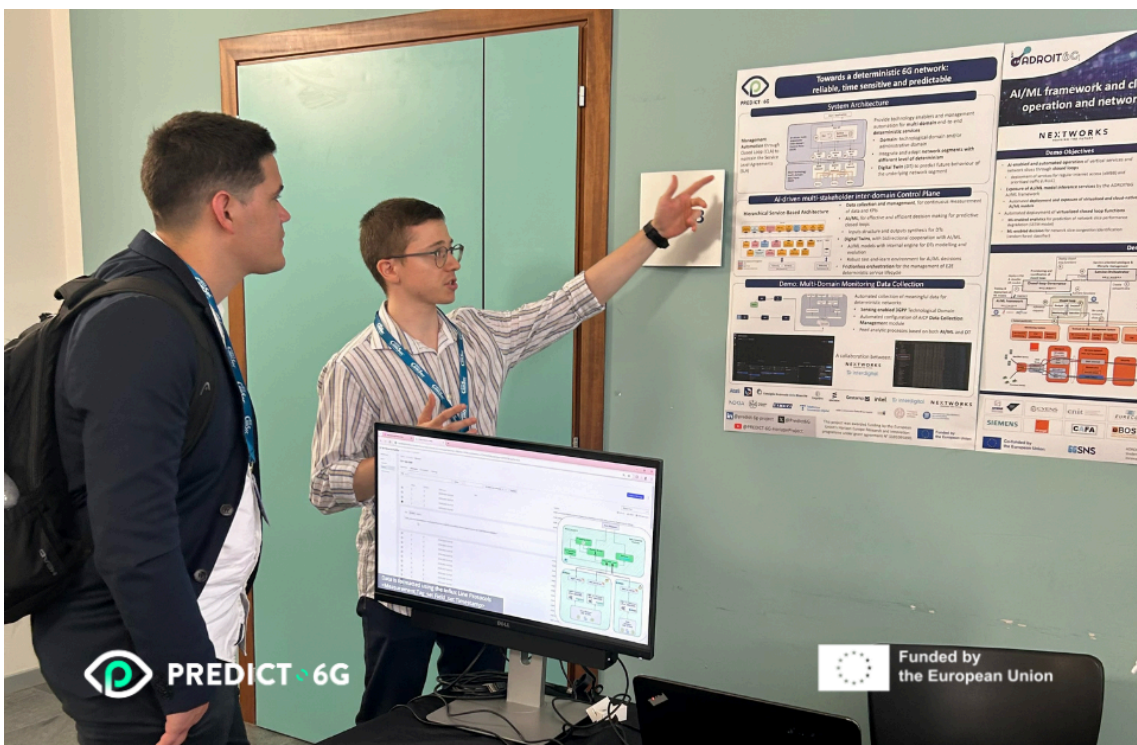
Discover more



PREDICT-6G at ICTON

The International Conference on Transparent Optical Networks ([ICTON](#)) 2024 was held from 14 to 18 July 2024 in Bari, Italy. [Universitat Politècnica de Catalunya](#) organised the 6G Network Operation (6GNeO) workshop as part of ICTON, with a special session on Time Sensitive Networking (TSN) and Deterministic Networking (DetNet). In this session, [Telefónica Innovación Digital](#) presented a paper.

Discover more



PREDICT-6G at IEEE HPSR

The IEEE 25th International Conference on High Performance Switching and Routing (**HPSR**) was held 22-24 July 2024 in Pisa, Italy. The main focus of the HPSR 2024 was to assess how breakthrough changes occurring to networks and telecom are affecting areas related to switching and routing, and communication networks in general.

PREDICT-6G was **represented by our consortium member [Nextworks](#)**, which had a booth showcasing a poster and the screening of the demo jointly developed with InterDigital: “Monitoring Data collection Integration with a Sensing-Enabled 3GPP Technology Domain”.

[Discover more](#)

WORKSHOP

Upcoming event
MobiCom 2024

6G-PDN 2
2nd workshop on 6G Programmable
Deterministic Networking with AI (6GPDN)

acm sigmobile

November 18, 2024

MobiCom - Washington DC, USA

JOIN US!

DETERMINISTIC6G DESIRE6G PREDICT6G

Funded by the European Union

Join PREDICT-6G at MobiCom 2024

The Annual International Conference on Mobile Computing and Networking (**MobiCom 2024**) will be held on the 18-22 of November in Washington DC, USA. In this scope, **DESIRE6G**, **DETERMINISTIC6G** and **PREDICT-6G** will co-organise the 2nd workshop on "6G Programmable Deterministic Networking with AI" (6G-PDN 2), which will take place on the 18th November.

[Discover more](#)

UPCOMING EVENTS



UPCOMING EVENTS

PREDICT-6G is in its final year and the consortium partners are showcasing progress on the project, presenting the latest publications and papers at various events taking place in the coming months. Here is a list so you don't miss any of the **events taking place between October and December 2024**.

[List of upcoming events](#)



Funded by
the European Union



PREDICT-6G

You have received this email because you are subscribed to our newsletter.

This newsletter has been prepared by the PREDICT-6G project, which is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. The European Union cannot be held responsible for them.

The PREDICT-6G project and its consortium partners are not liable for any consequence stemming from the reuse of this publication.

