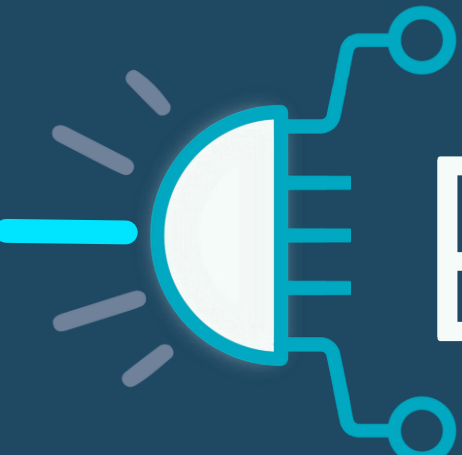


Alessandro Scordo

Laboratori Nazionali di Frascati - INFN

COST ACTION CA24131

European Network for radiation-detection based Research and
Innovation addressing increasing societal CHallenges (ENRICH)



ENRICH

CA24131 – ENRICH: Annual Meeting Introduction



CA24131 – ENRICH: Aims and Scopes

European Network for research and innovation in Radiation-based applications to address Increasing societal Challenges

Main Scope:

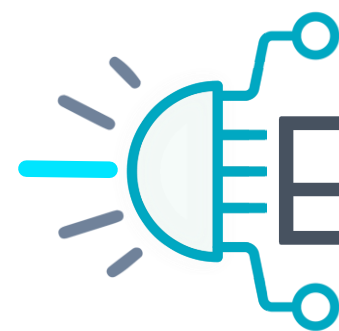
Build a broader and multidisciplinary community that exchanges information and expertise, covering fundamental physics, nuclear physics, astrophysics, medical physics, agrifood, and material science.

MoU publication: 12/06/2025

<https://www.cost.eu/actions/CA24131/>

Duration: November 2025–November 2029





ENRICH

CA24131 – ENRICH: Aims and Scopes

ABOUT US

Aim & Description

The ENRICH (European Network for radiation-detection based Research and Innovation addressing increasing societal Challenges) COST Action aims to build a European network of researchers and stakeholders working on radiation-detection based experiments and applications.

Numerous researchers work with photon detection daily, applying it in astrophysics, nuclear and atomic physics, material science, data analysis, simulations, detectors, electronics, optics, medicine, cultural heritage, food safety, fraud detection and others. However, the community remains fragmented, with subcommunities (e.g., nuclear physics, synchrotron users) often working in silos. This lack of crossdisciplinary collaboration limits knowledge exchange and the transfer of technologies from large-scale facilities to smaller labs and industries.

“The community of photon detection is fragmented in sub-communities. ENRICH seeks to unite them, allowing collaboration across sectors and disciplines to accelerate scientific and technological advances in radiation detection”

Working Groups

WG1: Management and Coordination
WG2: Technological Advancement
WG3: Software Advancement
WG4: Electronics and DAQ
WG5: Multidisciplinary and Societal Applications
WG6: Integration and Interchange
WG7: Mentoring, Training and Dissemination

ENRICH seeks to unite these diverse communities, allowing collaboration across sectors and disciplines to accelerate scientific and technological advances in radiation detection.

Such a collaboration will, first of all, focus on pressing scientific questions related to radiation detection in research fields like fundamental physics, nuclear and astrophysics, data analysis, and X- and Gamma ray spectroscopy or imaging.

In addition, the scientific outcomes of ENRICH's activities will enhance Europe's industrial competitiveness by contributing to tackling key societal and technological challenges Europe faces, such as energy autonomy, food security, faster medical diagnostics, and more. These challenges require, indeed, advances in analytical sciences, with radiation-based technologies playing a crucial role across various sectors of science and society.

ENRICH will be grounded on inclusiveness, and special attention will be paid to young researchers, those with caregiving responsibilities, and participants from ITC countries, through mentoring programs, training in proposal submissions, and special initiatives

1st ENRICH COST Annual Meeting

Kraków, 14 – 16 July 2026



Welcome to 1st ENRICH COST Annual Meeting
held at Jagiellonian University in Kraków, Poland

14 July 2026 Faculty of Physics, Astronomy and Applied Computer Science UJ

- Opening
- Working Groups and Coordinators Reports
- Scientific Sessions
- Conference Reception

15 July 2026 Faculty of Physics, Astronomy and Applied Computer Science UJ

- Working Groups and Coordinators Reports
- Scientific Sessions

16 July 2026 Collegium Novum

- Tour to Jagiellonian University Museum in Collegium Maius
- CORE Group Meeting
- Management Committee Meeting

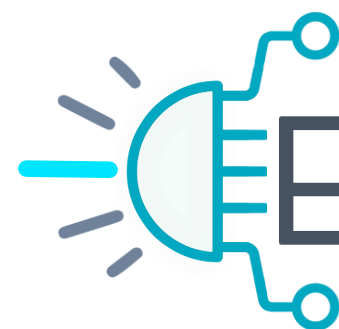
>90 participants | >30 countries | >60 institutions | 7 working groups



Thanks to the Jagiellonian University of Krakow
for hosting us!

Special thanks to Magdalena Skurzok, for the
excellent (not yet tested 😊) organization

Special thanks to the Heidi Cattaneo from Eastern
Switzerland University of Applied Sciences (OST),
our Grant Holder Manager, for all the patient
support to all our activities



ENRICH

CA24131-ENRICH: Core Group

Leadership & Members

Dr Alessandro Scordo

Action Chair



Dr Silvia Cipiccia

Action Vice Chair



Dr Francesca Bonfigli

WG1 Leader



Prof Leonardo Abbene

WG2 Leader



Dr Manuel Sanchez del Rio

WG3 Leader



Dr Chris Armstrong

WG4 Leader



Dr Ivana Tucaković

WG5 Leader



Dr Uddhab Chaulagain

WG6 Leader



Dr Michela Esposito

WG7 Leader



Additional Roles

Dr Davide Bleiner

GRANT HOLDER SCIENTIFIC REPRESENTATIVE

Dr Adriana Postiglione

SCIENCE COMMUNICATION COORDINATOR

Dr Magdalena Skurzok

GRANT AWARDING COORDINATOR

Dr Eugenia Naselli

YOUNG RESEARCHERS' COORDINATOR

Dr Peter Oberta

STAKEHOLDERS' CONTACT POINT

Dr Eva Marguí

EVENTS' COORDINATOR

Dr Simone Manti

WG3 CO-LEADER

Dr Luca Brombal

WG5 CO-LEADER

Dr Silvia Cipiccia

WG6 CO-LEADER

Dr Alessandro Scordo

WG1 CO-LEADER

Dr Michela Fratini

WG4 CO-LEADER

Mr Jesel Patel

WG2 CO-LEADER

Dr Catalina Oana Curceanu

WG7 CO-LEADER

Thanks to our Core Group for all the excellent job(s) done so far



CA24131-ENRICH: Annual Meeting

Thanks to all participants in-person or online

Contributions:

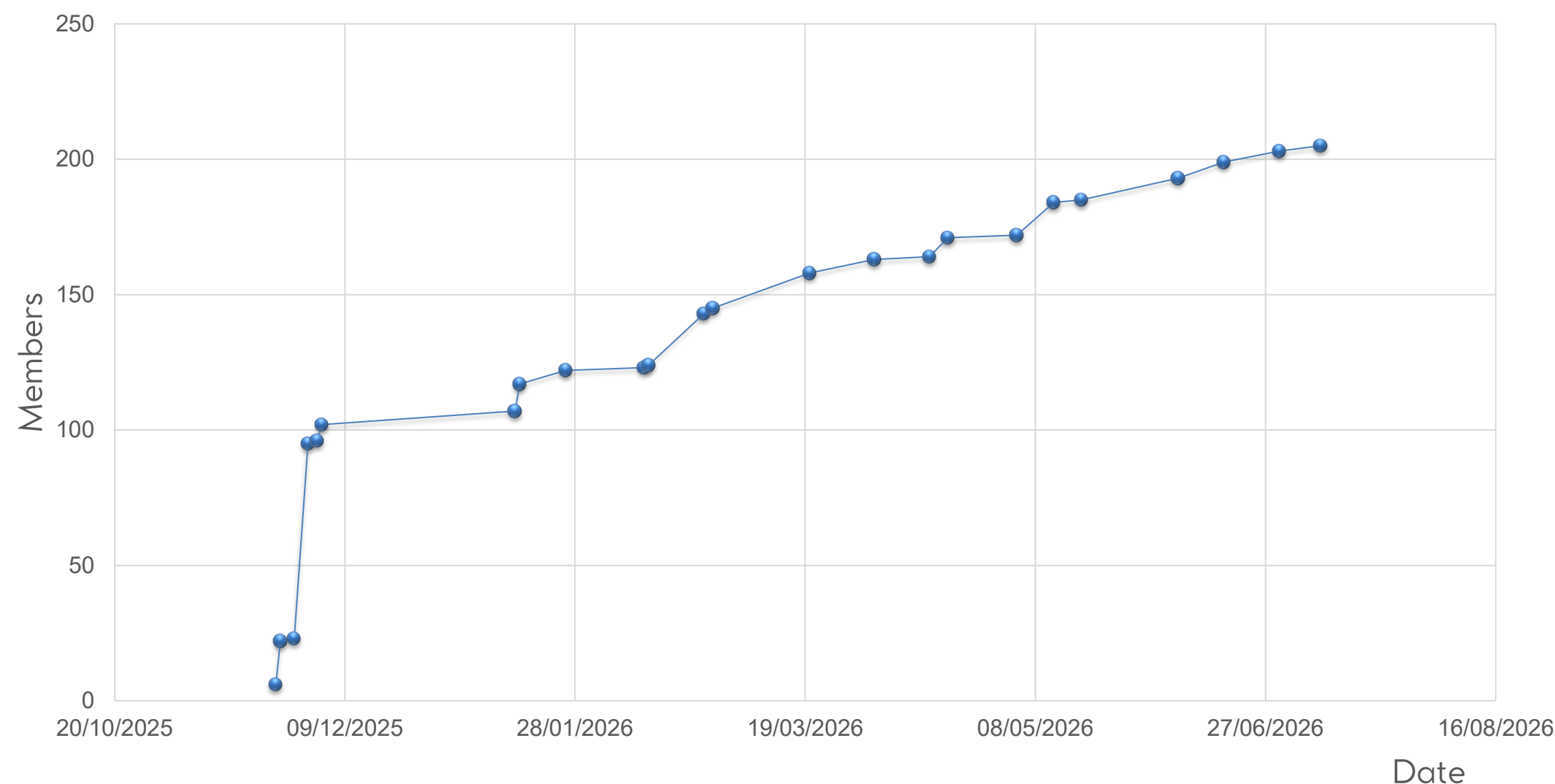
18 Invited Contributions on research activities and outcomes
7 Reports from WG Leaders
5 Reports from Coordinators

Tough timeschedule but we are glad to be able to have all of you here

(Please, stay in time)

< Tue 14/07 Wed 15/07 Thu 16/07 All days >			< Tue 14/07 Wed 15/07 Thu 16/07 All days >		
Print PDF Full screen Detailed view Filter			Print PDF Full screen Detailed view Filter		
09:00	Registration & coffee		09:00		
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	09:00 - 10:00		StakeHolder Coordinator	Peter Oberba
10:00	Opening & introduction		10:00	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	09:50 - 10:05
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	10:00 - 10:20		Working Groups Report: WG2 Report	Leonardo Abbene
	Working Groups Report: WG1 Report	Francesca Bonfigli		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	10:05 - 10:15
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	10:20 - 10:30		High-Z Sensor Materials and Detection Systems for Photon Science	Matt Wilson
	Working Groups Report: WG 3 Report	Manuel Sanchez del Rio		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	10:15 - 10:40
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	10:30 - 10:40		Novel silicon 3D-trench pixel detectors with gain, based on 8-inch CMOS process, for timing applications	Gordana Lastovicka-Medin
11:00	Deep-Learning-Based Anomaly Detection in Low-Count Gamma-Ray Spectra Using Compact CZT Detector	Konstantinos Karafasoulis	11:00		
	Machine-Learning-Assisted Screening of Materials for Advanced Gamma-Ray and X-Ray Detectors	Alper Sefa Donmez		MEMS based Ultrasonic Technology For Radiation Dedection	Fikret Yildiz
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	11:05 - 11:30		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	11:05 - 11:30
	Coffee break			Coffee break	
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	11:30 - 12:00		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	11:30 - 12:00
12:00	Working Groups Report: WG4 Report	Michela Fratin	12:00	Photon counting with columnar CsI-Tl	Sarah Bugby
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	12:00 - 12:10		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	12:00 - 12:25
	Data Acquisitions System for High Bandwidth Detectors and Real Time Processing	Matt Wilson		X-Ray Imaging applications	Mihai Iovea
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	12:10 - 12:35		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	12:25 - 12:50
	Electronics and data acquisition for research and education	Mihai Cucu		Science Communication Coordinator	Adriana Postiglione
13:00	Young Researchers' Coordinator	Eugenia Naselli	13:00	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	12:50 - 13:05
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	13:00 - 13:15		Conference photo	
	Lunch			Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	13:05 - 13:15
				Lunch	
14:00			14:00		
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	13:15 - 14:30		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	13:15 - 14:30
	Grant Awarding Coordinator	Magdalena Skurzok		Working Groups Report: WG5 Report	Luca Bromberg
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	14:30 - 14:45		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	14:30 - 14:40
	Translating X-ray ptychography from synchrotrons to a small-scale laboratory: progress and challenges	Luca Fardini		X-Ray Fluorescence-Based Methods: An Overview of Applications Current Challenges, and Opportunities for Future De...	Eva Margui
15:00	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	14:45 - 15:10	15:00		
	Laser-Driven X-ray Sources at ELI Beamlines for Ultrafast Spectroscopy, Diffraction, and Imaging	Jaroslav Nejedly		The Role of X-Ray Fluorescence-Based Methods in the Biological and Biomedical Fields: Applications and Challenges	Jasna Jablan
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	15:10 - 15:35			
	Femtosecond X-rays from Laser plasma accelerators	Kim Ta Phuoc		Advances in positronium and quantum entanglement imaging with JPET	Pawel Moskal
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	15:35 - 16:00		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	15:30 - 15:55
16:00	Coffee break		16:00	Coffee break	
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	16:00 - 16:30		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	15:55 - 16:30
	Working Groups Report: WG7 Report	Michela Esposito		The potential of virtual histology by X-ray computed tomography in human carcinoma evaluation	Sandro Donato
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	16:30 - 16:40		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	16:30 - 16:55
	Strengthening participation in European Research and Innovation programmes: Practical lessons from proposal develo...	Anastasios Tsakias		Working Groups Report: WG6 Report	Silvia Cipiccia
17:00			17:00	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	16:55 - 17:05
	Navigating European Research Funding: Key Opportunities for Early Career Researchers	Michela Esposito		Event Coordinator	Eva Margui
	Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	17:05 - 17:30		Faculty of Physics, Astronomy and Applied Computer Science, Jagiellonian University	17:05 - 17:20
				Closing	

CA24131-ENRICH Community



207 Total Participants

33% Women – 67% Men

39% Young Researchers (< 40 years old)

52% from Inclusivness Target Countries

38 Countries Involved

30 Countries Represented in the MC

More numbers and statistics in WG1 Report

Acknowledgements

This presentation is based upon work from COST Action ENRICH - CA24131, supported by COST (European Cooperation in Science and Technology).

COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

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