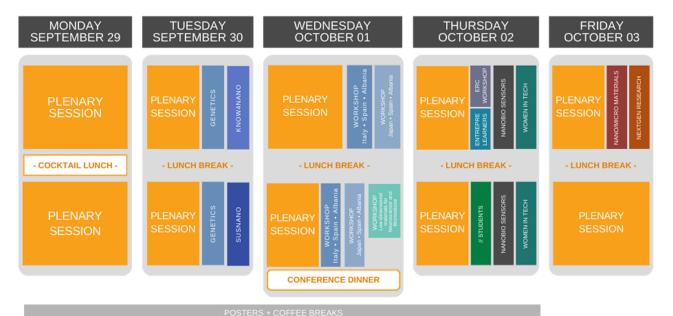
NANOBALKAN2025

TENTATIVE PROGRAM



MONDAY SEPTEMBER 29, 2025 PLENARY SESSION \rightarrow (BALSHA room) Pag. 2 TUESDAY SEPTEMBER 30, 2025 PLENARY SESSION \rightarrow (BALSHA room) Pag. 3 Satellite Workshop - Genetics and molecular biology → (METROPOL room) Pag. 7 Satellite Workshop - Know4Nano - (Access restricted) → (CONSORTIUM room) Satellite Workshop – SUSNANO - (Access restricted) → (CONSORTIUM room) WEDNESDAY OCTOBER 01. 2025 PLENARY SESSION \rightarrow (BALSHA room) Pag. 4 Satellite Workshop - Albania, Italy and Spain \rightarrow (METROPOL room) Pag. 8 Satellite Workshop - Albania, Japan and Spain \rightarrow (ABRET room) Pag. 9 Workshop on Low-dimensional materials for Neuroscience and Biomedicine \rightarrow (CONSORTIUM room) Pag. 10 THURSDAY OCTOBER 02, 2025 PLENARY SESSION → (BALSHA room) Pag. 5 PARALLEL SESSION - PhD Students → (CONSORTIUM room) Pag. 11 ERC Workshop \rightarrow (CONSORTIUM room) Pag. 12 Entreprelearners Seminar → (CONSORTIUM room) Pag. 13 NanoBiosensors School → (METROPOL room) Pag. 14 Workshop Women in STEM: Nanotech and Green Energy →(ABRET room) Pag. 15 FRIDAY OCTOBER 03, 2025 PLENARY SESSION \rightarrow (BALSHA room) Pag. 6 Workshop on (Nano/Micro) Materials \rightarrow (METROPOL room) Pag. 16 NextGen Research Workshop → (CONSORTIUM room) Pag. 17

POSTER LIST Pag. 18



Tentative Program PLENARY SESSION

(as of 29/09/2025)

MONDAY SEPTEMBER 29, 2025

08:00-09:00 09:00-09:30	Registration Opening Ceremony
03.00-03.30	· · · · · · · · · · · · · · · · · · ·
	Chairperson: Arzum Erdem Gürsan (Ege University, Türkiye)
09:30-10:00	Gustau Catalán (ICN2, Spain) K
	The Bending Boost: Polarization Pathways to Enhanced Photostriction and Photovoltaics
10:00-10:20	Maria Guix (University of Barcelona, Spain)
	Animating living robots with compliance and biosensing
10:20-11:20	Coffee Break / Poster Session
	Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Spain)
11:20-12:00	Andrea Ferrari (Cambridge Graphene Centre / University of Cambridge, UK) P
	Light Scattering and Emission from Layered Materials Heterostructures
12:00-12:30	Jose A. Garrido (ICN2, Spain) K
	Graphene thin film technology for neural interfaces
12:30-14:00	Cocktail Lunch (offered by NanoBalkan2025 organisers)
14:00-14:30	Poster Session I
	Chairperson: Cecilia Jimenez (CSIC, Spain)
14:30-15:00	Mariangela Di Donato (CNR-ICCOM, Italy) K
	Self-assembled nanoparticles for photoinduced and photothermal therapies
15:00-15:30	Josep Nogués (ICN2, Spain) K
	Magnetoplasmonic Nanocapsules as Wirelessly Controlled Nanotherapies
15:30-16:00	Javier Ramón-Azcón (IBEC, Spain) K
	Organs-on-chip with integrated optical sensors: advanced models for evaluation of
	potential therapies
16:00-16:30	Nunzio Denora (Università degli Studi di Bari Aldo Moro, Italy) K
	Advancing Glioma Therapy through Microfluidic Fabrication of Hybrid Liposomes with
	Homotypic Targeting
16:30-17:30	Coffee Break / Poster Session
20130 27130	Chairperson: Javier Ramón-Azcón (IBEC, Spain)
17:30-18:00	Cecilia Jimenez (CSIC, Spain) K
2 20.00	Smart microsensors for Total Aquatic Process Monitoring and Control
18:00-18:30	Arzum Erdem Gürsan (Ege University, Türkiye) K
10.00 10.00	Advancing Nucleic Acid Biosensors based on nanomaterials for electrochemical
	monitoring of Nucleic Acid interactions
	monitoring of Nucleic Acid interactions

TUESDAY SEPTEMBER 30, 2025

	Chairperson: Fabiana Arduini (University of Rome "Tor Vergata",	Italv)
09:00-09:20	Laura Rodriguez-Lorenzo (INL, Portugal)	l l
	Plasmonic Hybrid Composites as Excellent Nanoplatform for Surface-Enhanced Raman	
	Scattering-based Sensors	
09:20-09:40	Pilar Rivera Gil (Universitat Pompeu Fabra, Spain)	1
	A SERS-active plasmonic nanosensor-chemometrics platform reveals a biphasic zinc	
	switch that controls breast-cancer metastasis	
09:40-09:55	Víctor Ruiz-Valdepeñas Montiel (Universidad Complutense de Madrid, Spain)	0
	Electroanalytical Biotools Targeting Globally Non-Canonical G-quadruplex DNA	
	Structures: Towards Accessible Cancer Diagnosis and Therapy	
09:55-10:10	Marina Serin (EGE university, Turkey)	0
	Determination of DAMP Signals from Immunogenic Cell Death Biomarkers for Anticancer	
	Drug Development Studies with Nano Electrochemical Aptasensor	
10:10-10:30	Marijana Petković (University of Belgrade, Serbia)	- 1
	S-doped carbon dots stimulate overexpression of ribosomal and change expression of	
	proteasomal proteins in HeLa cervical cancer cell line	
10:30-11:00	Coffee Break / Poster Session	
	Chairperson: Laura Rodriguez-Lorenzo (INL, Port	ugal)
11:00-11:30	Fabiana Arduini (University of Rome "Tor Vergata", Italy)	K
	Paper-based electrochemical (bio)sensors: where we are and where we are going	
11:30-12:00	Fabio Di Francesco (University of Pisa, Italy)	K
	Next-Generation Biosensing Technologies for the Detection of Infectious Agents	_
12:00-12:15	Federico Vivaldi (University of Pisa, Italy)	0
42.45.42.45	Solid state electrochemical sensor for the detection of hydrogen	17
12:15-12:45	Sibel A. Özkan (Ankara University, Türkiye)	K
	Fabrication of Nanomaterial Embedded Molecularly Imprinted Polymer-Based Sensors	
12.45 12.15	and its Electrochemical Applications	V
12:45-13:15	Paola Minghetti (Università degli Studi di Milano, Italy) The European Regulatory Framework for Nanomedicines: Is It Suitable for the Future?	K
13:15-14:15	Lunch	
13.13 14.13	Chairperson: Neus Gomez Bastus (ICN2, S	nain)
14:15-14:45	Winnie Edith Svendsen (DTU, Denmark)	K
00	Laser-Scribed Graphene Electrodes for Advanced Electrochemical Biosensing: From	• • •
	Material Properties to Real-World Applications	
14:45-15:05	Alessandro Silvestri (Università Ca' Foscari Venezia, Italy)	1
	Nanomaterial-based smart inks for electrochemical sensors	
15:05-15:25	Mònica Mir Llorente (IBEC, Spain)	1
	Integrated sensors in humanized models to study neurodegeneration	
15:25-15:55	Carsten Sönnichsen (University of Mainz, Germany)	K
	Plasmons for sensors implanted under the skin	
15:55-16:15	Ulku Anik (Mugla Sitki Kocman University, Türkiye)	1
	Biosensors Based on Infection Mechanism Mimicry at The Core of Diagnostic Systems	
16:15-16:35	Alfredo de la Escosura-Muñiz (University of Oviedo, Spain)	- 1
	Use of novel bimetallic nanoparticles as labels in biosensing for applications in clinical diagnostics	
16:35-17:15	Coffee Break / Poster session	
	Chairperson: Carsten Sönnichsen (University of Mainz, Germ	
17:15-17:45	Neus Gomez Bastus (ICN2, Spain)	K
	Disordering by Design: High-Entropy Alloy Nanocrystals via Galvanic Replacement	
	Reactions for Catalytic Applications	_
17:45-18:15	Fetah Podvorica (University of Prishtina, Republic Kosovo)	K
	Functionalization of the surfaces of materials with organic moieties using aryl diazonium	
40.45.40.05	salts as a radical source	_
18:15-18:30	Sefer Avdiaj (University of Prishtina, Republic of Kosovo)	0
	The Influence of 3D Printing Type and Structure on the Diffusion and Permeability	
	Properties of Polymeric Materials	

WEDNESDAY OCTOBER 01, 2025

	WEDNESDAY OCTOBER 01, 20	
	Chairperson: Michal Otyepka (RCPTM, Czech Repul	
09:00-09:30	Steven Dunn (London South Bank University, UK) Corona-Boosted Piezocatalysis: Transforming Ferroelectric Materials for Enhanced Water Splitting	K g
09:30-09:50	Kledi Xhaxhiu (University of Tirana, Albania) Rapid and low-cost determination of flavonoids and hormones using nanomodified-CPE in combination with ESV	I
09:50-10:20	Francesco Ricci (University of Rome, Tor Vergata, Italy) DNA-Protein Hybrids as Multifunctional Nanodevices	K
10:20-11:00	Coffee Break / Poster session	
	Chairperson: Francesco Ricci (University of Rome, Tor Vergata, It	taly)
11:00-11:30	Fatih Inci (Bilkent University, Türkiye) Delving into Molecular Fingerprints for Biosensing Applications	K
11:30-11:50	Alexandra Teixeira (INL, Portugal) Microfluidic Nanobiosensors for the Analysis of Minimal Residual Disease in Acute Myeloid Leukemia	I
11:50-12:10	Bergoi Ibarlucea Canton (Tecnalia, Spain) Antibody-nanocluster Biohybrids and Multimodal Wearable Biosensors for Cost-Effective	1
12:10-12:25	and Personalized Health Monitoring) Hoi Tung Lam (University of Exeter, UK)	0
40.07.45.55	Sustainable and Scalable 2D Materials for Wearable Self-Powered Sensing	_
12:25-12:40	Albana Veseli (University of Prishtina, Republic of Kosovo) Electro-Sensing of Herbicides Enhanced by Nanomaterials in Environmental Samples	0
12:40-12:55	Toufic El Beaino (CIHEAM BARI, Italy)	0
	Development of High-Affinity Aptamers for Xylella fastidiosa Detection Using Comparative SELEX Strategies	
12:55-14:30	Lunch	
	Chairperson: Yeseren Saylan Inci (Hacettepe University, Türk	kiye)
14:30-15:00	Sabato D'Auria (CNR, Italy)	Κ
15.00 15.20	The use of proteins as a new avenue for the design of optical biosensors	
15:00-15:20	Majlinda Vasjari (University of Tirana, Albania) The rGO@Me impact on modified pastes and printed sensors	ı
15:20-15:40	Sevinc Kurbanoglu (Ankara University, Türkiye)	1
	From Enzymes to Aptamers: The Power of Immobilized Biomaterials in Next-Gen Biosensors	
15:40-16:10	Mamas Prodromidis (University of Ioannina, Greece)	K
	Generation of Nanomaterials via Spark Discharge: A Rapid, Environmentally Friendly, and	
16.10 16.25	Versatile Method for In-Situ Modification of Electrochemical (bio)sensing devices	0
16:10-16:25	Antonella Barone (University Magna Graecia of Catanzaro, Italy) Green vesicles, golden opportunities: plant-derived nanovesicles from pharma to	0
16:25-16:40	cosmetic applications Nicola d'Avanzo (Magna Græcia University of Catanzaro, Italy)	0
10.25-10.40	From Nanovesicles to Fibers: A Hybrid Electrospun Membrane for Enhanced Ketoprofen	U
	Skin Delivery	
16:40-17:10	Coffee Break / Poster Session	
	Chairperson: Mamas Prodromidis (University of Ioannina, Gred	ece)
17:10-17:30	Yeseren Saylan Inci (Hacettepe University, Türkiye) Molecularly Imprinted Sensors Targeting Extracellular Vesicles for Cancer Detection	I
17:30-17:50	Acelya Yilmazer (Ankara University, Türkiye) Leveraging Omics for the Advancement of Cancer Nanotherapeutics	1
17:50-18:10	Bashkim Ziberi (University of Tetova, Republic of North Macedonia)	1
	Combining Radiotherapy and Immunotherapy using nanoparticle loaded immunogenic	•
18:10-18:30	biomaterials for cancer treatment Gjergj Dodbiba (The University of Tokyo, Japan)	1
10.10-10.30	Application of Fine Bubbles for Free Radical Reduction: An Experimental Study	'
18:30-18:45	Rebeca Magnolia Torrente Rodríguez (Universidad Complutense de Madrid, Spain) Pioneering Electrochemical Peepholes for Decoding Epigenomic and Epitranscriptomic	Ο
	Oncological Landscapes	
18:45-19:00	Antonio Lopalco (University of Bari Aldo Moro, Italy)	0
19:00-19:15	Impact of Different Zwitterionic Surfaces on the Performance of Lipid-Based Nanocarriers Rosa Maria Iacobazzi (University of Bari, Italy)	0
19.00-19.13	Microfluidic-Driven Precision Lipid Nanoparticles for Nucleic Acid Delivery	U

THURSDAY OCTOBER 02, 2025

	THORSDAT OCTOBER 02, 20	023
	Chairperson: Pedro Gómez-Romero (ICN2, Sp	pain)
09:00-09:30	Yasuaki Einaga (Keio University, Japan)	K
	Electrochemical Application of Boron-doped Diamond Electrodes	
09:30-10:00	Jordi Sort Viñas (UAB/ICREA, Spain)	Κ
	Magneto-ionics for Low-power Memory, Data Security and Advanced Computing	
10:00-10:15	Antonios Makridis (Aristotle University of Thessaloniki, Greece)	0
10.00 10.13	Magnetite-Gold Hybrid Nanoparticles for Dual-Modality Biosensing and Targeted Therapy	
	in Neurodegenerative Disorders	
10:15-11:05	•	
10:15-11:05	Coffee Break / Poster Session	. \
	Chairperson: Jordi Sort Viñas (UAB/ICREA, Sp	
11:05-11:35	Aristides Bakandritsos (Palacky University of Olomouc, Czech Republic)	K
	Low-Dimensional Functional Materials for Catalysis and Energy Storage	
11:35-12:05	Pedro Gómez-Romero (ICN2, Spain)	K
	The nano-approach to hybrid energy storage	
12:05-12:25	Tariq Sajjad (London South Bank University, UK)	- 1
	Mesoporous WO₃ Nanoplates: Smart Materials for Integrated Photonic Energy Storage	
	and Catalysis	
12:25-12:45	Hirotomo Nishihara (IMRAM, Tohoku University, Japan)	1
	Three-dimensional mesoporous graphene for energy applications	
12:45-13:05	Kostas Rogdakis (Hellenic Mediterranean University, Greece)	- 1
	Printable memristive solar cells based on Lead-free perovskites for self-powered artificial	•
	synapses and neurons	
13:05-13:20	John Buckeridge (London South Bank University, UK)	0
13.03-13.20	Determining the thermodynamics of disorder at the nanoscale using quantum computing	U
13:20-14:30		
13:20-14:30	Lunch	
	Chairperson: Dritan Siliqi (CNR, I	
14:30-15:00	Francesco Trotta (University of Turin, Italy)	K
	The two aspects of cyclodextrin polymers: exploring soluble and insoluble worlds through	
	synthetic routes, characterization and applications.	
15:00-15:30	Gianluca Fiori (University of Pisa, Italy)	K
	Ultra-Conformable Circuits Based on MoS₂ Transistors and High-Precision Printing	
	Technologies	
15:30-15:50	Suela Kellici (London South Bank University, UK)	1
	Design–Synthesis–Performance Framework for Advanced Nanomaterials using	
	Continuous Flow	
15:50-16:20	Coen de Graaf (ICREA/URV, Spain)	K
	Many-electron band structures based on Non-Orthogonal Configuration Interaction to	
	study exciton dispersion and charge transport	
16:20-16:40	Sachiko Matsushita (Institute of Science Tokyo, Japan)	- 1
	Redox reaction of thermally excited carriers: Semiconductor-sensitized thermal cell	•
16:40-17:20	Coffee Break / Poster Session	
10.40-17.20		taly)
17.20 17.40	Chairperson: Gianluca Fiori (University of Pisa, I	taly)
17:20-17:40	Tomoko Shimizu (Keio University, Japan)	ı
	Characterization of Organic Porous Thin Films Fabricated at the Air/Liquid Interface Using	
4= 40	Atomic Force Microscopy and Nano-FTIR Spectroscopy	
17:40-18:10	Dritan Siliqi (CNR, Italy)	K
	Unveiling Complexity: Small-Angle X-ray Scattering (SAXS) as a Powerful Tool in	
	Bioscience — from Nanomaterials to Biomolecules	
18:10-18:30	Hiroaki Onoe (Keio University, Japan)	I
	Hydrogel-based sealed microwell array for analyzing extracellular vesicles secreted from	
	single cells	
18:30-18:50	Pinar Kara (Ege University, Türkiye)	- 1
	Electrochemical Aptasensing Approach for Measuring Myelin Basic Protein Levels in	
	Demyelination and Neurological Disorders	

FRIDAY OCTOBER 03, 2025

	· ·	
	Chairperson: Gianni Ciofani (IIT, I	taly)
09:00-09:30	Giulia Palermo (The University of California Riverside, USA)	K
	Deep Learning and Computational Modelling for the Next Generation of CRISPR	
	Technologies	
09:30-09:50	Marcel Langer (EPFL, Switzerland)	I
	Recent developments in machine learning force fields: Foundation models, symmetries,	
	constraints, and long-range interactions	
09:50-10:10	Chiara Zanardi (Ca´ Foscari University of Venice, Italy)	I
	Unusual amperometric detection of ions using machine learning applied to	
	hexacyanoferrate and graphene oxide modified electrodes	
10:10-10:30	Genc Basha (University of British Columbia, Canada)	1
	Stimulation of morphological changes of Lipid Nanoparticle Formulations of mRNA Leads	
	to Improved Transfection Potency	
10:30-11:00	Coffee Break	
	Chairperson: Arben Merkoci (ICREA - ICN2 - BIST, Sp	oain)
11:00-11:30	Gianni Ciofani (IIT, Italy)	K
	Light-Responsive Biodegradable Nanotransducers for Cellular Modulation: Polydopamine	
	Nanoparticles as a Promising Platform for Healthcare Applications	
11:30-12:00	Ilaria Fratoddi (Sapienza University of Rome, Italy)	K
	Tuneable Interfaces in Single-Metal and Hybrid Nanoparticles: A Toolbox for Adaptive	
	Sensing and Therapeutics	1
12:00-12:20	Ardian Jusufi (ETH and UZH Institute for NeuroInformatics, Switzerland)	
	Bioinspired anisotropic Microspines enable agile Robots' control-efficient Disturbance Reju	ection
12:20-12:50	Raik Grünberg (KAUST, Saudi Arabia)	K
	Multi-enzyme MOF nanoreactors transplant a drug biosynthesis pathway into cells	
12:50-13:20	Mariana Medina Sanchez (CIC nanoGUNE, Spain)	K
	Rolled-Up Nanomembrane Sensors: Enabling Multi-Scale Monitoring from Molecules to	
	Embryos	
13:20-13:40	Filiz Kuralay (Hacettepe University, Türkiye)	1
	Nano/Micromaterials for Sensing and Drug Delivery	
13:40-13:55	Flamur Sopaj (University of Prishtina, Republic of Kosovo)	0
	Characterisation of graphite fibre anode used for organic pollutants removal from	
	aqueous media	
13:55	CLOSING & NANOBALKAN2026 ANNOUNCEMENT	

Tentative Program SATELLITE WORKSHOP Genetics and molecular biology

(as of 26/09/2025)

1st Collaborative session Molecular Biomarkers and Statistical Learning in Predictive, Preventive and Personalised Medicine

Cooperation event between genetics Albania and Nanobalkan regional center





SEPTEMBER 30, 2025

	SEPTEMBER 30, 2025
	Chairperson: Pirro Hysi (King's College London, United Kingdom)
09:00-09:30	Pirro Hysi (King's College London, United Kingdom)
	Future opportunities and challenges in genomic medicine
09:30-10:00	Merita Xhetani (University of Tirana, Albania)
	Exploring the Relationship Between Pregnancy Loss and Genetic Factors: An Examination
	of Fetal Chromosomal Abnormalities
10:00-10:30	Endri Visha (Department of Health Science, Università del Piemonte Orientale, Italy)
	Discovery of Novel Functional SNPs in the IFNGR2 Region Associated with Multiple
	Sclerosis Pathogenesis Starting from GWAS Data
10:30-11:00	Coffee Break / Poster Session
	Chairperson: Mirela Lika (ASHMG, University of Tirana, Albania)
11:00-11:30	Bani Tamraz (University of California San Francisco, USA)
	Point of care use of pharmacogenetics
11:30-12:00	Christopher Bell (Queen Mary University of London, United Kingdom)
	Epigenomic Insights into Human Health & Disease
12-00-12:30	Sidorela Dunolli (University Hospital Koço Gliozheni, Albania)
	Artificial Intelligence in embryo selection: integrating genetic profile with morphology
12-30-14:00	Lunch break
	Chairperson: Merita Xhetani (University of Tirana, Albania)
14:00-14:30	Ajda Pristavec (King's College London, United Kingdom)
	Machine learning exploration of the human metabolism in health and disease
15:00- 15:30	Mario Falchi (King's College London, United Kingdom)
	Microbiome: the human species' evolutionary waltz with bacteria
15:30-16:00	Gazmend Temaj (College UBT, Calabria, Prishtina, Kosovo)
	Targeted Ribosome Editing and RiboScreenTM: Novel Therapeutic Strategies for LAMB3-
	Related Junctional Epidermolysis Bullosa and Elastin Regeneration
16:00-16:30	Arta Lugaj (University of Tirana, Albania)
	CT-DNA (circulating tumor DNA) as a non-invasive biomarker for monitoring tumor
	progression
16:30-17:00	Meral Gavaz (Genoks Genetics Center, Turkey)
	Next-Generation Technologies in Modern Disease Diagnosis

3rd Workshop STATE OF THE ART ON NANOTHERAPEUTICS AND NANODIAGNOSTICS

Cooperation event between Albania, Italy and Spain

Tentative Program

(as of 26/09/2025)

OCTOBER 01, 2025

	OCTOBER 01, 2025
09:00-09:15	Welcome, Organizers & Representatives from the Albanian Institutions, Academy of Sciences of Albania, Embassies of Italy and Spain in Tirana
	taran da antara da a
	ITALY
00.45.00.30	Chairpersons: Arben Merkoçi, Nunzio Denora
09:15-09:30	Massimo Fresta (University of Catanzaro, Italy)
	Functionalized hybrid nanoparticles for glioblastoma targeting
09:30-09:45	Teresa Musumeci (University of Catania, Italy)
00.45 10.00	Nose to brain delivery and nanomedicine: a brief journey through successes and setbacks
09:45-10:00	Francesca Selmin (University of Milan, Italy)
10:00-10:15	From Nanotechnology to Medicinal Products: the Dosage Form as the Bridge to Clinical Translation Antonio Lopalco (University of Bari, Italy)
10.00-10.15	
10:20-11:00	Exploring the Frontiers of Drug Delivery and Pharmaceutical Technology: the PhartecoLab Experience Coffee Break / Poster Session
10.20-11.00	
	SPAIN SPAIN
	Chairpersons: Mimoza Basholli, Massimo Fresta
11:00-11:15	Mariana Kober (ICMAB, Spain)
11.15 11.20	Stable nanocarriers for the delivery of nucleic acid therapeutics
11:15-11:30	Mariana Medina Sanchez (CICnanoGUNE, Spain)
	Medical Microrobots for Intrauterine Embryo Transfer: Toward Precision Reproductive Medicine
11:30-11:45	Javier Ramón-Azcón (IBEC, Spain)
11.50 11.45	Biosensor-Integrated Organs-on-a-Chip: Bridging Nanotechnology and Personalized
	Medicine for Advanced Nanotherapeutics and Nanodiagnostics
11:45-12:00	Gabriel Ortega (CICBioGUNE, Spain)
	Engineering conformational biosensors for personalized medicine applications
12:00-12:15	Alejandro Criado (Universidade da Coruña, Spain)
	Graphene Field-Effect Transistor Microarray for Ultrasensitive Virus Detection and Surveillance
12:15-14:30	Lunch break & Brainstorming
	ALBANIA
	Chairpersons: Majlinda Vasjari, Marianna Rossetti
14:30-14:45	Niko Hyka (Medical University of Tirana, Albania)
	Integration of Deep Learning Algorithms with PPIR and AI4MED for advanced medical
	Image analysis and simulations in radiotherapy
14:45-15:00	Gledjan Caka (Faculty of Natural Sciences, University of Tirana, Albania)
	Biomedicine meets machine learning: Mapping melanoma with data
15:00-15:15	Merita Xhetani (Faculty of Natural Sciences, University of Tirana, Albania)
	Amygdalin as a potential breast cancer therapy via BAX/BCL-2 genes mediated apoptosis
15:15-15:30	Bashkim Ziberi (University of Tetova, Albania)
	Nanotheranostics for Cancer Diagnosis and Therapy
15:30-16:40	Wrap-up and Closing remarks
16:40-17:10	Coffee Break / Poster Session

6th Workshop NANOTECHNOLOGIES FOR 21st CENTURY

Tentative Program
(as of 26/09/2025)

Cooperation event between Albania, Japan and Spain

OCTOBER 01, 2025

	OCTOBER 01, 2025
09:00-09:30	Welcome, Organizers & Representatives from the Embassies of Japan and Spain in Tirana
	SPAIN
09:30-09:45	Alfredo de la Escosura-Muñiz (University of Oviedo, Spain)
00.45 10.00	Novel biosensing strategies based on nanoparticles and nanochannels
09:45-10:00	Bergoi Ibarlucea Canton (Tecnalia, Spain) Scalable solutions toward in vitro and in vivo diagnostics
10:00-10:15	Josep Nogués (ICN2, Spain)
	Magneto-optic-electrochemical nanostructures for biomedical, energy and environmental applications
15:15-10:30	Mònica Mir Llorente (IBEC, Spain) Biosensors technologies for biomedical applications
10:30-10:45	Maria Guix (University of Barcelona, Spain)
	Microfluidics and robotics, from Earth to microgravity
10:45-11:15	Coffee Break / Poster Session
44.45.44.00	JAPAN
11:15-11:30	Gjergj Dodbiba (The University of Tokyo, Japan) Title to be defined
11:30-11:45	Yasuaki Einaga (Keio University, Japan)
	CO ₂ reduction by boron-doped diamond electrodes
11:45-12:00	Sachiko Matsushita (Institute of Science Tokyo, Japan) New thermal energy conversion technology: Semiconductor-sensitized thermal cell
12:00-12:15	Hirotomo Nishihara (IMRAM, Tohoku University, Japan)
	Advanced temperature-programmed desorption for ultra-sensitive analysis in inorganic materials
12:15-12:30	Hiroaki Onoe (Keio University, Japan)
12:30-12:45	Biochemical microgel sensor using DNA nanotechnology Tomoko Shimizu (Keio University, Japan)
	Exotic Phenomena Revealed by Tip-Enhanced Raman Spectroscopy of Carbon Nanomaterials
12:45-14:30	Lunch
	₩ ALBANIA
14:30-14:45	Fetah Podvorica (University of Prishtina, Republic Kosovo) Direct grafting of acrylate polymers on electrode surfaces
14:45-15:00	Sadik Cenolli (University of Tirana, Albania)
	Boron-Doped Diamond Modified Carbon Paste Electrodes for Sensitive Electrochemical
45.00.45.45	Detection of Antibiotics
15:00-15:15	Valbona Aliko (University of Tirana, Albania) Deep Learning-Driven Image Analysis for Real-Time Monitoring of Nanomaterial
	Interactions in Biological Systems
15:15-15:30	Magdalena Cara (University of Tirana, Albania)
	Advancing agriculture through nanotechnology-enabled diagnostics and management of
15:30-15:45	plant pathogens Kledi Xhaxhiu (University of Tirana, Albania)
	Extractive stripping voltammetry combined with nanomodifers – a promising tool for
	rapid and low cost determination of antioxidants and hormones
15:45-16:00	Bashkim Ziberi (University of Tetova, Republic of North Macedonia) Funtionalized nanoparticles for cancer diagnosis and therapeutics
16:00-16:15	Brainstorming and session closing
16:15	Closing remarks

1st Workshop

LOW-DIMENSIONAL MATERIALS FOR NEUROSCIENCE AND BIOMEDICINE

Tentative Program

(as of 26/09/2025)





OCTOBER 01, 2025

	Chairperson: Makis Angelakeris
14:30-14:50	Makis Angelakeris (Aristotle University of Thessaloniki, Greece)
	Magnetic nanoparticles as biosensing boosters
14:50-15:10	Stefano Casalini (University of Padua, Italy)
	Water-dispersible graphenes for (bio-)sensing application
15:10-15:30	Dimitrios Fatouros (Aristotle University of Thessaloniki, Greece)
	Engineering 3D-Printed Microneedles for Transdermal Delivery in Alzheimer's Disease
15:30-15:50	Danilo Echeverri (ICN2, Spain)
	Nanostructured Capacitive Biosensing Platforms for Clinical Diagnostics
15:50-16:10	Sandeep Kumar (NOVAPTECH, France)
	The Aptamer advantage: Biosensing Solutions for Neurohealth and Environment
16.10-16:30	Alessandro Silvestri (Università Ca' Foscari Venezia, Italy)
	Electrochemical Sensors for the detection of neurotransmitters: from plasma to in-vitro
	neurodegenerative models
16:30-16:40	Wrap-up and Closing remarks
16:40-17:10	Coffee break / Poster Session

PARALLEL SESSION **PhD Students**

Tentative Program

(as of 26/09/2025)

THURSDAY OCTOBER 02, 2025

	Chairperson: Kledi Xhaxhiu (NANOBALKAN & University of Tirana, Alba	ania)
14:30-14:40	Meriem Gouasmi (University of Turin "UNITO", Italy) Controlled Synthesis of Graphitic Carbon Nitride (g- C_3N_4) via Melamine Polymerization	0
	Using Experimental Design	
14:40-14:50	Carla Arroyo Rivera (Institute for Bioengineering of Catalonia, Spain)	0
	Development of an Electrochemical Multiparametric Sensor for Continuous Monitoring	
	of Cardiovascular Biomarkers	_
14:50-15:00	Kerem Tok (Ege University, Turkey)	0
	Development of CdSe/ZnS-QD protein/peptide coronas from pleural fluids for targeted biomedical use	
15:00-15:10	Konstantina Kazeli (Aristotle University of Thessaloniki, Greece)	0
13.00 13.10	DNA aptamer gold-magnetic nanoconjugates for the detection of Alzheimer's disease	Ū
	biomarkers	
15:10-15:20	Yuki Shimizu (Keio University, Japan)	0
	Production of Carbon Monoxide in One-Chamber Reactor Using Boron-Doped Diamond Electrodes	
15:20-15:30	Kohei Shibano (Keio University, Japan)	0
	Fabrication of Metal-Supported Diamond Electrodes for Direct Formic Acid Fuel Cells	
15:30-15:40	Akant Sengül (Brandenburg University of Technology, Germany)	0
	Optical investigation of Polymer-Functionalization of TiN-Nanohole-Arrays for Integrated	
	Biosensor Applications	
15:40-15:50	Gulsu Keles (Ankara University, Turkey)	0
	Fabrication and Characterization of a Bimetallic Nanomaterial Modified Aptasensor for Organophosphorus Pesticide Sensing	
	Organiophiotas i esticide sensing	

ERC Workshop

Tentative Program

(as of 26/09/2025)

THURSDAY OCTOBER 02, 2025

09:00-09:15	Mirela Muça (National Agency for Scientific Research and Innovation (AKKSHI), Albania) Funding opportunities for scientific research in Albania, through national and	0
09:15-11:00	international programs Juan Artes (European Research Council- ERC, Belgium) ERC and researchers in Widening Countries	0
11:00-11:30	Brixhilda Gurakuqi (Albanian-American Development Foundation, Albania) BRIDGE the Gap: Strengthening Universities for EU Opportunities	0

ENTREPRELEARNER SEMINAR

James Basha (Entreprelearners, Spain)



TALK 1 OCTOBER 02, 2025

11:30-12:00

From Lab to Impact: The Scientist's Guide to Captivating Any Audience Communicating for Impact: Getting your message to stick

You've dedicated years to your groundbreaking research. But what if its impact is limited by not being able to deliver its impact? Yet many great ideas fail, not in the lab, but in the conference room, unable to capture attention or secure resources

In this dynamic and practical session, you will learn some of the secrets of master communicators. We'll move beyond bullet points but we will look at the 3 most important components great communicators work on and should you:

The Speaker, The Message & The Audience.

This isn't just a presentation skills talk; it's a mindset shift towards becoming a great communicator, to make sure your work gets the attention and funding it deserves. You will leave with immediate, actionable frameworks you can use in your very next talk.

TALK 2 OCTOBER 02, 2025

12:00-12:45

Design your Lab for Growth: Identify and Develop the Key Skills to Stay Ahead and Motivated

Identifying & Developing True Skills to stay ahead and motivated

What it takes to succeed in science is changing. Technical mastery is the price of entry, the researchers who lead, get funded, and make a lasting impact are those who proactively identify and develop key fundamental and emerging skills.

But how do you identify what to learn while you are dealing with workload?

And how do you stay motivated through experiments that fail and papers that get rejected? This session provides you the tools how to design your personal Roadmap for growth. We will move from theory to practice, using a simple framework to identify your sttengths, define your purpose about why you do what you do, create a actionable roadmap, and integrate learning into your daily work through real-world challenges.

This session will give you the tools to design your personal roadmap for growth. We will move from theory to practice, using a simple framework to:

- Identify your unique strengths.
- Define your purpose your 'why you do what you do'
- How to create an actionable plan for your development.
- Integrate learning into your daily work through real-world challenges.

You will leave with a clear framework, personal plan to future-proof your career and maintain the passion that fuels your work.

NANOBIOSENSORS SCHOOL

Tentative Program

(as of 26/09/2025)

OCTOBER 02, 2025

	OCTOBER 02, 2023
09:00-09:10	Arben Merkoçi (ICN2, Spain)
	Welcome & Opening Remarks
09:10-09:40	Andrea Bonini (Department of Chemistry "Ugo Schiff", University of Florence, Italy)
	Sensing proteins at the single-molecule level using biological nanopores
09:40-10:10	Simona Ranallo (University of Rome Tor Vergata, Italy)
	Ultrasensitive nucleic acid-based systems: from bench to ready-to-use R&D kit
10:10-10:40	Gabriel Ortega (Precision Medicine and Metabolism Lab, CIC bioGUNE, Spain)
	Engineering Nanobodies for Biotechnological Applications
10:40-11:00	Coffee Break
11:00-11:30	Elisa Michelini (Department of Chemistry "Giacomo Ciamician", University of Bologna, Italy)
	Sustainable optical biosensing with bioinspired tools and nanomaterials
11:30-12:00	Madalena Calabretta (Department of Chemistry "Giacomo Ciamician", Univ. of Bologna, Italy)
	Bioluminescence-based bioanalytical tools
12:00-12:30	Alessandra Zanuth (Department of Chemical Sciences (DiSC), University of Padova, Italy)
	Nanotechnology-based Strategies for Enhanced Electrochemiluminescence Biosensing
12:30-13:00	Vasa Radovnic (Biosense Institute, Serbia),
	Affordable and Practical Technology for Fabrication of Electrochemical Biosensor Transducers
	– From Concept to Application
13:00-14:30	Lunch Break
14:30-15:00	Valentin Mirceski (Department of Inorganic and Analytical Chemistry, University of Lodz,
	Poland)
	Advanced voltammetric techniques derived from square-wave voltammetry for mechanistic
	and kinetic study of electrode processes
15:00-15:30	Fetah I. Podvorica (Chemistry Department, University of Prishtina, Republic of Kosovo)
	Electrochemical grafting of material surfaces with organic molecules
15:30-16:00	Flamur Sopaj (Department of Chemistry, Faculty of Natural and Mathematical Science,
	University of Prishtina, Kosovo).
	Advanced oxidation degradation of organic pollutants in water media, coupled with
	electrochemical monitoring of the process.
16:00-16:30	Alejandro Criado (CICA-Centro Interdisciplinar de Química e Bioloxía, Facultade de Ciencias,
	Universidade da Coruña, Campus de Elviña, Spain)
	Unlocking the Biosensing Potential of Graphene FETs through Chemical Approaches
16:30-17:00	Coffee Break

WORKSHOP

Women in STEM:

NANOTECHNOLOGY AND GREEN ENERGY

Tentative Program (as of 26/09/2025)

OCTOBER 02, 2025

	OCTOBER 02, 2025
10:00-10:15	Welcome and Introduction of the Workshop Women in STEM
	Marinela Barci (HUAWEI, Belgium - AWIN Founder)
10:15-10:30	NanoAlb and its activity related to STEM
	Majlinda Vasjari (University of Tirana, Albania - NanoAlb coordinator)
10:30-11:00	Green Energy and Startup/Industry
	Moderator: Albana Veseli (University of Prishtina "Hasan Prishtina", Kosovo - NanoAlb)
	Rexhina Saraci (FeFuel Solutions, Italy)
	Joli Delimeta (Solaron, Albania)
11:00-11:15	Break
11:15-11:45	Green Energy and Sustainability
	Moderator: Mimoza Bashollari (University of Pristina, Kosovo - NanoAlb)
	Majlinda Daci (University of Prishtina; Kosovo)
	Edita Kala (Intersnack Group, Germany)
11:45-12:15	Green Energy and Academia
	Moderator: Valbona Aliko (University of Tirana, Albania - NanoAlb)
	Magdalena Cara (University of Tirana, Albania)
	Ada Tushe (Istituto Oncologico Veneto IOV – IRCCS, Italy)
12:15-13:15	Lunch Break
13:15-14:00	Special guests
	Moderator: Tea Mankollari (Western Balkans University, Albania)
	Arben Merkoci (ICN2 / NanoAlb, Spain)
	Anila Paparisto (University of Tirana and Albanian Academy of Science, Albania)
	Gjylije Hoti (University of Turin, Italy and AWIN Co-coordinator)
14:00-14:20	Break and Group – Photo
14:20-15:20	Panel discussion" Nanotechnology and Green Energy in Albania and the great
	possibilities it offers to Women in STEM"
	Moderator: Kledi Xhaxhiu (University of Tirana, Co-coordinator of NanoAlb, Albania)
15:20-15:30	Final Remarks
	Moderator: Marinela Barci (Huawei, Belgium and AWIN Founder)
15:30-17:00	Networking and Open Discussion

(NANO/MICRO) MATERIALS WORKSHOP

Tentative Program (as of 26/09/2025)

OCTOBER 03, 2025

	00105ER 03, 2023
09:00-09:15	Lavdie Moisiu (Regional Innovation Center – EIT RawMaterials, Albania)
	Opening Remarks – Introduction to the Workshop and RIC Albania's Mission.
09:15-09:40	Përparim Alikaj (EIT RawMaterials, Albania)
	The Role of Nano/Micro Materials in Raw Materials Innovation
09:40-10:00	Aleksandar Stamboliev (EIT Community Officer, Republic of North Macedonia)
	Business models for circular economy solutions including waste
	Applied researches
10:00-10:30	Huseyin Cetinkaya (GEOCURA, Belgium)
	Fabiola Dodaj (GEOCURA, Belgium)
	Shah Saud (GEOCURA, Spain)
	GeoCura: Transforming Mine Waste into Self-Healing, Sustainable Concrete
10:30-11:00	Irida Markja (Materials Science and Technology/PUT, Albania)
	Nano techniques applied in Materials Science and Engineering
11:00-11:15	Coffee Break & Networking
11:15-11:35	Alban Metallari (Institute of Ceramics, Glass and Construction Materials, Freiberg, Germany)
	Plastic shrinkage and capillary pressure development of low-embodied CO ₂ mortars
11:35-11:55	Enton Bedini (Albanian Geological Survey, Albania)
	Potential of Albanian for exploration of new SRM/CRM
11:55-12:10	Busra Karakas (RECYGEO, Belgium)
	Smart Geopolymer Coatings for a Safer, Greener Built Environment; Revolutionizing
	Opportunities in Tailings and Urban Waste for the Circular Economy
12:10-12:40	Chanda Mubanga (KAABRICK, Belgium)
	Valentina Chessa (KAABRICK, Spain)
	Zaid Bin Hisham (KAABRICK, Belgium)
	Building the Future with Textile and Mining Waste
12:40-13:00	Andrii Sevriukov (Beholder, Estonia)
	AI in Geological Modeling for CRM Exploration
13:00-13:30	Closing & Conclusions: Summary, Networking Opportunities and Next Steps

NextGen Research Workshop

FROM LAB DISCOVERY TO HIGH-IMPACT PUBLICATION: PhD RESEARCH & PUBLISHING MASTERCLASS

Tentative Program (as of 26/09/2025)

OCTOBER 03, 2025

	00.011.00, 1010
	Section I – Masterclass: Writing & Publishing Successfully
	Chairperson: Valbona Aliko (NanoBalkan, University of Tirana, Albania)
09:00-09:10	Welcome by Organizers (NanoBalkan Unit, QUARTZ PhD Program, Academy of Young
	Researchers)
	Opening Remarks
09:10-09:30	Erman S. Istifli (Cukurova University, Turkey) K
	The Art of Scientific Storytelling: From Draft to Published Paper
09:30-09:45	Valbona Aliko (NanoBalkan, University of Tirana, Albania)
	Structuring Papers and Journal Selection: Choosing the right journal; Common mistakes
	to avoid
09:45-10:00	Ledia Vasjari (NanoBalkan, University of Tirana, Albania)
	Ethics in publishing, Open access vs. traditional publishing
10:00-10:15	Aulon Shabani (Polytechnic University of Tirana, Albania)
	Advanced Critical Thinking and Avoiding Plagiarism in the Researcher's Journey
10:15-10:30	Ina Varfaj (University of Perugia, Italy)
	Peer review process and how to respond to reviewers
10:30-10:45	Klaudjo Peqini (Department of Physics, University of Tirana, Albania)
	Title to be defined
10:45-11:00	Coffee Break & Networking
	Section II— PhD Research Showcase
	Chairperson: Ledia Vasjari (NanoBalkan, University of Tirana, Albania)
11:00-11:40	PhD Student Lightning Talks (QUARTZ program and collaborators)
11:40-12:00	Closing Session; Wrap-up, Q&A & Awards

POSTER LIST

(as of 26/09/2025)

Poster number

23	Ana Ameda (University of Tirana, Albania) Laser-scribed rGO-based sensors for HM detection
1.2	Belinda Amiti (University of Tetovo, Republic of North Macedonia)
13	Hydrophobic Deep Eutectic Solvents for Sustainable Apricot Kernel Oil Extraction
	Duygu Beduk (Institut Català de Nanociència i Nanotecnologia (ICN2), Spain)
24	Hydrogel-Assisted Signal Enhancement in Lateral Flow Assays
	Gledjan Caka (University of Tirana/Albanian Academy of Sciences, Albania)
4	Indomethacin: The pro-inflammatory anti-inflammatory
2.2	Nil Su Caylayik (Mugla Sitki Kocman Üniversitesi, Turkey)
33	Electrochemical Sensor Based on Hybrid Nanomaterials for Melatonin Detection in Human Saliva: A
	Potential Diagnostic Tool for Anxiety Disorders
17	Shege Ceci (University of Tirana, Albania)
17	Molecular Mechanisms of Freeze Tolerance in Ranid Amphibians: The Role of Cellular Adaptations
	and Regulatory Control in Hypometabolism
25	Besarta Celiku (University of Tetovo, Republic of North Macedonia)
23	Electrocatalytic Activity of LnMn0.5Fe0.5O3 toward Serotonin and H2O2
26	Ronaldo Challhua (Institut Català de Nanociència i Nanotecnologia (ICN2), Spain)
20	Early Detection of Alzheimer's Disease Using an Electrochemical Graphene-Based Platform
5	Melita Dauti (University of Tetova, Republic of North Macedonia)
J	Physico-mechanical characterization of ceramics obtained from diatomite earth
L1	Sara Dervishi (Faculty of Natural Sciences, University of Tirana, Albania)
LI	Silver-Doped TiO ₂ /Graphite Oxide Nanocatalyst: Structural Insights and Photocatalytic Performance
	in Dye Degradation
27	Andi Halilaj (University of Prishtina, Republic of Kosovo)
_ /	Development of a Colorimetric Paper Based Sensor for the Determination of 5-
	Hydroxymethylfurfural
28	Emigreta Haxhiu (University of Prishtina, Republic of Kosovo)
20	Development of Phospholipid-Based Nanoparticles Encapsulating Carvacrol and Thymol: Influence
	of Lipid Composition on Size, Stability, and Encapsulation Efficiency
6	Veton Haziri (University for Business and Technology, Albania)
	Novel AI-Enhanced Sampling Techniques for Microplastic Detection in Aquatic Ecosystems
29	Ergi Hoxha (Western Balkans University/NanoAlb, Albania)
	Impedance Spectroscopy Analysis of Reduced Graphene Oxide Doped with Metal/Metal Oxide
	Nanocomposites – Carbon Paste Electrodes for Highly Sensitive Detection of Atenolol
7	Shqipran Kastrati (University of Prishtina, Republic of Kosovo)
,	Development of Lipid-Based Nanocarriers Encapsulating Eucalyptus Officinalis Essential Oil:
	Comparative Evaluation of Liposomes and Nanoemulsions
8	Konstantina Kazeli (Aristotle University of Thessaloniki, Greece)
	PEGylated magnetic nanoparticles conjugated with curcumin for biomedical applications
16	Elira Krasniqi (University of Prishtina, Republic of Kosovo)
	Moleculary Imprinted Electrochemical Sensor Based on β-cyclodextrine for determination of
	Levothyroxine
18	Toskë Kryeziu (University of Prishtina, Republic of Kosovo)
10	Final Outcomes of the Research Project: "Nano-based platforms and Phytochemicals for Enhanced
	Drug Delivery and Therapeutic Efficacy"
9	Lueda Kulla (University of Tirana, Albania)
	Electrochemical determination of pesticides using Ni-rGO printed sensors
19	Nora Limani Bektashi (Mother Teresa University, Republic of North Macedonia)

	I
30	Venesa Lupçi (University of Prishtina, Albania)
	Advanced Nanoplatforms for Antimicrobial and Antioxidant Therapy
10	Eljesa Murtezi (International Balkan University, Republic of North Macedonia)
	Tailoring Coumarin Derivatives for Advanced Nanoscale Imaging and Photoinitiated Nanolithography
3	Arber Musliu (University of Prishtina, Republic of Kosovo)
	Prediction of sound speeds of the ternary system 1-Propanol + Pyridine + Nitrobenzene using
	various semi-empirical models
2	Mamas Prodromidis (University of Ioannina, Greece)
	Multi-modal, configurable optical lab-on- chip platform for low-cost multipurpose diagnostics &
	monitoring (MultiLab)
31	Blerta Rama (University of Prishtina, Republic of Kosovo)
	Developing and Evaluating Rosemary Essential Oil Nanosystems: Enhancing Stability and Antioxidant
	Efficacy
11	Zimere Saiti Musliji (Mother Teresa University, Republic of North Macedonia)
	Extraction and Utilization of Biowaste for Sustainable Textile Dyeing
22	Jeta Sela (University of Tetova, Republic of North Macedonia)
	Synthesis and Comprehensive Characterization of the Novel Mixed-Halide Perovskite
	DMAPbl1.5Br1.5
32	Francesca Selmin (University of Milan, Italy)
	On the effect of cationic polymer on the structure and pDNA transfection efficiency of
	lipopolyplexes
21	Jonë Shahini (University of Prishtina, Republic of Kosovo)
	Determination of 5-hydroxymethylfurfural using molecularly imprinted polymer based on
	electropolymerized β-cyclodextrine
20	Aida Shala (University of Prishtina, Albania)
	Nanoemulsion Based Delivery Systems to Enhance the Antimicrobial Activity of Essential Oils
12	Berat Sinani (University "Isa Boletini" Mitrovica, Albania)
	GEOCHEMICAL AND MINERALOGICAL ANALYSIS OF ORE BODY 139-F1 OF TREPÇA MINE
14	Bahri Sinani (Municipality of Mitrovica, Albania)
	Dispersion of Naturally Occurring Asbestos Fibers During Wind Energy Park Construction in the Shala
	Region, Kosovo
15	Dafina Xhako (Polytechnic University of Tirana, Albania)
_	Integration of Deep Learning Algorithms with PPIR and AI4MED for advanced medical Image analysis
	and simulations in radiotherapy