IWBBIO-2025

PROGRAM

15th-18th JULY, 2025
Gran Canaria (SPAIN)

IWBBIO-2025 Program

Tuesday, July 15th, 2025	
18:30-20:00	**REGISTRATION DESK** ***(start at 18:30h but it is open during all the conference)***
18:30-20:00	**Upload the presentations to the room's computer (in case you haven't sent them by email). Meeting of the attendees with the Program Committee and Organizers of IWBBIO-2025**

NOTES:

- All **Sessions A** will be held in Hotel Lopesan Villa del Conde Resort. They are **face-to-face sessions**, and they will also be shared on-line by Zoom. The **plenary lectures** are in **Session A.**
- All **Sessions B** will be held on-line (virtual) using Zoom.
- **Oral** Presentation: **20 minutes** (including questions). Short Presentation: **15 minutes** (including questions). Depending on whether there are absent speakers, times may be adjusted.
- **Poster** authors are requested to place their posters on the panels before the start of the poster session. It is recommended to use **A0 size** and large fonts.

Session A: Located on the last floor of the main building

<table>
<tr><th colspan="3">Wednesday, July 16th, 2025</th></tr>
<tr><td rowspan="2">8:30</td><td colspan="2">REGISTRATION DESK
(start at 8:30h but it is open during all the conference)</td></tr>
<tr><td colspan="2">All Sessions A: Oral <u>face-to-face sessions</u>.
All Sessions B: Oral Virtual (will be held on-line by Zoom)</td></tr>
<tr><td>9:00-10:00</td><td>Session A.1: High-throughput Genomics: Tools for Medical Genomics and Epidemiological Surveillance</td><td rowspan="2">Session B.1: Recent Advances in Bioinformatics (Part I)</td></tr>
<tr><td>10:00- 11:15</td><td>Session A.2: Advances in Deep Learning in Bioinformatics and Bioengineering (Part I)</td></tr>
<tr><td>11:15-11:45</td><td colspan="2">COFFEE BREAK</td></tr>
<tr><td>11:45-12:45</td><td colspan="2">Session A.P1: Opening & Plenary Lecture.
Dr. Maryam Abbasi
CISUC -Centre for Informatics and Systems, Department of Informatics Engineering, University of Coimbra, Portugal</td></tr>
<tr><td>12:45-14:00</td><td>Session A.3: Biomedical Computing (Part I)</td><td>Session B.2: Advances in Deep Learning in Bioinformatics and Bioengineering (Part II)</td></tr>
<tr><td>14:00-16:00</td><td colspan="2">REST BREAK</td></tr>
<tr><td>16:00-17:00</td><td colspan="2">Session A.P2: Plenary Lecture.
Dr. Mattea Carmen Castrovilli
National Research Council of Italy, CNR-ISM, Italy</td></tr>
<tr><td>17:00-18:00</td><td>Session A.4: Biosensors and data acquisition</td><td>Session B.3: Machine learning in Bioinformatics/Biomedicine (Part I)</td></tr>
<tr><td>18:00-19:30</td><td>Session A.5: New advances in Bioinformatics and Biomedical Engineering
Short Presentation</td><td></td></tr>
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<tr><th colspan="3">Thursday, July 17th, 2025</th></tr>
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<tr><td colspan="2">All Sessions A: Oral <u>face-to-face sessions</u>.
All Sessions B: Oral Virtual (will be held on-line by Zoom)</td></tr>
<tr><td>9:00- 10:35</td><td>Session A.6: High Performance in Bioinformatics</td><td>Session B.4: Biomedical Engineering</td></tr>
<tr><td>10:35-11:00</td><td colspan="2">COFFEE BREAK</td></tr>
<tr><td>11:00-12:00</td><td colspan="2">Session A.P3: Plenary Lecture.
Prof. Ping Luo
Faculty of Computer Science and Technology, Algoma University, Canada</td></tr>
<tr><td>12:00-13:00</td><td>Session A.7: Emerging Trends and Innovations in E-Health</td><td rowspan="2">Session B.5: Recent Advances in Bioinformatics (Part II)</td></tr>
<tr><td>13:00- 14:00</td><td>Session A.8: Biomarker identification</td></tr>
<tr><td>14:00-16:00</td><td colspan="2">REST BREAK</td></tr>
<tr><td>16:00-17:30</td><td colspan="2">Session A.9: POSTER SESSION</td></tr>
<tr><td>17:30-18:50</td><td>Session A.10: Biomedical Computing (Part II)</td><td>Session B.6: Machine learning in Bioinformatics and Biomedicine (Part II)</td></tr>
<tr><td>20:30</td><td colspan="2">GALA DINNER
(15 minutes walking from Hotel Lopesan Villa del Conde Resort)</td></tr>
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Friday, July 18th, 2025		
8:45	**REGISTRATION DESK** ***(start at 8:45h but it is opened during all the conference)***	
	All **Sessions A: Oral face-to-face sessions**. All **Sessions B:** Oral Virtual (will be held on-line by Zoom)	
9:00-10:00	**Session A.12: Innovations in Cancer Research: The Role of Bioinformatics and Biomedical Engineering**	**Session B.7: Advances in Deep Learning in Bioinformatics and Bioengineering (Part III)**
10:00- 10:45	**Session A.13: New advances Biotelemetry**	
10:45-11:30	**COFFEE BREAK**	
11:30-12:30	**Session A.14: Machine learning in Bioinformatics and Biomedicine**	**Session B.8: High performance in Bioinformatics**
12:30 -13:30	**Session A.P4: Plenary Lecture.** **Prof. Roberto Pagliarini** **Dpt. Mathematics, Computer Science, and Physics, Univ. Udine, Italy**	

IWBBIO 2025 PROGRAM

Wednesday, July 16th, 2025

(9:00-10:00) Session A.1: High-throughput Genomics: Tools for Medical Genomics and Epidemiological Surveillance

Chairman: Dr.Javier Perez Florido and Dr. Rosario Carmona

Insights into Spanish Genetics: Secondary Findings from the CSVS Database **(Ref: *1614*)**

Rosario Carmona, Javier Perez-Florido, Gema Roldan, Carlos Loucera, Virginia Aquino-Quintans, Noemí Toro-Barrios, José Luis Fernández Rueda, Gerrit Bostelmann, Daniel López López, Francisco Manuel Ortuño, Beatriz Morte, Maria Peña-Chilet and Joaquin Dopazo

The genomic surveillance circuit of Andalusia (Spain): a scalable model for emerging and endemic pathogens **(Ref: *6375*)**

Javier Perez-Florido, Carlos S. Casimiro-Soriguer, Maria Lara, Andrea Aguado, Carlos Loucera, Jose M. Navarro-Mari, Jose Antonio Lepe, Federico García and Joaquin Dopazo

Five years of "vardb": insights from scaling genomic knowledge management **(Ref: *7983*)**

Jorge Amigo and Iria Roca

(9:00-10:00) Session B.1: Recent Advances in Bioinformatics (Part I)

Chairman: Dr. Nihal Habib and Dr. Jorge Miguel Silva

NucleoConvert Analytics: An Integrated Platform for DNA-to-RNA Conversion and Sequence Analysis **(Ref: *1791*)**

Nihal Habib, Chakib Nejjari, Najib Al Idrissi and Hassan Ghazal

Computational Screening and Prediction of CYP1A2-Related Toxicants for Safer Drug Discovery **(Ref: *3588*)**

Yao Wei, Uliano Guerrini and Ivano Eberini

NGS sequencing workflows and bioinformatics tools and techniques designed for analyzing Mycobacterium tuberculosis genomic data. **(Ref: *7195*)**
Sushanta Deb, Jhinuk Basu and Megha Chaudhari

(10:00-11:15) Session A.2: Advances in Deep Learning in Bioinformatics and Bioengineering (Part I)

Chairman: Dr. Carlos Loucera and Dr.Francisco Manuel Ortuño

Integrating Spatial Information into MIL Models for Histological Image Classification: A Comparative Evaluation **(Ref: *1480*)**
Nerea Hernández, Luis J. Herrera, Francisco M. Ortuño and Ignacio Rojas

Integrated In Silico Pipeline for Validating AI-Generated Ligands: From Docking Consensus to Molecular Dynamics **(Ref: *4426*)**
Maryam Abbasi, Paulo Vaz, Jose Silva and Pedro Martins

Enhancing Drug-Target Interaction Prediction: A Deep Learning Approach with Embedding-Based Representations **(Ref: *4453*)**
Maryam Abbasi, Paulo Vaz, Jose Silva and Pedro Martins

Synthetic Patients for Real-World Endpoint Validation **(Ref: *4800*)**
Víctor Manuel de la Oliva Roque, Joaquin Dopazo, Francisco Manuel Ortuño and Carlos Loucera

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(11:45-12:45) Opening Ceremony. Plenary Talk: Dr. Maryam Abbasi

CISUC -Centre for Informatics and Systems, Department of Informatics Engineering, University of Coimbra, Portugal

Title of the presentation: Harnessing AI for Therapeutic Drug Design: From Data to Discovery

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(12:45-14:00) Session A.3: Biomedical Computing (Part I)

Chairman: Dr. Luis Javier Herrera and Dr. Antonio Pinti

Regulating Toxic Amyloid-Beta Oligomers in Alzheimer's Disease: A Control Theory Approach **(Ref: *4145*)**

Swadesh Pal and Roderick Melnik

Six-minute walk test performance correlates with trabecular bone score in a group of older sarcopenic women **(Ref: *4427*)**

Linda Moussi, Antonio Pinti and Rawad El Hage

Maximal strength is a strong determinant of hip geometry indices in a group of older sarcopenic men **(Ref: *4709*)**

Elie Maliha, Nour Khalil, Antonio Pinti and Rawad El Hage

A 3D Model-Based Standardized Procedure for Evaluating Condylar Displacement in Mandibular Reconstruction **(Ref: *8128*)**

Marta Mencarelli, Luca Puggelli, Beatrice Pulli, Giuseppe Spinelli and Yary Volpe

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(12:45-14:00) Session B.2: Advances in Deep Learning in Bioinformatics and Bioengineering (Part II)

Chairman: Dr. Yao Wei and Dr. Aurelio López

Fast, Accurate, and Automated Skin Lesion Segmentation via YOLO-Based Detection and SAM **(Ref: *1954*)**

Alejandro Jerónimo, Ignacio Rojas, Francisco M. Ortuño, Luis Javier Herrera and Olga Valenzuela

A hybrid metagenomic pipeline for taxonomic classification **(Ref: *3882*)**

Inês Martins, Jorge Silva and João Rafael Almeida

Seder: Deep Learning Algorithm for Protein Structure Prediction **(Ref: *4135*)**

Eshel Faraggi, Robert Jernigan and Andrzej Kloczkowski

(16:00-17:00) Plenary Talk:
Dr. Mattea Carmen Castrovilli
National Research Council of Italy, CNR-ISM, Italy

How to make overperforming and sustainable biosensors using ElectroSpray Deposition technology: An overview **(Ref: *5104*)**

Mattea Carmen Castrovilli and Antonella Cartoni

(17:00-18:00) Session A.4: Biosensors and data acquisition

Chairman: Dr. Fakhreddine Karray and Dr. Antonella Cartoni

Methods for Wearable Electrocardiogram and Photoplethysmogram Synchronization **(Ref: *396*)**

Daniele Padovano, Arturo Martinez-Rodrigo, Oscar Ayo, José Joaquín Rieta and Raul Alcaraz

Optimization of the Tau Parameter in Phase Space Plots for ECG Signal Quality Assessment **(Ref: *1420*)**

Alvaro Huerta Herraiz, Pilar Escribano Cano, Oscar Ayo-Martín, Jose Joaquin Rieta and Raul Alcaraz Martínez

Use of the graphic tablet for monitoring and analysis of the spatial and temporal characteristics of a precise manual task **(Ref: *8310*)**

Sara Trapero-Asenjo, Sara Fernández-Guinea, M.A. Rubio and Susana Nunez-Nagy

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(17:00-18:00) Session B.3: Machine learning in Bioinformatics/Biomedicine (Part I)

Chairman: Dr. Jeong Kyu Lee and Dr. Pavel Petrov

Sickle cell disease patient care system using artificial intelligence **(Ref: *238*)**

Jorge Gomez, Daniel Salas and Raúl Ramírez

Automated Annotation of Electronic Health Records Using Large Language Models **(Ref: *1057*)**

Bruna Alice Oliveira de Brito, Itamir de Morais Barroca Filho, Jean Mário Moreira de Lima, André Morais Gurgel and Ramon Santos Malaquias

AI-Powered CRM for Personalized Customer Engagement **(Ref: *3011*)**
Sivasai Nadella

(18:00-19:30) Session A.5: New advances in Bioinformatics and Biomedical Engineering (Part I). Short Presentation

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Chairman: Dr. Ignacio Rojas

Will BCI replace Neuropharmacology? **(Ref: *69*)**
Jorge Luis Cuyubamba Dominguez

Effectiveness of SNAPPS Implementation in the Family Medicine Residency Program in Erbil: A Randomized Controlled Trial **(Ref: *690*)**
Ghaith Shindala, Ali Dauod and Nazdar Alkhateeb

Pharmacoinformatics-based phytochemical screening of Melastoma decemfidum Roxb ex. Jack medicinal plant against breast cancer **(Ref: *1476*)**
Sepideh Parvizpour, Jafar Razmara and Amirhossein Razmara

CirRFKB: A circadian clock risk factors knowledgebase for pathogenesis and precision medicine of cancer **(Ref: *2068*)**
Jiao Wang, Hui Zong, Yingbo Zhang, Xingyun Liu and Bairong Shen

Public Health Data Science Analysis regarding Targeted Lung Health Check in Cornwall **(Ref: *2786*)**
Jingwen Kang and Jiayin Wang

A homozygous variant in ARHGAP39 is associated with lethal cerebellar vermis hypoplasia in a consanguineous Saudi family **(Ref: *3431*)**
Sulman Basit

Is the urinary kidney injury molecule an optimum biomarker for early detection of obstructive nephropathy?: An experimental study **(Ref: *3808*)**
Ahmad M. A. Ibrahim and Khadiga M. Ali

Sepsis-LLM: A personalized sepsis prognostic prediction model integrating RAG and ontology-enhanced artificial intelligence **(Ref: *4479*)**
Hao Yang, Chi Zhang, Jiaxi Li, Alejandro Pazos Sierra and Bairong Shen

CyberKnife and Data Mining: Exploring opportunities for clinical advancements **(Ref: *1003*)**
Jana Schwarzerová, Libor Stefek, Jiri Simpach, Lubomir Pavliska, Bogdan Walek, Lukas Evin, Valentýna Provazník, Wolfram Weckwerth and Stefan Reguli

Decoding Viral Heterogeneity: A Single-Cell Analysis of Genetic Variations and Immune Activation in Influenza **(Ref: *1890*)**
Muskan Tiwari and Mukund Thakur

NeuroOmicNet: A Hybrid Deep Learning Framework for Multimodal Omics Integration and Functional Interpretation in Neurodegenerative Disease **(Ref: *2807*)**
Iqra Rafiq and Ateeq Ur Rehman

Exercise is medicine – An evidence - based personalized exercise prescription knowledge base for cancer patients and survivors **(Ref: *3369*)**
Min Jiang and Bairong Shen

Ethical aspects in telemedicine. Literature review **(Ref: *6573*)**
Francisco Rosero-Villarreal

Global perspectives on governing healthcare AI: prioritising safety, equity and collaboration **(Ref: *7483*)**
Ghasem Dolatkhah

Blockchain-powered Healthcare: Revolutionizing Security and Privacy in IoT-based Systems **(Ref: *8722*)**
Deepak Singla, Sanjeev Rana Rana and Shipra Goel

Comparative Safety Analysis of Hedgehog Inhibitor Preparations: Insights from the FAERS Database **(Ref: *8798*)**
Li Chen, Yijiang Liu and Jia Chen

Thursday, July 17th, 2025

(9:00-10:35) Session A.6: High Performance in Bioinformatics

Chairman: Dr. Omar Abdelwahab and Dr.Daria Kałużyńska

Beyond three-dimensional structures of biological macrolecules: Conformational ensambles by cryo Electron Microscopy **(Ref: *1040*)**
Jose-Maria Carazo, Carlos Oscar S. Sorzano and David Herreros

Benchmarking variant calling algorithms for the analysis of genomic data in panel sequencing **(Ref: *1598*)**
Jiri Novotny, Jana Schwarzerova, Jana Neuwirthova, Jana Indrakova, Tereza Vodickova, Lucie Faldynova, Jozef Skarda, Wolfram Weckwerth, Petra Cibulkova and Valentyna Provaznik

Computational Detection of 5-Fluorouracil Metabolites in Nanopore-Sequenced RNA: Unraveling Chemotherapy-Induced Transcriptome Damage **(Ref: *2222*)**
Shutong Ye, Nicole Simms, John Knight and Michael Boemo

Optimising random forest for prediction based decision-making processes using the optRF package **(Ref: *3733*)**
Thomas Martin Lange

VCFX: A Minimalist, Modular Toolkit for Streamlined Variant Analysis **(Ref: *4833*)**
Jorge Miguel Silva and José Luis Oliveira

(9:00-10:40) Session B.4: Biomedical Engineering

Chairman: Dr. Itamir de Morais Barroca and Dr. Andrzej Kloczkowski

Detection of Recurrence in Head and Neck Carcinoma Through Body Composition Changes Using PET/CT, MRI, and CT **(Ref: *821*)**
Virginia del Campo and Iker Malaina

Real-Time Milk Oxytocin Cost-Effective Assessment Kit on the Principle of Paper-Microfluidics Technology **(Ref: *1918*)**
Sonal Jaiswal, Priyanka Kumari and Dr. Amit Prabhakar

Bioinformatics-based prediction and assessment of chemical scaffolds that inhibit mushroom tyrosinase to treat melanogenesis **(Ref: *2925*)**
Mubashir Hassan, Saba Shahzadi and Andrzej Kloczkowski

Computational studies suggest that let-7a microRNA is a potential target for Ewing's sarcoma treatment **(Ref: *4968*)**
Saba Shahzadi, Mubashir Hassan and Andrzej Kloczkowski

A Distributed Web System for Patient Monitoring Integrating CRM for Improved Clinical Management **(Ref: *5163*)**
Marian Ileana, Pavel Petrov and Vassil Milev

(11:00-12:00) Plenary Talk: Prof. Ping Luo

Faculty of Computer Science and Technology, Algoma University, Canada

Title of the presentation: From Sequence to Therapy: Identifying Tumor-Reactive TCRs with Deep Learning

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(12:00-13:00) Session A.7: Emerging Trends and Innovations in E-Health

Chairman: Dr. Jose Maria Carazo and Dr. Panagiota Kontou

Vision Language Models for Dynamic Human Activity Recognition in Healthcare Settings **(Ref: *2032*)**
Abderrazek Abid, Thanh-Cong Ho and Fakhri Karray

Method for detection and analysis of the sit-to-walk transition in older adults. Threshold-based transition detection application: a case study **(Ref: *3347*)**
María del Mar Lendínez-Chica, Sara Trapero-Asenjo, Bernardo Alarcos, Yolanda Pérez-Martín, Sandra Machado-Zurita and Susana Nunez-Nagy

Agent-Based Modeling of the Retina **(Ref: *9528*)**
Cayla Harris, Umar Abubacar, Ryan Bournes, Tameem Adel, Alireza Tamaddon-Nezhad and Roman Bauer

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(12:00-13:30) Session B.5: Recent Advances in Bioinformatics (Part II)

Chairman: Dr. Stella Vetova

Problems in Bioinformatics: Which human reference genome to use? **(Ref: *3737*)**
Igor Islanov, Kirill Baybekov and Elena Zaklyazminskaya

Gene Co-Expression Network analysis based on GPUs for biomarkers discovery in sarcomas **(Ref: *7437*)**
Marc Ríos Cadenas, Aurelio López-Fernández, Dulcenombre M. Saz-Navarro, Juan A. Ortega and Francisco A. Gómez-Vela

An Algorithm For Local Pairwise Alignment Of DNA Sequences **(Ref: *7995*)**
Hristina Georgieva and Stella Vetova

IGHV Mutational Status and DNA Entropy: Refining Prognostic Tools in Chronic Lymphocytic Leukemia **(Ref: *8301*)**
Alexander Martynenko, Xavier Pastor, Santiago Frid, David Sánchez and Xavier Borrat

Primer- and non-primer-mediated allelic dropout in the sequencing data **(Ref: *236*)**
Anna Shestak, Victoria Rumyantseva and Elena Zaklyazminskaya

(13:00-14:00) Session A.8: Biomarker identification

Chairman: Dr. Jana Schwarzerova and Dr. Francisco Manuel Ortuño

ScRNA-seq Protocols Detection of Gene Expression May Decline After a While from Onset **(Ref: *1759*)**
Omar Alaqeeli and Raad Alturki

Machine Learning-Based Diagnosis and Staging of Liver Cancer Using RNA-Seq Data **(Ref: *4683*)**
Martina Álvarez Lorenzo, Antonio José Heredia Arredondo, Ignacio Garach Vélez, Luis Javier Herrera Maldonado, Ignacio Rojas Ruiz and Francisco Manuel Ortuño Guzmán

RNA-seq Analysis of Brain Cancer: Astrocytoma, Oligodendroglioma, and Mixed Glioma **(Ref: *5065*)**
Pablo Heredero García, Elena Maroto Rica, Ignacio Garach Vélez, Francisco Manuel Ortuño Guzmán, Luis Javier Herrera Maldonado and Ignacio Rojas Ruiz

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(16:00-17:30) Session A.9: POSTER SESSION

Chairman: Dr. Fernando Rojas

A Novel Approach to Confirm Genetic Variants with Potential Phenotypic Impact by Amplicon Massive Parallel Sequencing from Data Obtained by Whole Genome Sequencing in Patients with Parkinsonism **(Ref: *592*)**

Radek Vodička, Kristyna Kolarikova, Hama Ismail, Radek Vrtel, Katerina Mensikova and Petr Kanovsky

A partial correlation network from summary data can identify causally related diseases **(Ref: *659*)**

Panagiota Kontou, Ioanna Sasilioglou and Pantelis Bagos

Effects of Tobacco Smoking on Composite Indices of Femoral Neck Strength in Young Lebanese Men **(Ref: *834*)**

Eddy Zakhem, Zaher El Hage, Antonio Pinti and Rawad El Hage

Metabolomic Predictions via SOM: A Cold-Stress Case Study in Arabidopsis thaliana **(Ref: *2226*)**

Jana Schwarzerova, Eva Volna, Steffen Waldherr, Valentyna Provaznik and Wolfram Weckwerth

Activity recognition and assistance for the autonomy of elderly people in smart homes: an approach based on artificial intelligence **(Ref: *3781*)**

Mireille Jabbour, Hussein Bilal, Antonio Pinti, Patrice Caulier and Cina Motamed

From Code to Cell: Modeling Translational Dynamics with miRNA and Radiation Response **(Ref: *3906*)**

Daria Kałużyńska, Jarosław Śmieja and Michał Dudek

Machine learning methods to predict cardiovascular risk in Hispanic patients with Systemic Lupus Erythematosus **(Ref: *5212*)**

Abiel Roche-Lima and Arianna Gonzalez

Uncovering a Novel Variant in LGI3: A Case Study of Intellectual Developmental Disorder with Muscle Tone Abnormalities **(Ref: *7116*)**

Maryam Naghinejad, Sima Mansoori Derakhshan, Sepideh Parvizpour and Jafar Razmara

Web Tool for Viewing and Analysing ECG and PPG Signals with Atrial Fibrillation Detection **(Ref: *8180*)**

Daniel Iradier, Arturo Martinez-Rodrigo, Daniele Padovano, Óscar Ayo, José Joaquín Rieta and Raúl Alcaraz

ECG-Based Classification of Cardiac Diseases Using Deep Learning Techniques **(Ref: *9044*)**

Fernando Rojas and Juan Francisco Valenzuela-Valdés

Electrospray Technology for Lactate Oxidase – Based Biosensor in a Sustainable Prospective **(Ref: *9154*)**

Antonella Cartoni and Mattea Carmen Castrovilli

(17:30-18:50) Session A.10: Biomedical Computing (Part II)

Chairman: Dr. Roderick Melnik and Dr. Thomas Martin Lange*

PMP-LLM: A Culture-Aware and AI based Personalized Meal Planner Tool for Weight Management **(Ref: *6859*)**

Mustafa Elattar and Mohamed Abouelhoda

Validation of measurements-based peak height velocity and maturity offset predictions in young soccer players **(Ref: *2476*)**

Sergey Lytaev, Valerii Erkudov and Polina Vedeneeva

Towards Development of Natural Language Processing Model to Support Infertility Treatment Planning in Poland **(Ref: *3386*)**

Dawid Zamojski, Adam Pudelko, Alicja Gajewska-Kucharek and Michal Marczyk

Balancing Accuracy and Energy Efficiency in EEG Classification: An Evaluation of Wrapper-based Approaches **(Ref: *1951*)**

Juan José Escobar, Diego Aquino-Brítez, Beatriz Prieto, Rodrigo Javier Martinez, Gloria Marcela Ortiz and Andrés Ortiz

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(17:00-18:20) Session B.6: Machine learning in Bioinformatics and Biomedicine (Part II)

Chairman: Dr. Jorge Gomez and Dr.Krishnendu Ghosh*

Statistical Inference and Temporal Logics in Pathway Modeling Under Uncertainty **(Ref: *3755*)**

Hailey Sparks and Krishnendu Ghosh

Mastering Market Trends: How AI-Powered Predictive Analytics is Transforming CRM **(Ref: *8136*)**

Sivasai Nadella

A supervised learning strategy to investigate age effect on brain activity and support biomarkers detection for neurological disorders **(Ref: *9750*)**

Igor Rodrigues, Juciara Silva, Emerson Carvalho and Sabrina Silveira

Enhancing RNA-Seq Analysis through Protein-Derived Features for Cancer Stratification **(Ref: *9525*)**
Radwa Elawadi, Francisco Ortuño Guzmán and Ignacio Rojas Ruiz

An efficient multi-stage gene selection method for Alzheimer's disease diagnosis **(Ref: *6051*)**
Hamed Ka, Jafar Razmara, Sepideh Parvizpour, Mohd Shahir Shamsir and Morteza Hadizadeh

A Comprehensive Review: Innovative Therapies for Disorders of the Eyes **(Ref: *6547*)**
Sushma Verma and Vindhya Pal

Friday, July 18th, 2025

(9:00-10:00) Session A.12: Innovations in Cancer Research: The Role of Bioinformatics and Biomedical Engineering

Chairman: Dr. Francisco Manuel Ortuño

Differential Flux-balance Analysis infers metabolic mutations associated with cancer **(Ref: *1669*)**

Roberto Pagliarini

Explainable AI for Clinical Decision-Making: Unlocking the Potential of MSI Thresholds in Bladder Cancer **(Ref: *7732*)**

Amr Ahmad, Firas Alghanim, Bashier Elkarami, Mousa Abughosh, Hazem Qattous and Abedalrhman Alkhateeb

Evaluating mitochondrial, red blood cells and platelets reads in breast cancer circulating tumor cells: implications for transcriptomic quality and biological interpretation **(Ref: *9538*)**

Alicja Staśczak, Agnieszka Stankiewicz, Justyna Topa, Zofia Piesik, Anna Żaczek, Sebastian Student, Tomasz Stokowy and Aleksandra Markiewicz

(9:00-10:00) Session B.7: Advances in Deep Learning in Bioinformatics and Bioengineering (Part III)

Chairman: Dr. Stephany Osei and Dr. Daas Mohamed Skander

Fish Fin Damage Evaluation Using a Convolutional Neural Network: A Pilot Study **(Ref: *1043*)**

Stephany Osei, Aizhan Toxeitova, Mohammad Mehdi Ziaei, Ievgen Koliada and Sunita Warjri

Advancing Dermatology Diagnostics with Vision Transformers for Binary Skin Lesion Classification **(Ref: *7637*)**

Magdalini Kreouzi, Nikolaos Theodorakis, Athanasios Anastasiou, Konstantinos Kalodanis, Aikaterini Sakagianni, Effrosyni Bazakidou, Iris Zoe Boufeas, Georgios Dimitrakopoulos, Konstantina Karathanasopoulou, Maria Nikolaou and Georgios Feretzakis

Cognitive Delegation? Enhancing an MRI Study through Generative AI **(Ref: *8990*)**
Virginia del Campo and Iker Malaina

(10:00-10:45) Session A.13: New advances Biotelemetry

Chairman: Dr. Jan Urban

Fish telemetry as a stationary process **(Ref: *2804*)**
Pavla Urbanova and David Lastovka

Fish acoustic telemetry as a diffusion system **(Ref: *3527*)**
Jan Urban and David Lastovka

(11:30-12:30) Session A.14: Machine learning in Bioinformatics and Biomedicine

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Chairman: Dr. Juan José Escobar

DeepGBSImpute: A Reference-Free Deep Learning Approach for Genotype Imputation in Genotyping-by-Sequencing Data **(Ref: *2237*)**
Omar Abdelwahab and Davoud Torkamaneh

Machine Learning Models for Assessing Depression in Syrian Adolescent Refugees in Jordan **(Ref: *5777*)**
Rand Habashneh, Hazem Qattous, Malek Alsmadi and Abed Alkhateeb

Predicting T cell receptor specificity with graph attention networks **(Ref: *6580*)**
Aiwu Xu, Dhritiben Patel, Randy Lin and Ping Luo

(11:30-12:50) Session B.8: High performance in Bioinformatics

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Chairman: Dr. Konstantina Karathanasopoulou*

Machine Learning-Based Screening Tool for Lung Adenocarcinoma Via Gut Microbiome **(Ref: *2752*)**
Jeong Kyu Lee and Mai Oudah

Cost-Effective Microbiome Profiling: Abridged Shotgun Sequencing (ASSS) **(Ref: *3663*)**
Sourish Karmakar

Correlation between CYP1A2 Genetic Polymorphism and Drug Response **(Ref: *8586*)**
Yao Wei, Uliano Guerrini and Ivano Eberini

A Systematic Comparison of Phylogenetic Inference Methods Using an Inverse Problem Approach **(Ref: *9657*)**
Mohamed Skander Daas, Safia Rouabah, Imene Chettah and Affef Chial

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(12:30-13:30) Plenary Talk: Prof. Roberto Pagliarini

Dpt. Mathematics, Computer Science, and Physics, Univ. Udine, Italy

Title of the presentation: From Allele Specific Expression Analysis to Genetic Variability at Population Level

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CENTRO DE INVESTIGACIÓN EN TECNOLOGÍAS DE LA INFORMACIÓN Y LAS COMUNICACIÓNES