

8:00-9:00  
9:00-9:30  
9:30-10:30

**DAY 1**  
**Registration**  
**Opening Ceremony**  
**Keynote Speaker 1**

**Aula Magna**

**Security, Myra Spiliopoulou**

1566	Ferdous Hossen Nezhad, Yenlia Rotalini, Puja Myles and Allan Tucker	Privacy Assessment of Synthetic Patient Data
5464	Dima Alattaf, Zhenchen Wang, Puja Myles and Allan Tucker	Creating Synthetic Geospatial Patient Data to Mimic Real Data Whilst Preserving Privacy
5747	Erikson J. Aguiar, Márcus V. L. Costa, Caetano Traina Jr and Agma J. M. Traina	Assessing Vulnerabilities of Deep Learning Explainability in Medical Image Analysis Under Adversarial Settings

**Room 0A**

**CBS R&E, Chongsheng Zhang**

7565	Isabel Curioso, Bruno Ribeiro, Pedro Matias, Ricardo Santos, Joana Sousa, João Ferreira, Hugo Gamboa and David Belo	Pattern Recognition and Classification of Low-Intensity Emotions from Physiological Data
8143	Carolyn Wuerrich, Christian Wiede and Gregor Schiele	Cuffless Beat-to-Beat Blood Pressure Estimation from Photoplethysmogram Signals
7119	Mid Imran Hossain, Ghada Zamzmi, Peter Moutoun, Yu Sun and Dmitry Goldfog	Enhancing Neonatal Pain Assessment Transparency via Explanatory Training Examples Identification
7480	Gaojuan Fan, Jie Wang and Chongsheng Zhang	SACA-UNet: Medical Image Segmentation Network Based on Self-Attention and ASPP

**Rom 1G**

**RAD, Filippo Mignosi**

217	Diogo Filipe Silva and Steffen Leonhardt	A Real-Time Dual Heart and Respiratory Rate Estimator for Electrical Impedance Tomography
5654	Samuel Müller, Olaf Hellwich, Daniel Szymanski, Hardik Jain and Timo Krüger	Calibration and Registration Method for Tomography-Based Laser-Guided Surgical Interventions using a 4-DOF Navigation Robot
7562	Matheus Ribeiro, Marco Gutierrez and Fátima Nunes	Improving deep learning shape consistency with a new loss function for left ventricle segmentation in cardiac MRI
1425	Max Dümwald, Philipp Ernst, Emrah Düzel, Klaus Toniies, Matthew J. Betts, Andreas Nüßberger and Steffen Oelze-Hoffa	Deep Coordinate Regression for Weakly Supervised Segmentation of the Locus Coeruleus in MRI

**Room 1A**

**AI4MI, Matteo Polsinelli**

882	João Pedrosa, Pedro Sousa, Joana Silva, Ana Maria Mendonça and Aurelio Campilho	Lesion-Aware Chest Radiography Abnormality Classification with Object Detection Framework
903	Ricardo Coimbra Britoso, João Pedrosa, Ana Maria Mendonça and Aurelio Campilho	Semi-supervised Multi-structure Segmentation in Chest X-Ray Imaging
2183	Daniel Wulff, Timon Dohmke, Ngoc Thinh Nguyen and Floris Ernst	Towards Realistic 3D Ultrasound using Conditional Variational Autoencoders
3707	Hunter Moreira, Palak Dave, Saad Alahmari, Yaroslav Kolinko, Lawrence Hall, Dmitry Goldfog and Peter Moutoun	MIMO YOLO - A Multiple Input Multiple Output Model for Automatic Cell Counting

**Room 2A**

**CBS C, Lucia Prieto Santamaria**

9726	Yihan Deng, Julia van der Meer, Athina Tzovara, Markus Schmidt, Claudio L.A. Bassetti and Kerstin Denecke	Analysis of semantic drifting in diagnostic texts for sleep disorders
5383	Gianluca Aprimpro, Irene Rechichi, Claudia Ferraris and Gabriella Olmo	Objective Assessment of the Finger Tapping Task in Parkinson's Disease and Control Subjects using Azure Kinect and Machine Learning
169	Mahbub Ul Alam, Jaakko Holmlén and Rahim Rahmani	CWDS-19 detection from thermal image and tabular medical data utilizing multi-modal machine learning
9994*	Arun Sivakumar, Jacob Furest, Roselyne Tchoua, Yiyang Wang, Thiruvangan Ramaraj and Daniela Raicu	Curriculum-based Improving Local Malignancy Classification through Robot Curriculum Task Learning

11:50 - 12:20

**CV, Matteo Spezialetti**

1645	Rodrigo Escobar Diaz Guerrero, Yubraj Gupta, Thomas Bocklitz and José Luis Oliveira	A Multimodal Image Registration System for Histology Images
884	Ramin Soleimani and Dirk Pesch	Preventing Pressure Ulcers by Image-based Posture Detection
5930	Sahar Nasirhighighi, Negin Ghamsarian, Daniela Stefanics, Klaus Schoeffmann and Heinrich Husslein	Action Recognition in Video Recordings from Gynecologic Laparoscopy
8718	Pedro Alves, Ana Filipa Sampaio, Nuno Cardoso, Paulo Alves, Pedro Salgado and Maria João M. Vasconcelos	AI-powered image acquisition and characterisation of dressings for patient-centred wound management

**CBS R&E, Belén Otero Carrasco**

8822	Fadime Tokmak and Beren Semiz	Investigating the Effect of Body Composition Differences on Seismocardiogram Characteristics
2607	Gabriela Diogenes, Arthur Vitória, Diogo Silva, Daniel Pagotto, Rafael Sousa and Afonso Filho	Live Births Prediction using Legendre Memory Unit: A case study for the health regions of Goiás
5689	Sajad Amouei Sheshkhal, Michael Alexander Riegler and Hugo Lewi Hammer	ML-Peaks: Chip-seq peak detection pipeline using machine learning techniques
5806	Marcelo Marques da Rocha, Aura Conci and Debora Christina Muchaluat-Sade	Voice Emotion Recognition Based on Color Histogram Features

**Coffe Break**

**RAD, Alessandro Di Matteo**

4012	Tetsuya Asakawa, Yuki Sugimoto, Hiroki Shinoda, Kazuki Shimizu, Takayuki Komoda and Masaki Aono	Cardiac Detection in Non-Contrast CT and Application to Calcium Scoring
1109	Selene Tomasiini, Agnese Sbröllini, Micaela Moretтини, Aldo Franco Dragoini and Laura Burtatini	CLAUDA: Cloud-based Automatic Diagnosis of Alzheimer's Prodromal Stage and Disease from 3D Brain Magnetic Resonance
5739	Alessandro Pio, Giovanna Castellano, Filippo Mignosi, Giuseppe Piacidi, Matteo Polinelli, Alessandro Scara and Gennaro Vesio	Graph Model to Represent Color Closeness in Pseudo-color Multimodal MRI
7887	Ricardo Coimbra Britoso, Damiano Del, Ciro Franzese, Nicola Lambri, Daniele Loiacono, Pietro Mancosu and Marta Sorretti	Segmentation of Planning Target Volume in CT Series for Total Mammal Irradiation Using U-Net

**AI4MI, Francesca Galassi**

4622	Fatih Aksu, Fabrizia Gelardò, Arturo Chiti and Paolo Soda	Early Experiences on using Triplet Networks for Histological Subtype Classification in Non-Small Cell Lung Cancer
6185	Nikolai Fetsov, Lawrence Hall, Dmitry Goldfog and Matthew Schultz	Unsupervised Prostate Cancer Histopathology Image Segmentation via Meta-Learning
9750	Elena Vincenzi, Alice Fantazzini, Marina Giulio, Simone Marini, Alessandro Verrì, Francesca Odente, Luca Basso, Maria Beatrice Damasio and Curcio Basso	An automatic tool performing functional analysis in MR urography in children
2250*	Dan Li, Xuechen Li, Zhibin Peng, Wenting Chen, Linlin Shen and Guangyao Wu	Multi-scale Contrastive Learning for Gastroenteroscopy Classification

**CBS C, Alejandro Rodríguez González**

1841	Konstantinos Bougalafiotis and Georgios Palouras	Analysing Biomedical Knowledge Graphs using Prime Adjacency Matrices
9976	Panagiotis Symeonidis, Lucia Bellinazzi, Chemseddine Berbague and Markus Zanker	Safe and Effective Recommendation of Drug Combinations based on Matrix Co-Factorization
9173	Matheus de Freitas Oliveira Baifa, Luciano Bachmann, Denise Maria Zanelli, Thiago Martins Pereira, Thomas Martin Deseno and Joaquim Cezar Felipe	Advancing Thyroid Pathologies Detection with Recurrent Neural Networks and Micro-FTIR Hyperspectral Imaging
7082	Xuechao Wang, Junqing Huang, Marianna Chatzakou, Kadri Medjainen, Pille Tabu, Aaro Toomala, Sven Nõmm and Michael Ruzhansky	A Light-weight CNN Model for Efficient Parkinson's Disease Diagnostics

13:40 - 14:40

**NTEL, Alejandro Rodriguez Gonzalez**

2045*	Dehelia Shabar, Shidin Balakrishnan, Jhasketan Pathan, Julien Abimhined, Elias Yacoub, Amir Mohammed, Zhang Deng, Abdulla Al-Ansari, Panagiotis Tsiamyrtzis and Nikhil Navkar	Tele-Mentoring Using Augmented Reality: A Feasibility Study to Assess Teaching of Laparoscopic Suturing Skills
2169	Stefan Kunze, Simon Uhrmann and Alexander Weinberger	Secure and Modular Sensor Network for an Ambient Assisted Living Field Study
4558	Diego Silva, José Gilberto Barbosa de Medeiros Junior, Lucas Vinicius Domingues and Thiago Mazzi Do Nascimento	Hemoglobin Estimation from Smartphone-Based Photoplethysmography with Small Data
2466	Anna Kleinau, Simon Flügel, Rüdiger Prys, Carsten Vogel, Milena Engelke, Winfried Schlee, Vilhmu Urnikshian and Myra Spiliopoulou	Predicting Patient-Based Time-Dependent Mobile Health Data

**CBS R&E, Dmitry Goldfog**

7851	Daniele Lozzi, Filippo Mignosi, Giuseppe Piacidi and Matteo Polinelli	Graph model of phase lag index for connectivity analysis in EEG of emotions
603	Ahmed Habashi, Ahmed Azab, Seif Eldawlaty and Gamal Aly	Motor Imagery Classification Enhancement using Generative Adversarial Networks for EEG Spectrum Image Generation
8696	Robin Heckenauer, Jonathan Weber, Cédric Wemmer, Caroline Trunster, Valentin Derangere, François Ghiringhelli, Michel Hassenforder, Pierre-Alain Müller and Germain Foresterier	Architectures of deep learning architectures for colon cancer mutation detection
3163	Fredrik Fineide, Andrea Storaa, Michael Riegler and Tor Ultheim	Predicting Melanoma Gland Dropout and Feature Importance Analysis with Explainable Artificial Intelligence

Lunch Break And Poster Presentations (8875, 6006, 6606)

**RAD, Alexis Andrew Miller**

6047	Francesco Di Feola, Lorenzo Tronchin and Paolo Soda	A Comparative Study Between Paired And Unpaired Image Quality Assessment in Low-Dose CT Denoising
8843	Ricky Walsh, Cédric Meuree, Anne Kerbrat, Arthur Masson, Burhan Rashid Husein, Malo Gaubert, Francesca Galassi and Benoît Combes	Expert Variability and Deep Learning Performance in Spinal Cord Lesion Segmentation for Multiple Sclerosis Patients
497	Yadollah Zamanizadost, Nadi Alami-Chentouf, Tarek Ould-Bachir and Sylvain Martel	Efficient Ring Proposal Extraction of Small Lung Nodules Using Enhanced VGG16 Network Model
5226	Rim El Badaoui, Ester Bonmati Col, Aleka Psarrou and Barbara Villarini	3D CATraTS: Channel Attention Transformer for Brain Tumour Semantic Segmentation

**AI4MI, Matteo Polsinelli**

7970	Sadeh Ferdowsi, Dimtri Ogimbene, Tom Foubham, Alberto Greco, Alejandro Luis Callara, Sergio Cervera-Torres, Mariano Alechia, Nicola Vanello and Luca Citi	Human body odour modulates neural processing of faces: effective connectivity analysis using EEG
4917*	Anushikha Singh, Brejesh Lal, B. K. Panigrahi, Anjali Agrawal, Anurag Agrawal, Balaramgesh Thangakumam and G. Christopher	Deep Learning based Diagnostic and Severity Assessment Framework for Lung Diseases using Chest Radiographs
1417	Nanne Vries, Gils van Praagh, Pieter Kienhuis, Othmane Bouhal, Riemer Slart and Leja Alic	Differentiating between giant cell arteritis and atherosclerosis on [18F]FDG-PET: an explainable machine learning approach
9009	Andreas Miliadoulis, Katerina D. Timourta, Vasilios Aspiotis, Theodoros Afrantou, Markos G. Tsipouras, Nikolaos Giannakeas, Euripidis Glavas and Alexandros T. Tzallas	Enhanced Alzheimer's disease and Frontotemporal Dementia EEG Detection: Combining lightGBM Gradient Boosting with Complexity Features

**CBS C, Lucia Prieto Santamaria**

9464	Zulfikar Ali, Alba Garcia Seco de Herrera, Tamer A. Alswalam and Ghulam Muhammad	Computer-based Blind Diagnostic System for Classification of Healthy and Disordered Voices
9755	Simon Bertschinger, Lukas Fenner and Kerstin Denecke	Feasibility of Cough Detection and Classification Using Artificial Intelligence in an Ambulatory Setting with a Ceiling Mounted Microphone
2306	Diogo A.P. Nunes, Joana Ferreira-Gomes, Daniela Oliveira, Carlos Vaz, Sofia Pimenta, Fani Neto and David Martins de Matos	Chronic pain patient narratives allow for the estimation of current pain intensity
7566	Semin Kim, Chanyuk Lee, Geunho Jung, Huiyu Yoon, Jongha Lee and Sangwook Yoo	Facial Acne Segmentation based on Deep Learning with Center Point Loss

16:00 - 16:30

**PH&H, Myra Spiliopoulou**

5918	Douglas Vieira Do Nascimento, Rafael Teixeira Sousa, Diogo Fernandes Costa Silva, Daniel Do Prado Pagotto, Cláudio José Coelho and Afonso Rodrigues Galvão Filho	Live Birth Forecasting in Brazilian Health Regions with Tree-based Machine Learning Models
339	Yakini Tchouka, Jean-François Couchot, David Laymani, Philippe Selles and Azeddine Rahmani	Automatic ICD-10 Code Association: A Challenging Task on French Clinical Texts
7221	Cristina Cerqueira, José Filipe Alves, Sara Andrade, António Mendes, João Paulo Barraca and João Rafael Almeida	Upscaling Operators of Essential Services Incident Response Teams
7077	Carsten Vogel, Elenen Biedig, Patricia Garatva, Lena Stenzel, Abdul Iredes, Robin Kraft, Harald Baummeister and Rüdiger Prys	A Highly Configurable EMA and JTAI Mobile App Framework Utilized in a Large-Scale German Study on Breast Cancer Aftercare
9803*	Helton Hideraldo Biscaro, Gabriela Colombo, Ayes Longo and Luciana Venturini Rossini	A Blood Flow Game Based on Smoothed Particles Hydrodynamics Concepts

**CBS R&E, Daniele Lozzi**

2745	Mingxiao Liu, Samuel Wilder, Sean Sanford, Sophie Dewi, Saha Saleh and Raviraj Nataraj	EEG and Motor Effects of Multimodal Feedback to Train Functional Grasp after Traumatic Brain Injury
6507	Eba Terumi Rubel Schneider*, Iohan Bonneck Gurnel, João Vitor André de Souza, Lilian Mie Mukai, Lucas Emanuel Silva E Oliveira, Marina de Sa Rebelo, Marco Antonio Gutierrez, José Eduardo Krieger, Douglas Teodoro, Claudia Moro and Emerson Cabrera Paraiso	CardioBERTP: Transformer-based Models for Cardiology Language Representation in Portuguese
9061*	Mustaqem Khan, Ufaq Khan and Alice Othmani	PD-Net: Multi-Stream Hybrid Healthcare System for Parkinson's Disease Detection using Multi Learning Trick Approach
2194*	Ehsan Azam, Ali Hassan, Muhammad Basit and Imran Khan Niazi	Classification Of Complicated Upper Limb Movements From Pre-movement EEG Signals Using STFT And Spectral Characteristics

**Coffe Break**

**R&ST, Dmitry Goldfog**

3437	Eva-Maria Stevens-Lefferts, Richard Geers, Eve Houtz-Loring and Henk Seelen	Identification of different functional hand grips using a sensor glove: reproducibility in healthy subjects
6882	Fikri Bajraktari, Nikola Rotkopf and Peter P. Pott	CNN-Based Intention Recognition Using Body-Worn Inertial Measurement Units
2993	Abdelakram Hafid, Saad Abdullah, Maria LImEh, Amira Khatiboussouf and Mita Folke	Impact of Activities in Daily Living on Electrical Bioimpedance Measurements for Bladder Monitoring
6380	Samuele Burtatini, Sara Montagna, Angelo Croatti, Nicola Gentili, Alessandro Ricci, Laura Leonard, Serafino Pandolfini and Sofia Tosi	An Ecosystem of Digital Twins for Operating Room Management and Staff Tosi
5682	Idoia Badilla, Onno Linschmann, Lina Wilms, Vladimir Blank, Steffen Leonhardt and Markus Lueken	Monte Carlo simulation-based analysis of unobtrusive PPG monitoring through clothes

**AI4MI, Francesca Galassi and Ricky Walsh**

8682	Eugenia Sol Pileiro, Rodrigo Ramele and Juliana Gambini	Variational Autoencoder as a Data Augmentation tool for Corneal Microscopy Images
2670	Cosmin Andrei Hatfaldui, Daniel Bunesco, Cosin Florian Ciupel, Alex Serban, Karl-Ulrich Böese, Marc Oppel, Stephanie Schröder, Christopher Seehase, Harald F. Langer, Jeanette Erdmann, Henry Northing and Lucian Mihai Iru	Deep learning based detection of collateral circulation in coronary angiographies

**CBS C, Mirela Cazzolato**

3000	Federica Aracri, Maria Giovanna Bianco, Andrea Quattrone and Alessia Sarica	Imputation of missing clinical, cognitive and neuroimaging data of Dementia using misRFnet, a Random Forest based algorithm
7096	Victor Amot, Oscar Jimenez-del-Toro, Padraic Eyraud, Yan Guex-Crosier, Clara Bergin, André Anjos, Florence Hogewoud and Mattia Tomasoni	Fully Automatic Grading of Retinal Vascularity on Fluorescein Angiography Time-lapse from Real-world Data in Clinical Settings
8125	Daniel Gómez-Bravo, Aaron Garcia, Guillermo Viqueira, Belén Ros Sánchez, Alejandra Pérez-García, María Torreente, Ernestina Mensalvas, Mariano Provencio and Alejandro Rodríguez González	Clustering-based Pattern Discovery in Lung Cancer Treatments
2221	Mamadou Dia, Ghazaleh Khodabandou and Alice Othmani	A Novel Stochastic Transformer-based Approach for Post-Traumatic Stress Disorder Detection using Audio Recording of Clinical Interviews
8752	Korbinian Randl, Nura Lladós Armengol, Lena Mondrejevski and Ioanna Miliou	Early prediction of the risk of ICU mortality with Deep Federated Learning

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13:30 - 14:30

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**Aula Magna**

**BIO, Andrea Bianchi**

1783 Dinis Cruz, João Rafael Almeida, Jorge Miguel Silva and José Luis Olivera  
SecureFASTA: Ensuring privacy and trust when sharing genomic data

9982 Andrea Álvarez-Pérez, Lucía Prieto-Santamaria, Esther Ugarte Carro, Belén Otero Carrasco, Adrián Ayuso-Muñoz and Alejandro Rodríguez-González  
Exploring disease-drug pairs in Clinical Trials information for personalized drug repurposing

9295 Belén Otero-Carrasco, Santiago Romero-Brufau, Andrea Álvarez-Pérez, Adrián Ayuso-Muñoz, Lucía Prieto-Santamaria, Juan Pedro Caraga-Valente Hernández and Alejandro Rodríguez-González  
Orphan Drugs and Rare Diseases: Unveiling Biological Patterns through Drug Repurposing

8733 Adrián Ayuso-Muñoz, Lucía Prieto-Santamaria, Andrea Álvarez-Pérez, Belén Otero-Carrasco, Emilio Serrano and Alejandro Rodríguez-González  
Enhancing drug repurposing on graphs by integrating drug molecular structure as feature

**DM, Vishnu Unnikrishnan**

1103 Guilherme Odeker Ribeiro, Jonata Tyska Carvalho and Mateus Grieffel  
Stimling Behavior Dataset - Unifying stereotype behavior dataset in the wild

9375 Andrea Bianchi, Antonisica Di Marco, Francesca Marzi, Giovanni Silò, Cristina Pellegrini, Stefano Mai, Alessandro Menguzzi, Agostino Viridis, Marco Salvatore Nobile and Maria Simeoni  
Trustworthy Machine Learning Predictions to support clinical research and decisions

6964 Sergio Rubio-Martin, Maria Teresa Garcia-Ordás, Martín Bayón-Gutiérrez, Natalia Prieto-Fernandes and José Alberto Benítez-Andrades  
Early Detection of Autism Spectrum Disorder through AI-Powered Analysis of Social Media Texts

5952 \* Kunli Zhang, Qianxiang Gao, Jimzhao Zhang, Dongming Dai, Yingjie Han, Hongmei Zan and Haomei Liu  
Construction of Chinese Pediatric Epilepsy Knowledge Graph

6945 Noor Jamaludeen, Felix Kuhn, Andre Brechmann, Falko Fuhrmann, Stefan Remy and Myra Spilopoulou  
Inferring Salient Motifs during Learning Experiments

**Room 0A**

**ERS, José Alberto Benítez-Andrades**

5296 Felix Barends, Sergio Guineá-Molina, Joaquín Gayoso Cabada, Jaime González Díaz and José Luis Sierra Rodríguez  
The Generation of Standardized e-Learning Content Packages from Interoperable FHIR Clinical Cases

8244 Austin English  
Automated Design of Task-Dedicated Illumination with Particle Swarm Optimization

4064 Alvaro García-Barragán, Oswaldo Solarte-Pabón, Georgy Nedostup, Mariano Provencio, Ernestina Menasalvas and Victor Robles  
Structuring Breast Cancer Spanish Electronic Health Records Using Deep Learning

2285 \* Pia Helen Smedsrud, Håvard Espeland, Tor Jan Derek Berstad, Andreas Petlund, Thomas de Lange, Michael Riegler and Pål Halvorsen  
Man vs. AI: An in silico study of polyp detection performance

**PH&H, Gennaro Vessio**

9568 Mirela Teixeira Cazzolato, Marco Antonio Gutierrez, Caetano Traina Jr., Agma Juci Machado Traina and Christos Faloutsos  
Exploratory Data Analysis in Electronic Health Records Graphs: Intuitive Features and Visualization Tools

3236 \* Jongwoo Kim and Loc Tran  
Ensemble Convolutional Neural Networks for the Classification and Visualization of Retinal Diseases in Optical Coherence Tomography Images

9557 \* Ifran Rahman Nijhum, Anan Ghosh, Hasibul Hassan, Md. Yearat Hossain and Tanzilur Rahman  
Heartscan: An Incremental Learning Based Arrhythmia Detection, Data Collection, and Monitoring System

3193 Yongjian Yu and Jue Wang  
Fluorescence Image Visualization using Multi-Channel Minimax Optimization (MCMO)

1846 Gianluca Zuin, Humberto Lomeu, Gabriel Barros, Mathews Barbosa, Guilherme Lima, Nicolas Montanha and Ferrnando Biscione  
A Modified Louvain Approach for Medical Community Detection using Geographic Data

**DAY 2**

**Registration  
Keynote Speaker 2**

**Room 1G**

**P&I, Annamaria Cimini**

3087 Gianluca Zuin, Lucas Parreiras, Luiz Melo, Gabriel Barros, Humberto Lomeu, Batiele Melo, Wesley Marini, Debora Lott and Mateus de Souza  
An Ensemble Approach for Inconsistency Detection in Medical Bills: A Case Study

4367 Eleni Theodoridou, Angelo Cacchio, Alessandro Di Matteo, Matteo Polinelli and Giuseppe Placidi  
Materials and techniques for effective at-home rehabilitation for hand mobility restoration based on the Virtual Glove

Tema Sinergie, Davide Raspanti, AI based advanced multimodality imaging for Radiotherapy, Diagnostic Radiology and Nuclear Medicine applications

**Coffe Break**

**P&I, Annamaria Cimini**

Dompe, Daniela Iaconis, Artificial Intelligence and Molecular Simulation: Paving a new way for drug discovery

Sanofi, Alessandro Casu, Smart data in manufacturing

Acc'youRate S.p.A, Arnaldo Usai, Printed e-textiles wearables, and preventive/predicting data model, in the human IOT concept

**Lunch Break and P&I Demonstrations  
Social Activities  
Free Time  
Social Dinner**

**Room 1A**

**RAD, Alexis Andrew Miller**

9843 Danilo César Pereira, Leonardo Henrique da Costa Longo, Thaina Aparecida Azevedo Costa, Alessandro Santana Martins, Adriano Barbosa Silva, Guilherme Botazzo Rozendo, Guilherme Freire Roberto, Leonardo Alves Neves and Marcelo Zanovetti Nascimento  
Handcrafted features vs deep-learned features: Hermite Polynomial Classification of Liver Images

5306 Rui Jesus, Dibeet Garcia Gonzalez, João Carlos, Telmo Adão, Rui Almeida, Vitor Sousa, Luis Bastião Silva and Carlos Costa  
Active Learning Impact in the Annotation of Cases in a Pathology-PACS

4615 Leonardo Crespi, Paolo Roncaglioni, Damiano Dei, Ciro Franzese, Nicola Lambri, Daniele Loiacono, Pietro Mancosu and Marta Scorsetti  
Ensemble Methods for Multi-Organ Segmentation in CT Series

7815 Giovanna Castellano, Eufemia Lella, Valerio Longo, Giuseppe Placidi, Matteo Polinelli and Gennaro Vessio  
Combining Unsupervised and Supervised Deep Learning for Alzheimer's Disease Detection by Fractional Anisotropy Image

**RAD, Paolo Soda**

8211 Márcus V. L. Costa, Erikson J. Aguiar, Lucas S. Rodrigues, Jonathan S. Ramos, Caetano Traina Jr. and Agma J. M. Traina  
A Deep Learning-based Radiomics Approach for COVID-19 Detection from CBCT Images using Ensemble Learning Model

8790 Xiaodan Xing, Yang Nan, Federico Felder, Simon Walsh and Guang Yang  
The Beauty or the Beast: Which Aspect of Synthetic Medical Images Deserves Our Focus

5929 Gergo Bogacsovic, Balazs Harangi and Andras Hujdu  
Increasing the diversity of ensemble members for accurate brain tumor classification

5206 Matteo Polinelli, Luigi Cinque, Filippo Mignosi, Giuseppe Placidi and Genoveffa Tortora  
Siamese Network to Investigate scanner-dependency in MRI

7366 Eduardo Almeida, Jose Maria Luna and Sebastião Ventura  
Radiomics Software Tools: A comparative Analysis on Breast Cancer

**Room 2A**

**CBS C, Daniele Lozzi**

9210 Norbert Serban and Balazs Harangi  
Localization-Enhanced Voting-based Ensemble of Semantic Segmentation Models for Cervical Polyp Segmentation

1785 Zihai Zhao, Hieu Hanh Le, Yuki Yasumitsu, Ryoosuke Matsuo, Tomoyoshi Yamazaki, Kenji Araki and Haruo Yokota  
Analysis of Transitions in Differences between Frequent Medical-order Sequences for COVID-19

6999 Luiz Henrique Pereira Niero, Ivan Rizzo Guilherme, Lucas Emanuel Silva E Oliveira and Gerardo Maria de Araujo-Filho  
PayBERTp: A Clinical Entity Recognition Model for Psychiatric Narratives

8410 Hrishikesh Tiwary and Amav Bhavsar  
Anti-seizure Medication Classification using EEG signals via Attention-based CNN

**CBS C, Alessandro Di Matteo**

605 Sara Montagna, Stefano Mariani and Martino Francesco Pengo  
A Chatbot-based Recommendation Framework for Hypertensive Patients

4700 Sidi Mohamed Sid'El Mocker, Ahmad Diab, Imad Rida, Kiyoka Kingwana and Sofiane Boudjedou  
Active aging prediction from muscle electrical activity using HD-sEMG signals and machine learning

5670 Stefano Rosini, Serena Altamura, Davide Pietropaoli, Giuseppe Placidi and Matteo Polinelli  
Periodontitis Evaluation through Automatic Teeth Detection and Segmentation from self-collected Smartphone Images

8181 \* Quoc-Huy Trinh  
Meta-Polyp: a baseline for efficient Polyp segmentation

8910 Parisa Movahedi, Valtteri Nieminen, Ileana Montoya Perez, Tapio Pahikkala and Antti Arola  
Evaluating Classifiers Trained on Differentially Private Synthetic Health Data.

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14:30 - 15:00

**Aula Magna**

**DD4HL, Andrea Tigrini and Sofia Romagnoli**

4518 Alfredo Ormazabal, Lucy Hederman and Damon Berry Clinician's perspective on trusting Patient Generated Health Data for use in clinical decision-making: A qualitative interview study.

1713 Andrea Tigrini, Federica Verdini, Sandro Fioretti, Mara Scattolini, Rami Mobarak, Emilio Gambi, Laura Burattini and Alessandro Mengarelli Gait Event Timeseries Assessment through Spectral Biomarkers and Machine Learning

5096 Giulia Rafaloni, Massimo Battagioni, Simone Compagnoni, Linda Senigaglia, Franco Chiaraluce and Marco Baldi A Machine Learning-based Method for Cyber Risk Assessment

9890 Mara Scattolini, Andrea Tigrini, Federica Verdini, Sandro Fioretti and Alessandro Mengarelli Canonical Correlation Analysis of Transient EMG Data for Multi-User Motion Intent Detection

237 Antonio Nocera, Linda Senigaglia, Gianluca Ciattaglia and Ennio Gambi Walking Pattern Identification of FMCW Radar Data based on a Combined CNN and bi-LSTM Approach

**DD4HL, Andrea Tigrini And Agnese Piersanti**

4454 Agnese Piersanti, Benedetta Salvatori, Christian Gbibi, Laura Burattini, Andrea Tura and Micaela Moretini A Machine Learning Framework based on Continuous Glucose Monitoring to Prevent the Occurrence of Exercise-Induced Hypoglycemia in Children with Type 1 Diabetes

6736 \* Elif Toprak, Sevgi Nur Bilgin Aktay, Buket Coşkun, Pinar Uliser, Hatice Kose and Duygun Erol Barkana Investigation of Physiological Features by Age Groups in Children with Autism

5887 Alessandro Mengarelli, Federica Verdini, Ali Al-Timemy, Rami Mobarak, Mara Scattolini, Sandro Fioretti, Laura Burattini and Andrea Tigrini Toward a Minimal sEMG Setup for Knee and Ankle Kinematic Estimation during Gait

**Room 0A**

**PH&H, Eleni Theodoridou**

7481 Jose M. Iniesta-Chamorro, Maria Sereno-Moyano, Beatriz Garrido-Rubiales, Victoria Moreno-Arribas, Ana Ramirez de Molina, M. Elena Hernandez Pérez, Guillermo Reglero, Enrique Casado and Enrique J. Gómez The ALLIBRD mHealth Platform: Supporting Cancer Patient Treatment and Follow-up

7030 (5) Maximilian Karthan, Daniel Hieber, Annika Kreuder, Ulrich Frick, Rüdiger Prys and Johannes Schobel Concept and Requirements for an Educational Serious Game Teaching Pandemic Management

4614 Nikolaos Mylonas, Ioannis Mollas and Grigorios Tsoumakas Beyond Annual Revisions: A Multi-Label Concept Drift Analysis of MeSH

5405 Panagiotis Symeonidis, Grigorios Maniatis and Markus Zanke Accurate and Safe Drug Recommendations based on Singular Value Decomposition

2725 Maximilian Karthan, Daniel Hieber, Rüdiger Prys and Johannes Schobel Developing a Gamification-Based mHealth Platform to Support Orofacial Myofunctional Therapy for Children

**ERS, Alejandro Rodriguez González**

1011 Jule Elmanowski, Melanie Kleynen, Richard Geers, Jeanine Verbut and Henk Seelen Task-oriented arm training for stroke patients based on remote handling technology concepts: Results of a pilot study

2668 Andreia Caldas, Simão Valente, Nuno S. Rodrigues, Augusto R. V. F. de Araújo, Roland Storz, Pedro Morais, Demétrio Matos and João L. Vilaça Development of a breast ultrasound phantom for medical training

3245 Juan Arias Natural Language Processing for Clinical Quality Measures

**DAY 3  
Registration  
Keynote Speaker 3**

**Rom 1G**

**BIO, José Alberto Benitez-Andrades**

8836 Jean Mendes, Francisco Silva, André Cardoso, Ivan Moura, Luciano Coutinho, Davi Viana, Markus Endler and Ariel Teles OpenDRPM: A Framework for Developing Mobile Sensing Applications of Digital Phenotyping

3355 Andrea Storás, Morten Magna, Fredrik Fineide, Bernd Thiede, Xiangjun Chen, Inga Stomke, Pål Halvorsen, Tor Ulheim and Michael Reager Identifying Important Proteins in Melibionin Gland Dysfunction with Explainable Artificial Intelligence

6685 Hyounghin Choi, Choongki Min and Kyungnam Kim Subgroups of social anxiety disorder using digital phenotype

9475 José António Reis Tavares, Isabel Praça, Lúcia Laerdas, Pedro Brandão, Ivo Barros, José Gonçalves and Marisa Santos Machine learning for rectal cancer prediction based on metabolic changes on amino acids

4099 Andrea Bianchi, Antinica Di Marco and Cristina Pellegrini Comparing HiSAT and STAR-based pipelines for RNA-Seq Data Analysis: a real experience

**CBS C, Erikson de Aguiar**

9526 Sofia Romagnoli, Agnese Sbrolini, Micaela Moretini and Laura Burattini Symbolic Analysis of Heart-Rate Variability during Training and Competition in Short Distance Running

9724 \* Cristina Antón-Munárriz, Rafael Pastor-Vargas, Juan M. Huel-Hurtado, Antonio Robles-Gómez, Mercedes E. Paoletti and José Alberto Benitez-Andrades Detection of cerebral ischaemia using transfer learning techniques

521 \* Yanki Madooua, Melissa Cylla Lounic, Frédéric Bouvierfal, Ferrel Abalache, Choubella Maoui and Alain Pruski Blood pressure assessment from contact photoplethysmographic signals using a combination of deep convolutional and recurrent neural networks

9457 Adriano B. Silva, Guilherme B. Rozendo, Thaina A. A. Toski, Alessandro S. Martins, Adriano M. Loyola, Sérgio V. Cardoso, Alessandra Lumini, Leandro A. Neves, Paulo R. De Faria and Marcelo Z. Do Nascimento CNN Ensembles for Nuclei Segmentation on Histological Images of OED

**Lunch Break  
Closing Ceremony**

**Room 1A**

**DB, Alessandro Di Matteo**

9306 João Rafael Almeida, Jorge Miguel Silva and José Luis Oliveira A FAIR Approach to Real-World Health Data Management and Analysis

3200 Cássio Ribeiro Pereira, Access Passos Souza, Fábio Pires Iturrutien, Juliano Costa Machado and André Luis Del Mestre Martins FASS-ECG: A FHR Cloud API to Enable Streaming and Storage of Continuous 12-lead ECGs

1426 Daniel Hieber, Georg Prokop, Maximilian Karthan, Felix Holl, Hans A. Kestler, Gregor Grambow, Bruno Mias, Rüdiger Prys, Friederike Liesche-Straecker and Johannes Schobel Towards an Architecture for Collecting a Multidimensional Glioblastoma Dataset

4728 Inesol Passa, Mikel Hernandez, Gorika Epelde, Francisco Landeiro, Andoni Beristian, Ane Alberdi, Panagiotis Bamidis and Evdokimos Konstantinidis Effect of incorporating metadata to the generation of synthetic time series in a healthcare context

6874 Ioannis Billonis, Luis Fernandez-Luque and Carlos Castillo A Survey on Public Data Sets Related to Chronic Diseases

**RAD, Alexis Andrew Miller**

190 Matteo Spezialetti, Ramon Gimenez De Lorenzo, Giovanni Luca Gravina, Giuseppe Placidi, Fabrizio Rossi, Giorgio Russo, Stefano Smiriglio, Francesca Vittorini and Filippo Mignosi Spread-Out Bragg Peak in Treatment Planning System by Mixed Integer Linear Programming: a Proof of Concept

779 \* Iliaria Marcantoni, Federica Tomaluolo, Giusepp Piccolantonio, Agnese Sbrolini, Micaela Moretini, Federica Fiori, Arianna Vignini, Gabriele Polonara, Laura Burattini and Mara Fabri Spatial distribution of BOLD activations evoked by three different tastants to build a chemotopic map of primary gustatory area: A pilot study

6146 Tânia Melo, Jaime Cardoso, Ângela Carneiro, Aurélio Campinho and Ana Mendonça OCT Image Synthesis through Deep Generative Models

8690 Leonardo Crespi, Mattia Portanti and Daniele Loacono Comparing Adversarial and Supervised Learning for Organs at Risk Segmentation in CT Images

**Room 2A**

**R&ST, Rosa Sicilia**

9470 Sérgio G. Pereira, Fernando Veloso, Tiago H. Barros, Pedro Lobo, Pedro Morais and João L. Vilaça Development of a Thermoplastic Polyurethane gradient deformation monitoring system

3593 Markus Schwarz, Vincent Gauda, Markus Kaiser, Henrik K. J. Kuttruff, Jonas Rentsch and Maximilian Thür Networked multi-sensor rollator with AI-assisted fall detection

1025 Andreas Puder, Marc Schindewolf and Eric Sax Ontology-Based Service Composition for Interoperable and Modular Medical Devices

3741 \* Shenghao Cao and Hao Liu EEG-based hardware-oriented lightweight 3D-CNN emotion classifier

3765 Guido Di Patrizio Stanchieri, Andrea De Marcellis, Marco Faccio, Elia Palange, Mario Di Ferdinando, Stefano Di Gennaro and Pierdomenico Pepe On the FPGA-Based Hardware Implementation of Digital Glucose Regulators for Type 2 Diabetic Patients

**CV, Jan Liu and Flake Bajraktari**

145 Felipe Barboza, João Souto and Bruno Carvalho Three-Dimensional Wound Reconstruction using Point Descriptors: A Comparative Study

3971 Alexander Pálhva, Vajira Thamawita and Steven Hicks RePoly: A Framework for Generating Realistic Colon Polyps with Corresponding Segmentation Masks using Diffusion Models

9062 Rui Jesus, José Friás, Luís Bastão Silva and Carlos Costa A Vendor Neutral Archive with MONAI for Automatic Medical Image Analysis

5431 Jan Liu, Flakë Bajraktari, Regine Rausch and Peter P. Pott 3D Reconstruction of Forearm Veins Using NIR-Based Stereovision and Deep Learning

**Legend**

- Security
- Public Health and Healthcare (PH&H)
- Education, Research and Services (ERS)
- AIMEDIMAG (AI4MI)
- Human In The Loop (DD4HL)
- Project and Industry Track (P&I)

- Bioinformatics (BIO)
- Computer Vision (CV)
- Databases and Blockchain (DB)
- Datamining (DM)
- Robot and Smart Technologies (R&ST)
- Radiomics and Radiogenomics (RAD)

- Network and Telemedicine Systems (NTEL)
- Computer Based Solutions in clinical decision support (CBS C)
- Computer Based Solutions in Clinical Research and Epidemiology (CBS R&E)

Paper IDs marked with a star (\*) refer to exceptional cases: online presentation.