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Room: The Alban Arena - Basement Room

435 Designing an Immersive Virtual Reality Scenario for Social Anxiety Elicitation and Modeling: A Preliminary Evaluation

Matteo Martini and Eros Viola (University of Genoa, Italy); Francesco Bossi, Sergio Frumento, Alessio Iannizzotto and Sara Said (University of Pisa, Italy); Alejandro Luis Callara (Research Center "E. Piaggio", University of Pisa, Italy); Fabio Solari (Via Dodecaneso 35, Italy); Enzo Pasquale Scilingo (University of Pisa, Italy); Alberto Greco (Università di Pisa, Italy); Danilo Menicucci (University of Pisa, Italy); Manuela Chessa (University of Genoa, Italy)

441 Visuo-Haptic Mixed Reality for Interactive Therapy With Temperature Stimuli: A Preliminary Study

Jabrail Chumakov (Istituto Italiano di Tecnologia (IIT), Italy); Manuela Chessa (University of Genoa, Italy); Nikhil Deshpande (University of Nottingham, United Kingdom)

447 Adaptive Application for Cognitive Training on Selective Attention

Francesco Bossi (University of Pisa, Italy); Francesco Di Gruttola (University of Bologna, Italy); Gabriella Daneluzzi (Intesa Sanpaolo Innovation Center S.p.A. Neuroscience Lab, Italy); Rossella Iannucci (Intesa Sanpaolo S.p.A., Italy); Sonia D'arcangelo (Intesa Sanpaolo Innovation Center S.p.A. Neuroscience Lab, Italy); Emiliano Ricciardi (IMT School for Advanced Studies Lucca, Italy)

452 Perceptual Features of Emotionally-Subliminal Phobic Stimuli Elicit Differences in ERPs: A Study on Holographic Spiders Shown in Augmented Reality

Sergio Frumento (University of Pisa, Italy); Alejandro Luis Callara (Research Center "E. Piaggio", University of Pisa, Italy); Danilo Menicucci, Enzo Pasquale Scilingo, Alberto Greco, Angelo Gemignani (University of Pisa, Italy)

458 Insights Into Pre-Stimulus Activity for EEG-Based Machine Learning Sensory Classification

Linda Fiorini (IMT School for Advanced Studies Lucca, Italy); Stefania Lucia (SISSA Scuola Internazionale Superiore di Studi Avanzati, Italy); Francesco Pietrogiamici (IMT School for Advanced Studies Lucca, Italy)

Session 3.3 - Leveraging XR and AI in innovative industrial applications

Room: The Alban Arena - Circle Room

464 Integrating Deep Learning Based Anomaly Detection With Extended Reality: A Case Study on Extensive Railways Monitoring

Maria di Summa, Angelo Cardellicchio, Nicola Mosca, Marina Ricci, Vito Renò, Udith Krishnan Vadakkum Vadakkal and Ettore Stella (CNR STIIMA, Italy)

470 Exploring the Microcosm: Immersive Tomographic Analysis of Specimens

Nicola Mosca, Maria di Summa, Moh Rafik (CNR STIIMA, Italy); Vittorio Bianco (CNR-ISASI, Italy); Cosimo Patrino, Ettore Stella (CNR STIIMA, Italy)

475 Advancing Substructure Analysis in Tomograms

Moh Rafik (CNR STIIMA, Italy); Nicola Mosca (National Research Council, Italy); Massimiliano Nitti (National Research Council - ISSIA, Italy); Pietro Ferraro (CNR-ISASI, Italy); Maria di Summa (CNR STIIMA, Italy)

481 Exploiting Data Monitoring and Augmented Reality to Foster Customer Service in Domestic Wind Energy Adoption

Enricoandrea Laviola, Sara Romano, Antonio Uva, Michele Gattullo (Politecnico di Bari, Italy)

487 An Industry 4.0 Framework for Immersive Reality During Assembly and Testing of Satellites

Matteo Marinacci, Anna Carini, Marco Eugeni, Michele Pasquali and Massimo Mecella (Sapienza Università di Roma, Italy)

Poster Session 2

Room: The Alban Arena

493 A Machine Learning-Based Approach to Detect Cyberbullying Tweets

Giuseppe Prisco, Francesco Mercaldo and Antonella Santone (University of Molise, Italy); Mario Cesarelli (University of Sannio, Italy)

- 499 AI for Discovering the Role of Cognitive and Brain Reserves in Parkinson's Disease Classification**
Ilaria Siviero (University of Verona, Italy); Alice Pirastru (IRCCS Don Gnocchi Foundation, Italy); Nicola Valè (University of Verona, Italy); Valeria Blasi (IRCCS Don Gnocchi Foundation, Italy); Gloria Menegaz (University of Verona, Italy); Francesca Baglio (Rehabilitation Unit, Milano - Fond. Don Carlo Gnocchi Onlus, Italy); Ilaria Boscolo Galazzo and Silvia Francesca Storti (University of Verona, Italy)
- 505 Unsupervised Machine Learning Approach to Discover Subtypes of Progressive Supranuclear Palsy**
Noemi Pisani (University of Naples Federico II, Italy); Marina Picillo (University of Salerno, Italy); Michela Russo (University of Naples Federico II, Italy); Filomena Abate and Anna Rosa Avallone (University of Salerno, Italy); Francesco Amato (University of Naples Federico II, Italy); Paolo Barone (University of Salerno, Italy); Carlo Ricciardi (University of Naples Federico II, Italy); Mario Cesarelli (University of Sannio, Italy)
- 511 Transmission Delays in Negative Feedback Physiological Systems: The Case of the Muscle Stretch Reflex**
Francesca Angelone, Annarita Tedesco, Alfonso M Ponsiglione, Carlo Ricciardi, Donatella Dragone (University of Naples Federico II, Italy); Carlo Cosentino, Anna Procopio (Università degli Studi Magna Græcia di Catanzaro, Italy); Maria Romano, Francesco Amato (University of Naples Federico II, Italy)
- 517 A Combined Use of Radiomics and Connectomics to Classify Sex and Age in Healthy Subjects: The New "Radioconnectomics" Paradigm**
Leandro Donisi (University of Naples Federico II, Italy); Alessandro Pasquale De Rosa, Federica Franza, Maria Agnese Pirozzi, Antonio Gallo and Fabrizio Esposito (University of Campania Luigi Vanvitelli, Italy)
- 523 Measuring the Accuracy of Artificial Intelligence Algorithms in the Identification of Anatomical Landmarks Through the Rastereography SPINE3D**
Juri Taborri (University of Tuscìa, Viterbo, Italy); Luca Molinaro (University of Tuscìa & Sensor Medica Srl, Italy); Emanuele Faperdue (University of Tuscìa, Italy); Marco Donati (Motustech, Italy); Stefano Rossi (University of Tuscìa, Italy)
- 529 Real-Time Detection of Criminal Actions in the Everyday Life, From Camera-Equipped Street Lamps**
José M Alcalde-Llargo (University of Tuscìa & University of Córdoba, Spain); Andrea Zingoni (University of Tuscìa, Italy); Enrique Yeguas-Bolívar (University of Córdoba, Spain); Gianluca Morciano (Università Campus Bio-Medico di Roma, Italy); Daniele Melloni (University of Tuscìa, Italy); Nicola Fantasia and Matteo Sperandio (Architectures & Emerging Technologies Practice - AlmavivA, Italy); Gianluigi Mascia (AlmavivA, Italy)
- 535 VRAllexia Project: Provide Customized Support to University Students With Dyslexia Using Artificial Intelligence and Virtual Reality**
Andrea Zingoni (University of Tuscìa, Italy); Gianluca Morciano (Università Campus Bio-Medico di Roma, Italy); José M Alcalde-Llargo (University of Tuscìa & University of Córdoba, Spain); Juri Taborri (University of Tuscìa, Viterbo, Italy); Enrique Yeguas-Bolívar, Pilar Aparicio-Martínez and Sara Pinzi (University of Córdoba, Spain); Giuseppe Calabrò (University of Tuscìa, Italy)
- 541 VR-Based Silent Reading and Rosenberg Tests: Machine-Learning Approach to Identify Learning Disorders**
Michele Materazzini (University of Tuscìa - DEIM, Italy); Gianluca Morciano (Università Campus Bio-Medico di Roma, Italy); José M Alcalde-Llargo (University of Tuscìa & University of Córdoba, Spain); Enrique Yeguas-Bolívar (University of Córdoba, Spain); Andrea Zingoni, Juri Taborri (University of Tuscìa, Italy)
- 547 Implementation of a Routing Application for People With Impairments, Improved and Evaluated Through Service Learning**
Sediola Ruko, Andrea Zingoni, Raffaele Pelorosso and Giuseppe Calabrò, Daniele Melloni (University of Tuscìa, Italy)
- 553 Efficient Atrophy Mapping: A Single-Step U-Net Approach for Rapid Brain Change Estimation**
Riccardo Raciti, Alessia Rondinella, Lemuel Puglisi, Francesco Guarnera (University of Catania, Italy); Daniele Ravi (University of Messina, Italy & University College London, Italy); Sebastiano Battiato (University of Catania, Italy)
- 559 SynthBA: Reliable Brain Age Estimation Across Multiple MRI Sequences and Resolutions**
Lemuel Puglisi, Alessia Rondinella (University of Catania, Italy); Ermelinda De Meo (University College London, United Kingdom (Great Britain)); Francesco Guarnera, Sebastiano Battiato (University of Catania, Italy); Daniele Ravi (University of Messina, Italy & University College London, Italy)
- 565 A Novel Pipeline Based on Attention Mechanism Within a GNN to Predict New Edges Between Diseases and Genes**
Massimo Orazio Spata (University of Catania, Italy); Sabrina Conoci (University of Messina, Italy); Alessandro Ortis and Sebastiano Battiato (University of Catania, Italy)

- 570 Low-Dose CT-Based Radiomic Model to Identify Malignant Lung Nodules**
Jiaying Liu, Anna Corti, Valentina D.A. Corino and Luca Mainardi (Politecnico di Milano, Italy)
- 576 Strategies for Efficient ENG Signal Classification Using Data Augmentation and Data Balancing Techniques**
Antonio Coviello, Rafael Sobral Augusto, Davide Gottardello, Matteo Esposito, Matteo Manetti, Umberto Spagnolini and Maurizio Magarini (Politecnico di Milano, Italy)
- 582 On the Effectiveness of Rapid Antigen Test Kits in Measuring the Spread of SARS-CoV-2**
Aldo F. Dragoni (Università Politecnica Delle Marche, Italy)
- 588 eXplainable Artificial Intelligence Improves EEG-Based Cognitive Workload Assessment Induced by Fine Motor Activity in Neurosurgeons**
Pasquale Arpaia, Matteo De Luca, Anna Della Calce, Ludovica Gargiulo, Nicola Moccaldi (University of Naples Federico II, Italy); Elisa Visani, Dunja Duran, Giovanni Carone (IRCCS Carlo Besta Neurological Institute, Italy); Cosimo Puttilli and Marco Nalin (Ab Medica, Italy); Alessandro Perin and Nicolò Castelli (IRCCS Carlo Besta Neurological Institute, Italy); Salvatore Piccolo (University of Naples Federico II, Italy)
- 594 EEG-Based Stress Assessment During Robot Assisted Surgery. Comparison of Statistical Methods With Machine Learning**
Pasquale Arpaia (University of Naples Federico II, Italy); Irene Del Chicca (Ab Medica, Italy); Matteo De Luca, Ludovica Gargiulo, Giovanna Mastrati and Nicola Moccaldi (University of Naples Federico II, Italy); Elisa Morganti (Politecnico di Milano, Italy); Marco Nalin and Mauro Picciafuoco (Ab Medica, Italy); Francesca Pierro (University of Naples Federico II, Italy); Filippo Rigoni (Politecnico di Milano, Italy); Riccardo Rigoni (ETH Zurich, Italy)

Poster Session - Industry

Room: The Alban Arena

- 600 Words to Matter: A Comparative Study for Developing Intelligent Design and Manufacturing of 3D Materials Based on Large Language Models**
Raffaele Pugliese, Silvia Badini and Stefano Regondi (Nemo Lab, Italy)
- 606 Variable Time Delay Estimation for Industrial Processes: Robustness to Noise**
Salvatore Graziani (University of Catania, Italy); Maria Gabriella Xibilia, Luca Patanè (University of Messina, Italy)
- 612 A Multiphysics Framework for Bacterial Cellulose Sensor Modeling**
Luca Patanè, Francesca Sapuppo and Marco Calapristi (University of Messina, Italy); Giovanna Di Pasquale, Salvatore Graziani, Antonio Pollicino and Carlo Trigona (University of Catania, Italy); Maria Gabriella Xibilia (University of Messina, Italy)
- 618 Symbolic Regression for Industrial Applications: An NN-Based Approach**
Marco Calapristi, Luca Patanè, Francesca Sapuppo, Riccardo Caponetto and Maria Gabriella Xibilia (University of Messina, Italy)
- 624 An Embedded Sensing Methodology for the Classification of Activity Rate**
Bruno Ando, Mattia Manenti, Danilo Greco and Antonio Pistorio (University of Catania, Italy)
- 629 Evolution of Biopolymers: From Bacterial Cellulose via PCL to Pullulan**
Carlo Trigona, Salvatore Graziani, Giovanna Di Pasquale, Antonino Pollicino (University of Catania, Italy)
- 634 A Convolutional Neural Network for CNC Milling Machines Processes Classification**
Luca Martiri, Parisa Esmaili and Loredana Cristaldi (Politecnico di Milano, Italy)
- 640 Domain Adversarial Neural Networks for Remaining Useful Life Estimation of Lithium-Ion Batteries**
Luca Martiri, Giuseppe Meli, Luca Pasquarelli, Davide Azzalini, Loredana Cristaldi and Francesco Amigoni (Politecnico di Milano, Italy)
- 646 Li-Ion Battery State of Charge Estimation With Temperature: A Machine Learning Approach**
Simone Barcellona (Politecnico di Milano, Italy); Loris Cannelli (SUPSI-USI, Italy); Lorenzo Codecasa (Politecnico di Milano, Italy); Silvia Cohnago (Ricerca sul Sistema Energetico RSE SpA, Italy); Loredana Cristaldi and Christian Laurano (Politecnico di Milano, Italy); Gabriele Maroni (SUPSI-USI, Switzerland)

- 652 An Explainable Model Framework for Vehicle-To-Grid Available Aggregated Capacity Prediction**
Luca Patanè and Francesca Sapuppo (University of Messina, Italy); Antonio Comi (University of Rome Tor Vergata, Italy); Giuseppe Napoli (National Research Council - CNR ITAE, Italy); Maria Gabriella Xibilia (University of Messina, Italy)
- 658 The BOHEMIAN Project: Versatile Hybrid In-fiBer Optical-electrochemical systems for widely Applicable bioensing**
Bruno Ando, Mattia Manenti, Danilo Greco (University of Catania, Italy); Maria Rachele Guascito, Giuseppe Lamberti, Laura Martina (University of Salento, Italy); Francesco Arcadio, Luigi Zeni, Nunzio Cennamo (University of Campania Luigi Vanvitelli, Italy); Cosimo Trono, Sara Tombelli, Simone Berneschi and Niccolò Marcucci (Istituto di Fisica Applicata Nello Carrara, Italy); Laura Pasquardini (Indivenire Srl, Italy)
- 663 Boat Detection and Classification Framework for Safety Improvement in Port Areas**
Luca Patanè and Antonino Maio (University of Messina, Italy); Salvatore Graziani (University of Catania, Italy); Maria Gabriella Xibilia (University of Messina, Italy)
- 669 Sustainability and Resilience in the MICS SPOKE8 Project: The Role of the Digital Twin**
Nicola Berti, Dr. (University of Padua, Italy); Ala Arman (Università Sapienza di Roma, Italy); Parisa Esmaili and Mohsen Zeynivand (Politecnico di Milano, Italy); Daria Battini (University of Padua, Italy); Devis Bianchini (University of Brescia, Italy); Loredana Cristaldi and Laura Boca de Giuli (Politecnico di Milano, Italy); Ambra Galeazzo (University of Padua, Italy); Giambattista Gruosso and Alessio La Bella (Politecnico di Milano, Italy); Francesco Leotta (Sapienza Università di Roma, Italy); Luca Martiri and Eva Masero (Politecnico di Milano, Italy); Massimo Mecella (Sapienza Università di Roma, Italy); Pierluigi Plebani and Paolo Rocco (Politecnico di Milano, Italy); Luigi Salmaso (University of Padua, Italy); Riccardo Scattolini (Politecnico di Milano, Italy); Gian Antonio Susto (University of Padova, Italy); Letizia Tanca (Politecnico di Milano, Italy)
- 674 The MICS Project Approach for Fault Detection in CNC Machine Bearings**
Laura Boca de Giuli, Alessio La Bella, Eva Masero, Riccardo Scattolini, Parisa Esmaili, Loredana Cristaldi, Letizia Tanca, Giambattista Gruosso, Luca Martiri and Mohsen Zeynivand (Politecnico di Milano, Italy); Giovanni La Vigna and Giovanni Minei (Leonardo SpA, Italy)

Session 4.1 - Sensors, Extended Reality and Artificial Intelligence for Human Behavior Analysis

Room: The Alban Arena - Auditorium

- 680 Textile Sensors for Measuring and Classifying Human Breathing: A Preliminary Study Using Machine Learning**
Matteo Piratoni and Ilaria Mileti (University Niccolò Cusano, Italy); Juri Taborri, Stefano Rossi (University of Tuscia, Italy); Fabrizio Patanè (Niccolò Cusano University, Italy)
- 686 Virtual Training of Healthcare Providers for Migrant Pregnant Women: A Methodological Approach**
Alessia Bisio, Enrique Yeguas-Bolívar and Pilar Aparicio-Martínez (University of Córdoba, Spain); Juri Taborri (University of Tuscia, Viterbo, Italy); Aurora Ruiz Mezcuá (University of Córdoba, Spain)
- 692 Interpreting Type 1 Diabetes Management via Contrastive Explanations**
Daniele Melloni, Andrea Zingoni (University of Tuscia, Italy)
- 698 Enhancing Tourist Experience via Automatic Personalized Route Suggestions**
Sediola Ruko (University of Tuscia, Italy); José M Alcalde-Llargo (University of Tuscia & University of Córdoba, Spain); Enrique Yeguas (University of Cordoba, Spain); Andrea Zingoni (University of Tuscia, Italy)
- 704 Results of Measuring Immersion in a Cricket Simulation Game for Improved VR With Real-Time Time-Of-Flight Performance Capture**
Lionel Jayaraj, James Wood and Marcia Gibson (University of Bedfordshire, United Kingdom)

Session 4.2 - Artificial Intelligence, Biometrics and Extended Reality for Criminal Investigation and Digital Forensic

Room: The Alban Arena - Basement Room

- 710 Supporting Human Examiners in Facial Image Manipulation Detection**
Maichol Dadi, Annalisa Franco and Davide Maltoni (University of Bologna, Italy)

- 716 **Retrieving Shoeprint Images Using Convolutional Neural Networks**
Sruan Robertson, Stephen J McKenna and Roberto Puch-Solis (University of Dundee, United Kingdom)
- 722 **Enhancing Crime Scene Investigations Through Virtual Reality and Deep Learning Techniques**
Antonino Zappalà and Luca Guarnera (University of Catania, Italy); Vincenzo Rinaldi (University of Dundee, United Kingdom); Salvatore Livatino (University of Hertfordshire, United Kingdom); Sebastiano Battiato (University of Catania, Italy)
- 728 **Neural Network Technique Based on Hyperspectral Imaging for Determination of Blood Stains Tissues Washed With Bleach**
Alessandro Bini, Silvia Discepolo (Università Politecnica delle Marche, Italy); Nicola Giulietti (Università degli Studi di Pavia, Italy); Paolo Castellini, Milena Martarelli (Università Politecnica delle Marche, Italy)
- 734 **Integrating AI and Computer Vision for Ballistic and Bloodstain Analysis in 3D Digital Forensics**
Emmanouil Patsiouras, Stavros Kyriakou Vasileiou, Sotirios Papadopoulos (Centre for Research and Technology Hellas, Greece); Nikolaos I Dourvas, Konstantinos Ioannidis and Stefanos Vrochidis (Information Technologies Institute, Greece); Ioannis Kompatsiaris (Centre for Research and Technology Hellas, Greece)

Session 4.3 - Assistive technologies for human-machine interactions in harsh environments

Room: The Alban Arena - Circle Room

- 740 **Hey TPS, I Need Your Assistance - Social Perception of Telepresence Systems During a Collaborative Assembly Task**
Jennifer Brade, Sarah Mandl, Franziska Klimant, Anja Strobel (Chemnitz University of Technology, Germany); Philipp Klimant (Mittweida University of Applied Sciences, Germany)
- 746 **EEG Hero: A Game With a Purpose Based Imagined Speech BCI Training Paradigm**
Johannes Ihl, Tobias Jungbluth, Maurice Rekrut (German Research Center for Artificial Intelligence & Saarland Informatics Campus, Germany); Antonio Krüger (German Research Center for Artificial Intelligence, Germany)
- 752 **Evaluating Dry EEG Technology Out of the Lab**
Mushfika Sultana (University of Essex, United Kingdom); Osheen Jain (Goldsmiths, United Kingdom); Sebastian Halder, Ana Matran-Fernandez, Rab Nawaz and Reinhold Scherer (University of Essex, United Kingdom); Ricardo Chavarriaga (ZHAW, Switzerland); José del R. Millán (The University of Texas at Austin, USA); Serafeim Perdakis (University of Essex, United Kingdom)
- 758 **Cross-Subject Startle Detection in Pilots on the Flight Deck Using Physiological Signals**
Ganavi Basavaraju, Tobias Jungbluth, Maurice Rekrut (German Research Center for Artificial Intelligence & Saarland Informatics Campus, Germany); Florian Daiber, Antonio Krüger (German Research Center for Artificial Intelligence, Germany)
- 764 **Multisensory Simulations for Smart Personal Protective Equipment**
Felix Mühlberg, Stefan Vogt, Jimmy Orawetz, Georg Freitag and Dirk Reichelt (HTW Dresden, Germany)

Session 5.1 - Artificial Intelligence and Generative Models for Health

Room: The Alban Arena - Auditorium

- 770 **Neural Optimization for Pharmaceutical Transportation Under Stressful Conditions**
Georgia Fargetta, Alessandro Ortis and Sebastiano Battiato (University of Catania, Italy)
- 776 **Industrial Machines Health Prognosis Using a Transformer-Based Framework**
David Poland (University of Hertfordshire, United Kingdom); Lemuel Puglisi (University of Catania, Italy); Daniele Ravi (University of Messina, Italy & University College London, Italy)
- 782 **Towards a Predictive Model of Speech Signatures: Insights From Spectral Analysis and Generative AI Models**
Raffaele Pugliese and Stefano Regondi (Nemo Lab, Italy); Atieh Mahroo (National Research Council & University of Milano-Bicocca, Italy)
- 787 **Breaking the Cycle: Advancements in Universal Influenza Vaccine Design**
Valentina Di Salvatore, Elena Crispino, Giulia Russo and Francesco Pappalardo (University of Catania, Italy)

- 793 **A Case Study on the Use of Hypnosis Combined With Virtual Reality in Psychological Partner Violence**
Mirko Casu (University of Catania, Italy); Salvatore Bellissima (Azienda Sanitaria Provinciale di Catania, Italy); Giorgia Farruggio, Chiara Farrauto and Pasquale Caponnetto (University of Catania, Italy)
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Session 5.2 - Metrology for eXtended Reality in precision tasks

Room: The Alban Arena - Basement Room

- 799 **Control of the Cameras Matrix Parameters for Accurate On-Line Calibration to Perform Precision Tasks With Microsoft HoloLens 2 Headset**
Alessio Nocera, Sara Condino, Vincenzo Ferrari and Fabrizio Cutolo (University of Pisa, Italy)
- 805 **An Occlusion-Robust Optical-Inertial Tracking Solution for Augmented Reality Headsets**
Matteo Nicoletta, Fabrizio Cutolo and Vincenzo Ferrari (University of Pisa, Italy)
- 811 **A Metrological Approach to the Performance Characterization of Eye- and Head-Tracking Interfaces in Extended Reality**
Leopoldo Angrisani, Pasquale Arpaia, Mauro D'Arco, Egidio De Benedetto, Luigi Duraccio, Fabrizio Lo Regio, Annarita Tedesco (University of Naples, Federico II, Italy)
- 816 **Exploring Variability in Human-Machine Interaction Through Gesture Recognition Based on Hand-Tracking Within XR**
Leopoldo Angrisani, Egidio De Benedetto, Luigi Duraccio and Fabrizio Lo Regio (University of Naples Federico II, Italy); Michele Sansone (University of Salento, Italy); Annarita Tedesco (University of Naples, Federico II, Italy)
- 821 **Customizable Cutting Template for Computer Assisted Osteotomies**
Gabriele Vanni, Antonellamaria Rita Mendicino, Nadia Cattari, Marina Carbone and Paolo Parchi (University of Pisa, Italy); Vincenzo Ferrari (University of Pisa - EndoCAS center, Italy)
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SPECIAL EVENT - ID4MetroXRAI

Room: The Alban Arena - Circle Room

- 826 **Sustainability Measurements of ICT Infrastructures: A Case Study With the Dynamic Fourth Lane of the A4 Italian Highway**
Leopoldo Angrisani (University of Naples Federico II, Italy); Giovanni Bonini (Movyon S.p.a., Italy); Mauro D'Arco, Egidio De Benedetto, Luigi Duraccio, Immacolata Esposito, Monica Imbò, Annarita Tedesco (University of Naples Federico II, France)
- 831 **Accurate Energy Measurements for Tiny Machine Learning Workloads**
Pasquale Arpaia (University of Naples Federico II, Italy); Luigi Capobianco (STMicroelectronics, Italy); Francesco Caputo and Antonella Cioffi (University of Naples Federico II, Italy); Antonio Esposito (University of Naples Federico II, Italy & Augmented Reality for Health Monitoring Laboratory (ARHEmlab), Italy); Francesco Isgro, Nicola Moccaldi (University of Naples Federico II, Italy); Danilo Pietro Pau, David Siorpaes and Ettore Toscano (STMicroelectronics, Italy)
- 837 **Triplet Loss-Based Crack Verification for Structural Health Monitoring and Digital Twin Applications**
Arman Neyestani, Francesco Picariello, Ioan Tudosa, Pasquale Daponte and Luca De Vito (University of Sannio, Italy)
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Wednesday, October 23

Session 6.1 - Perspectives of Explainable Artificial Intelligence and Data Mining in Medical applications

Room: The Alban Arena - Auditorium

- 843 **Decision-Level Fusion for the Early Dementia Identification by Hand-Writing and -Drawing**
Vincenzo Dentamaro, Donato Impedovo and Giuseppe Pirlo (Università degli Studi di Bari, Italy); Gianfranco Semeraro (University School for Advanced Studies IUSS Pavia, Italy)
- 849 **Raman Spectroscopy of Cancer Cells: An Explainable Classification Model**
Andrea Cusano (University of Sannio, Italy); Martina Iammarino (University of Bari Aldo Moro, Italy); Marco Pisco, Sara Spaziani and Chiara Verdone (University of Sannio, Italy)
- 855 **An Explainable Approach for Early Diagnosis of Parkinson's Disease Exploring Motor Symptoms**
Antonella Madau (University of Sannio, Italy); Debora Montano (Cerict Scrl - Regional Center Information Communication Technology, Italy); Lerina Aversano (University of Foggia, Italy)
- 861 **Explainable Gait Analysis for Early Detection of Neurodegenerative Diseases Using Unsupervised Clustering Techniques**
Vincenzo Dentamaro, Felice Franchini, Ignazio Massaro, Luca Musti, Giuseppe Pirlo (Università degli Studi di Bari, Italy); Elena Sblendorio (University of Rome "Tor Vergata", Italy)
- 867 **An Explainable Approach to Characterize Heart Diseases Using ECG Images**
Francesco Denaro (University of Parma, Italy); Antonella Madau (University of Sannio, Italy); Chiara Martini (Azienda Ospedaliero-Universitaria di Parma, Italy); Riccardo Pecori (eCampus University, Italy & IMEM-CNR, Italy)

Session 6.2 - SPECIAL EVENT - PsychoBit - PART I

Room: The Alban Arena - Basement Room

- 873 **Can Educational Robotics Experiences Shape Early Childhood Interpersonal Dynamics? An Exploratory Investigation**
Alessandra Vitanza (Institute of Cognitive Sciences and Technologies - CNR, Italy); Federica Morleo (University of Padua, Italy); Paolo Pagliuca (Institute of Cognitive Sciences and Technologies - CNR, Italy)
- 879 **Teaching Embodied Artificial Intelligence to Children (Teach E-AI 2C): An Educational Proposal for Young Learners**
Clara Nobile, Davide Marocco, Onofrio Gigliotta, Michela Ponticorvo (University of Naples Federico II, Italy)
- 884 **JOINclusion: A Mobile Game for Social Inclusion in Multicultural School Contexts**
Alessandra Colella (University of Naples Federico II, Italy); Annaleda Mazzucato (Fondazione Mondo Digitale, Italy); Dario Bacchini (University of Naples Federico II, Italy); Ioannis Christidis (University of West Attica, Greece); Concetta Esposito (University of Naples Federico II, Italy); Enrique Hortal (Maastricht University, The Netherlands); Eleni Aikaterini Leligkoy (University of West Attica, Greece); Loukas Oikonomakis, Katerina Palaiologou (Odyssey Academy, Greece); Yusuf Can Semerci (Maastricht University, The Netherlands)
- 890 **An In-Depth Look at MOOW's Innovative Approach in Higher Education**
Maria Luongo and Luigia Sica, Michela Ponticorvo (University of Naples Federico II, Italy)
- 895 **All Digital Academy Project: Upskilling Adult Educators on Key Digital Emerging Technologies**
Alessio Manfredini, Monica Casella, Raffaella Esposito and Davide Marocco (University of Naples Federico II, Italy)

Poster Session 3

Room: The Alban Arena

- 901 **An Unsupervised Learning Method for Noise Detection in Photoacoustic Gas Measurements**
Ada Fort (University of Siena, Italy); Matteo Intravaia (University of Florence, Italy); Marco Mugnaini (University of Siena, Italy); Marco Bindi (University of Florence, Italy); Enza Panzardi and Valerio Vignoli (University of Siena, Italy)
- 906 **LSTM-Based Siamese Networks for Fault Detection in Meteorological Time Series Data**
Filippo Costanti (University of Florence, Italy); Irene Cappelli, Ada Fort, Elia Ceroni, Monica Bianchini (University of Siena, Italy)

- 912 **Next Generation Memristor Reservoir Computing**
Alon Ascoli (TU Dresden, Germany); Fernando Corinto, Davide Rossetti (Politecnico di Torino, Italy); Ahmet Samil Demirkol, Ronald Tetzlaff, Nicolas Schmitt (Technische Universität Dresden, Germany); Martin Ziegler, Kristina Nikiruy, Tzvetan Ivanov (Technische Universität Ilmenau, Germany)
- 918 **Rapid and Cost-Effective Characterization of Graphene Powders Using Memristive Echo State Networks**
Kishan Kartha (Kerala University of Digital Sciences, Innovation and Technology, India); Vineeta Vasudevan Nair (Digital University, Kerala, India); Alex James (Digital University Kerala, India)
- 924 **Eye-Adapted HDR Viewing of Stereoscopic Panoramic Photography in Virtual Reality**
Alessio Regalbutto (Magnopus UK, United Kingdom); Salvatore Livatino (University of Hertfordshire, United Kingdom)
- 930 **A Comparative Analysis Between Quantum Machine Learning and Machine Learning on EEG Dataset**
Leopoldo Angrisani, Egidio De Benedetto, Alessandro Di Bernardo, Roberto Prevete, Annarita Tedesco (University of Naples, Federico II, Italy)
- 935 **Classification of Depressive Symptoms Through Electrodermal Activity During Conversations With Virtual Humans: A Preliminary Study**
Emanuela Imperatore (University of Naples Federico II, Italy); Alberto Altozano (Universitat Politècnica de Valencia, Spain); Luigi Duraccio (University of Naples Federico II, Italy); Mariano Alcaniz (Universitat Politècnica de Valencia, Spain); Mauro D'Arco (University of Naples Federico II, Italy); Javier Marín-Morales (Universitat Politècnica de Valencia, Spain)
- 941 **Preliminary Exploration of Eye-Tracking Technology to Classify Human Personality Traits During Conversations With Virtual Humans**
Carlotta Genco (University of Naples Federico II, Italy); Alberto Altozano (Universitat Politècnica de Valencia, Spain); Luigi Duraccio (University of Naples Federico II, Italy); Mariano Alcaniz (Universitat Politècnica de Valencia, Spain); Mauro D'Arco (University of Naples Federico II, Italy); Javier Marín-Morales (Universitat Politècnica de Valencia, Spain)
- 946 **Enhancing Game Development Process Using AI: A Comparative Analysis of Image Generative AI**
Davinder Singh, Joideep Banerjee and Lionel Jayaraj (Staffordshire University, United Kingdom)
- 952 **Advancing Visual Decoding in EEG: Enhancing Spatial Density in Surface EEG for Decoding Color Perception**
Leonhard Schreiner (Gtec Medical Engineering GmbH & Johannes Kepler University Linz, Austria); Sebastian Sieghartsleitner (Gtec Medical Engineering GmbH, Austria); Matteo La Rosa (Sapienza University of Rome, Italy); Slobodan Tanackovic (Gtec Medical Engineering GmbH, Austria); Harald Pretl (Johannes Kepler Universität, Austria); Emma Colamarino (Sapienza University of Rome, Italy); Christoph Guger (Guger Technologies OEG, Austria)
- 958 **A Pilot Study on the User Experience of Different Upper Body Extended Reality Physiotherapy Interventions**
Alex Brennan, Debbie Rankin, Therese Charles, Nicole Blackburn, Karl McCreadie, Joan V Condell (Ulster University, United Kingdom)
- 964 **Parasympathetic-Sympathetic Causal Interactions During Continuous Affect Annotation: A Preliminary Study on the CASE Dataset**
Alejandro Luis Callara (Research Center "E. Piaggio", University of Pisa, Italy); Alberto Greco, Enzo Pasquale Scilingo (University of Pisa, Italy)
- 970 **Proactive Hand Rehabilitation Through a Double Digital Twin Provided by the Virtual Glove**
Alessandro Di Matteo, Daniele Lozzi and Enrico Mattei (University of L'Aquila & A2VI-Lab, Italy); Sara Montagna (University of Urbino, Italy); Alessia Cipriani (Università Cattolica del Sacro Cuore, Italy); Filippo Mignosi and Giuseppe Placidi (University of L'Aquila, Italy)
- 976 **Challenges and Opportunities Applying Laser Beam Scanning Displays Based on Biaxial Resonantly Operated MEMS Scanners**
Leon Pohl, Oleg Petrak, Jan Berlinski, Marcel Metschulat, Lars Boie, Robert Schmoll, Jakob Studer and Wjatscheslaw Galjan (OQmented GmbH, Germany); Andreas Bahr (Jade University of Applied Sciences, Germany)
- 982 **Low Latency Video Streaming System for VR Teleoperation Over 5G Networks**
Laszlo Blazovics, Viktor Kovács, Marton Gotzy (Budapest University of Technology and Economics, Hungary)
- 988 **Review of Neural Sensing Methods in the Peripheral Nervous System**
Maria Nicole Petrou and Mafalda Ribeiro (University of Bath, United Kingdom); Ryan Koh (University of Toronto, Canada); Leen Jabban and Ben Metcalfe (University of Bath, United Kingdom)

994 Virtual Dashboard Design for Grasping Operations in Teleoperation Systems

Antonio Di Tecco, Cristian Camardella and Daniele Leonardis (Sant'Anna School of Advanced Studies, Italy); Claudio Loconsole (Universitas Mercatorum & Institute of Mechanical Intelligence, Scuola Superiore Sant'Anna, Italy); Antonio Frisoli (Sant'Anna School of Advanced Studies, Italy)

1000 Ultrasound Haptics for XR and Rehabilitation: Influence of Arm and Hand Muscle Stiffness on User Perception

Mattia Alessandro Ragolia, Luisa De Palma, Nicola Giaquinto, Alessandro Pignatelli, Marco Scarpetta (Politecnico di Bari, Italy)

1005 Metrology for AI: Quality Evaluation of Datasets for Satellite Images Segmentation

Marco Scarpetta (Polytechnic University of Bari, Italy); Attilio Di Nisio and Paolo Affuso (Politecnico di Bari, Italy); Maurizio Spadavecchia (Polytechnic University of Bari, Italy); Nicola Giaquinto (Politecnico di Bari, Italy)

Session 7.1 - Medical Image Digital Transformation

Room: The Alban Arena - Auditorium

1010 Replicating Healthy and Metastatic Behavior: A Biomechanical Investigation Using 3D Printed Vertebrae Models

Riccardo Forni (Institute of Biomedical and Neural Engineering, Reykjavik University, Iceland & University of Bologna, Italy); Daniela Bruno, Marco Palanca, Luca Cristofolini (University of Bologna, Italy); Paolo Gargiulo (Reykjavik University, Iceland)

1016 Towards Bio-Mimetic 3D Printable Human Anatomies

Riccardo Forni (Institute of Biomedical and Neural Engineering, Reykjavik University, Iceland & University of Bologna, Italy); Danilo Calderone (University of Naples Federico II, Italy); Damiano Coato, Gianmarco Dolino (Reykjavik University, Iceland & University of Padova, Italy); Giuseppe Cesarelli and Carlo Ricciardi (University of Naples Federico II, Italy); Mario Cesarelli (University of Sannio, Italy); Paolo Gargiulo (Reykjavik University, Iceland)

1022 Multimetric Evaluation of Knee Cartilage Degeneration

Federica Kiyomi Ciliberti and Ida Maruotto (Reykjavik University, Iceland); Halldór Jónsson Jr (Landspítali Hospital, Iceland); Magnús Kjartan Gíslason (Institute of Biomedical and Neural Engineering, Reykjavik University, Iceland); Paolo Gargiulo (Reykjavik University, Iceland)

1028 Unveiling CT-Scan Radiodensity Leg Asymmetry Impact on Common Aging Comorbidities

Marco Recenti (Reykjavik University, Iceland); Carlo Ricciardi, Alfonso M Ponsiglione and Francesco Amato (University of Naples Federico II, Italy); Magnús Kjartan Gíslason (Institute of Biomedical and Neural Engineering, Reykjavik University, Iceland); Milan Chang (Icelandic Gerontological Research Institute, Iceland); Paolo Gargiulo (Reykjavik University, Iceland)

1034 New Frontiers in Postural Control and Motion Sickness Assessment: The BioVRSea Paradigm

Marco Recenti (Reykjavik University, Iceland); Federica Pescaglia (Institute of Biomedical and Neural Engineering, Iceland); Lorena Guerrini (Reykjavik University, Iceland & University of Campania L. Vanvitelli, Italy); Ida Maruotto, Carmine Gelormini, Deborah Jacob and Romain Aubonnet (Reykjavik University, Iceland); Hannes Petersen (Akureyri Hospital, Iceland); Paolo Gargiulo (Reykjavik University, Iceland)

Session 7.2 - SPECIAL EVENT - PsychoBit - PART II

Room: The Alban Arena - Basement Room

1040 Modeling Nonlinear Relationships in Psychometric Data Using Variational Autoencoders: Insights From Simulated Data

Monica Casella, Nicola Milano, Raffaella Esposito and Davide Marocco (University of Naples Federico II, Italy)

1045 Analyzing the Impact of Questionnaire Length on Respondent Burden Through Biosensors

Monica Casella (University of Naples Federico II, Italy); Francesca Borghesi (University of Turin, Italy); Pietro Cipresso (University of Turin & IRCCS Istituto Auxologico Italiano, Italy); Davide Marocco (University of Naples Federico II, Italy)

- 1050 Usability Study of a Virtual Reality-Based Ecological Battery for Memory Assessment: A Pilot Study**
Valentina Mancuso (E-Campus University, Italy); Sara Arlati, Selen Naz Saritas (National Research Council, Italy); Francesca Borghesi (University of Turin, Italy); Simona Gabriella Di Santo (IRCCS Fondazione Santa Lucia, Italy); Marco Cavallo and Elisa Pedrolì (E-Campus University, Italy)
- 1055 hUGO, a Humanoid Robot for Training Memory: A Pilot Study on Healthy Younger and Older Adults**
Erica Chinzer, Onofrio Gigliotta, Beth Fairfield and Caterina Padulo (University of Naples Federico II, Italy)
- 1059 Comparing UX Profile of Generative Artificial Intelligence Tools and Traditional Tools in Brainstorming Sessions: A Pilot Study**
Katusha Gerardini and Eleonora Diletta Sarcinella (Università Cattolica del Sacro Cuore, Italy); Francesca Borghesi (University of Turin, Italy); Andrea Pozzi, Andrea Gaggioli and Alice Chirico (Università Cattolica del Sacro Cuore, Italy)
- 1065 Large Language Models: Ethics and Norms in the European Union**
Marianna Ciullo (University of Sannio & Orders of Lawyers of Benevento, Italy)
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Session 7.3 - Bio-Inspired and Neuromorphic Applications of Memristive Devices

Room: The Alban Arena - Circle Room

- 1071 Programming an Oscillator-Based Ising Machine With Memristive Coupling**
Jonas Röhrig, Bakr Al Beattie and Karlheinz Ochs (Ruhr University Bochum, Germany)
- 1077 Applying Hodgkin-Huxley Neuron Model for Perovskite Memristor in Circuit Simulation**
Mostafa Shooshtari, Manuel Jiménez Través (Institute of Microelectronics of Seville, IMSE-CNM, University of Seville, CSIC, Spain); Saeideh Pahlavan (Institute of Microelectronics of Seville, CSI, Spain); Teresa Serrano-Gotarredona (National Microelectronics Center, CNM-CSIC, Spain); Bernabe Linares-Barranco (Institute of Microelectronics of Seville, CSI, Spain)
- 1083 Experimental Evidence for Local Fading Memory Effects in TaOx ReRAM Cells**
Nicolas Schmitt, Ioannis Messaris, Ahmet Samil Demirkol, Vasileios Ntinis, Dimitris Prousalis and Ronald Tetzlaff (Technische Universität Dresden, Germany); Alon Ascoli, Fernando Corinto and Marco Gilli (Politecnico di Torino, Italy); Sitandi Zhang, Stephan Menzel and Vikas Rana (Forschungszentrum Jülich, Germany); Leon Chua (University of Berkeley, California, USA)
- 1089 Carbon Nanomaterials-Based Memristive Devices for Neuromorphic Applications**
Luis Antonio Panes-Ruiz (TU Dresden, Germany); Shirong Huang (TU Dresden & Institute for Materials Science and Max Bergmann Center for Biomaterials, Germany); Alon Ascoli (Politecnico di Torino, Italy); Ronald Tetzlaff, Gianaurelio Cuniberti (TU Dresden, Germany)
- 1095 Dynamic Logic Gate Adaptation in TaO-Memristor Cellular Neural Networks**
Andras Horvath (Peter Pazmany Catholic University, Germany); Alon Ascoli (Politecnico di Torino, Italy); Ronald Tetzlaff (Technische Universität Dresden, Germany)
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Session 7.4 - General Session - PART I

Room: The Saint and Sinner Pub

- 1100 An HRV-fMRI-DTI Integrated Framework at Ultra-High Magnetic Field**
Federica Goffi and Elena Scalbi (Politecnico di Milano, Italy); Emma Tassi (Politecnico di Milano & Neurosciences and Mental Health Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Italy); Letizia Squarcina (Università Degli Studi di Milano, Italy); Michela Tosetti (IRCCS Fondazione Stella Maris, Italy); Anna M. Bianchi (Politecnico di Milano, Italy); Paolo Brambilla (Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Italy); Eleonora Maggioni (Politecnico di Milano & Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy)

1106 Analysis of Cortical Excitability During Brain-Computer Interface Stroke Rehabilitation of Upper and Lower Extremity

Sebastian Sieghartsleitner (Gtec Medical Engineering GmbH, Austria); Marc Sebastian (Universitat Autònoma de Barcelona, Spain & GTEC); Leonhard Schreiner (Gtec Medical Engineering GmbH & Johannes Kepler University Linz, Austria); Johannes Grünwald, Woosang Cho, Rupert Ortner, Slobodan Tanackovic (Gtec Medical Engineering GmbH, Austria); Josef Scharinger (Johannes Kepler University Linz, Austria); Christoph Guger (Guger Technologies OEG, Austria)

1112 In Search of Lost Attention: A BCI-Based Therapeutical Safari Tour in VR

Alexandre Delaux (Capgemini Engineering, France.); Alix Gouret (Integrative Neuroscience and Cognition Center, Université Paris Cité, France); Julien Carponcy and Thibault Porssut (Capgemini Engineering, France.); Sébastien Rouze (VR Research department, Wakeup and Smile Solutions, Spain); Florian Waszak, Sylvie Chokron (Integrative Neuroscience and Cognition Center, Université Paris Cité, France); Solène Le Bars (Capgemini Engineering, France)

1118 Enhancing Teleoperation: Personalized Design Through Psychological Profiling

Valentina Cesari, Giorgia Papini, Andrea Piarulli (University of Pisa, Italy); Yuri De Pra (ENEA-TERIN-PSU-ABI, Italy); Simone Ciotti (University of Pisa & Istituto Italiano di Tecnologia, Italy); Angelo Gemignani, Matteo Bianchi, Danilo Menicucci (University of Pisa, Italy)

1124 Automated Analysis of Topics in Story Descriptions Can Help Detect Primary Progressive Aphasia

Roelant Ossewaarde, Roel Jonkers (University of Groningen, The Netherlands); Yolande Pijnenburg and Antoinette Keulen (Alzheimercenter Amsterdam, The Netherlands); Stefan Leijnen (Hogeschool Utrecht, The Netherlands)

Session 8.1 - Passive and active BCI

Room: The Alban Arena - Auditorium

1129 ASIS: A Smart Alarm Clock Based on Deep Learning for the Safety of Night Workers

Daniele Lozzi, Alessandro Di Matteo and Enrico Mattei (University of L'Aquila & A2VI-Lab, University of L'Aquila, Italy); Alessia Cipriani (Università Cattolica del Sacro Cuore, Italy); Pasquale Caianiello, Filippo Mignosi and Giuseppe Placidi (University of L'Aquila, Italy)

1135 Motor Imagery Analysis of EEG Signals Using a Low-Cost Ankle Exoskeleton

Cristina Polo-Hortiguela, Desirée I. Gracia, Paula Soriano-Segura, Mario Ortiz (Miguel Hernández University of Elche, Spain); Eduardo Iáñez (Brain-Machine Interface Systems Lab, Miguel Hernández University of Elche, Spain); Carlo Cavaliere-Ballesta (Miguel Hernández University of Elche & BMI Lab research group, Spain); José M. Azorín (Miguel Hernández University of Elche, Spain)

1141 Optimized Spatial Filter Selection for Transfer Learning in Brain-Computer Interface

Mohamed A A Mohamed, Mahnaz Arvaneh, Joshua Giles (University of Sheffield, United Kingdom)

1147 A Case Study for Removing Cardiac Artifacts From Non-Invasive Electrospinography Signals

Desirée I. Gracia and Cristina Polo-Hortiguela (Miguel Hernández University of Elche, Spain); Manuel Bayón-Calatayud (Hospital Universitario Central de Asturias, Spain); Eduardo Iáñez (Brain-Machine Interface Systems Lab, Miguel Hernández University of Elche, Spain); Mario Ortiz (Miguel Hernández University of Elche, Spain); José M. Azorín (Miguel Hernández University of Elche, Spain)

1153 Identification of EEG Features of Transcranial Electrical Stimulation (tES) Based on Explainable Artificial Intelligence (XAI)

Pasquale Arpaia, Matteo De Luca, Anna Della Calce, Ludovica Gargiulo (University of Naples Federico II, Italy); Luigi Maffei (University of Campania Vanvitelli, Italy); Nicola Moccaldi (University of Naples Federico II, Italy); Lidia Ammendola, Maria Cropano, Giacomo Lus and Daniela Malangone (University of Campania Luigi Vanvitelli, Italy); Simona Raimo (University of Catanzaro, Italy); Elisabetta Signoriello (University of Campania Luigi Vanvitelli, Italy)

Session 8.2 - Metrology and Machine Learning in Medical Applications

Room: The Alban Arena - Basement Room

- 1159 Automated Classification of Test Tubes Based on Uncontrolled Image Analysis**
Riccardo Balia (University of Cagliari, Italy); Silvio Barra (University of Naples Federico II, Italy); A. Sebastian Podda and Livio Pompianu (University of Cagliari, Italy); Mara Sangiovanni (Università of Naples Federico II, Italy); Gianni Fenu (University of Cagliari, Italy)
- 1165 Automatic Landmark Detection on Knee Bony Surfaces in PSI-Based Total Knee Arthroplasty Using AI-Enhanced Statistical Shape Models**
Sara Maria Pagotto, Luca Marsilio, Luca Mainardi and Pietro Cerveri (Politecnico di Milano, Italy)
- 1171 Polygenic Risk Scores are Associated to A β - τ Protein Accumulation in Alzheimer's Disease**
Irene Treccani, Giorgio Dolci, Lorenza Brusini, Federica Cruciani, Ilaria Boscolo Galazzo and Gloria Menegaz (University of Verona, Italy)
- 1177 Integrated Gradients Demystified: An MRI Case Study on A β - τ Protein Localization**
Giorgio Dolci, Cristian Morasso, Federica Cruciani and Lorenza Brusini (University of Verona, Italy); Lorenzo Pini (University of Padua, Italy); Vince Calhoun (Tri-Institutional Research Center in Neuroimaging and Data Science, USA); Ilaria Boscolo Galazzo and Gloria Menegaz (University of Verona, Italy)
- 1183 Comparison of EEG Pre-Processing Techniques for Complexity Measures in Alzheimer's Disease Detection**
Pasquale Arpaia (University of Naples Federico II, Italy); Maria Cacciapuoti and Andrea Cataldo (University of Salento, Italy); Sabatina Criscuolo and Egidio De Benedetto (University of Naples Federico II, Italy); Antonio Masciullo (University of Salento, Italy); Marisa Pesola (University of Naples Federico II, Italy); Raissa Schiavoni (University of Salento, Italy)

Session 8.3 - Empowering the Aging Society in the Digital Era. AI-Powered Social and Assistive Robotics

Room: The Alban Arena - Circle Room

- 1189 Human Presence Detection to Support Contextual Awareness in Ambient Assisted Living Scenarios**
Sehrish Rafique and Farshid Amirabdollahian (University of Hertfordshire, United Kingdom); Gu Fang (Western Sydney University, Australia); Patrick Holthaus (University of Hertfordshire, United Kingdom)
- 1195 Association of Facial Action Units With Emotions in People Living With Dementia Listening to Music**
Dimitrios Kolosov (University of Hertfordshire, United Kingdom); Dimana Georgieva, Lucy Kerry, Keith McAdam and Marcel Gehrung (Music for My Mind Charity, United Kingdom); Iosif Mporas (University of Hertfordshire, United Kingdom)
- 1200 Efficient Convolutional Neural Networks for Automated Cognitive Diagnosis**
Connor Pearson, Beatrix De La Iglesia and Saber Sami (University of East Anglia, United Kingdom)
- 1206 ViLaBot: Connecting Vision and Language for Robots That Assist Humans at Home**
Asfand Yaar and Marco Rosano (University of Catania, Italy); Aki Härmä (Maastricht University, The Netherlands); Antonino Furnari, Giovanni Maria Farinella (University of Catania, Italy)
- 1212 Exploring Bias in Text-To-Image Models: From Body Representation of Teenage Students to Perspectives for the Aging Society**
Norberto Albano and Sandro Brignone (University of Turin, Italy)

Session 8.4 - General Session - PART II

Room: The Saint and Sinner Pub

- 1218 Milky WAI: Unlocking the Secrets of Raw Cow Milk Through Speckle Pattern and AI**
Valentina Bello, Irene Bassi and Matteo Fiocchi (University of Pavia, Italy); Cristina Nuzzi (University of Brescia, Italy); Paolo Bellassi and Luca Cattaneo (Università Cattolica del Sacro Cuore, Italy); Simone Pasinetti (University of Brescia, Italy)
- 1224 FRIA Implementation Model According to the AI Act**
Lucilla Gatt, Maria Cristina Gaeta and Ilaria Amelia Caggiano (Università Degli Studi Suor Orsola Benincasa, Italy); Emiliano Troisi (University of Naples Suor Orsola Benincasa, Italy); Roberta Savella (ISTI-CNR, Italy); Roberto Trasarti (KDD Lab - ISTI - CNR Italy, Italy); Francesca Pratesi (ISTI-CNR, Italy)

1230 Can I Trust You? Exploring the Impact of Misleading AI Suggestions on User's Trust

Daniele Pretolesi (AIT - Austrian Institute of Technology, Austria & University of Salzburg, Austria); Olivia Zechner and Helmut Schrom-Feiertag (AIT Austrian Institute of Technology GmbH, Austria); Manfred Tscheligi (University of Salzburg, Austria)

1236 Legal Design Through AI in Banking Contracts

Lucilla Gatt, Iaria Amelia Caggiano, Maria Cristina Gaeta, Livia Aulino, Emiliano Troisi and Luigi Izzo (University of Naples Suor Orsola Benincasa, Italy); Alessandra Fabrocini (University La Sapienza, Italy); Christian Esposito (University of Salerno, Italy); Daniele Marino (Financial Service Consultant VISA, Spain)

1242 Graph Neural Networks for Missing Data Imputation in Time Series From Metereological Sensors

Giovanna Maria Dimitri, Irene Cappelli, Franco Scarselli, Ada Fort and Marco Gori (University of Siena, Italy)