Agenda for the 5th of February – Morning Session

9:45-10:00 Opening

Maurizio Magarini (General Chair, Politecnico di Milano, Italy)

10:00-11:15 Technical Session 1

A Study on the Implant Interface of Brain-Computer Interface Technology in the THz band

Marco Hernandez (University of Oulu, Finland); Matti Hämäläinen (University of Oulu, Finland)

Implant and In-Body Communications: the ETSI SmartBAN Vision

Daisuke Anzai (Nagoya Institute of Technology, Japan); Takahiro Ito (Hiroshima City University, Japan); Hirokazu Tanaka (Hiroshima City University, Japan); Matti Hamalainen (University of Oulu, Finland); Marco Hernandez (University of Oulu, Finland); Tuomas Paso (University of Oulu, Finland); Lorenzo Mucchi (University of Florence, Italy)

Experimental Evaluation of Initial Connection Time with Interference in Body Area Network

Tatsuki Hiramatsu (Hiroshima City University, Japan); Takahiro Ito (Hiroshima City University, Japan); Daisuke Anzai (Nagoya Institute of Technology, Japan); Hirokazu Tanaka (Hiroshima City University, Japan)

Performance Improvement in Channel-estimated Implant Communication by Spatial Transmit Diversity and Signal Pre-emphasis Technique

Lijia Liu (Nagoya Institute of Technology, Japan); Jianqing Wang (Nagoya Institute of Technology, Japan)

11:15-11:45 Coffee Break

11:45-13:00 Keynote 1

Conversational AI enabled Services: Opportunities, Risks and Directions

Prof. Boualem Benatallah (Dublin City University, Ireland)

13:00-14:30 Lunch Break

Agenda for the 5th of February – Afternoon Session

14:30-15:45 Technical Session 2

Wireless data transfer for Implanted Real-time Peripheral Nerve Interfaces

Chiara Quartana (Politecnico di Milano, Italy); Antonio Coviello (Politecnico di Milano, Italy); Paolo Motto Ros (Politecnico di Torino, Italy); Fabiana Del Bono (Politecnico di Torino, Italy); Danilo Demarchi (Politecnico di Torino, Italy); Umberto Spagnolini (Politecnico di Milano, Italy); Magarini, Maurizio (Politecnico di Milano, Italy)

Design Options for Aggregators for In-body Networks

Johan Engstrand (Uppsala University, Sweden); Madhushanka Padmal (Uppsala University, Sweden); Bappaditya Mandal (Uppsala University, Sweden); Pramod Rangaiah (Uppsala University, Sweden); Mauricio D. Perez (Uppsala University, Sweden); Maria Mani (Uppsala University, Sweden); Robin Augustine (Uppsala University, Sweden); Thiemo Voigt (Uppsala University, Sweden)

Visible light communications for implantable medical devices

Stefano Caputo (University of Florence, Italy); Giacomo Borghini (University of Florence, Italy); Sara Jayousi (Polo Universitario Città di Prato, Italy); Lorenzo Mucchi (University of Florence, Italy)

Spectral Features-based Machine Learning Approach to Detect SARS-COV-2 Infection Using Cough Sound

Shadab Azam Siddique (Supaul College of Engineering, Supaul, India); Sudhir Kumar (Indian Institute of Technology, Patna, India); Prabhat Kumar Upadhyay (Indian Institute of Technology, Indore, India); Fardad Vakilipoor (Politecnico di Milano, Milan, Italy); Davide Scazzoli (Politecnico di Milano, Milan, Italy)

15:45-16:15 Coffee Break

16:15-17:30 Technical Session 3

Smart Healthcare System for Detection of Diabetic Retinopathy using Transfer Learning

Pooja Ranjan (NIT PATNA, India); Shubham Kumar (NIT PATNA, India); Mustafa Sameer (NIT PATNA, India); Sanchita Ghosh (IEM Kolkata, India); Bharat Gupta (NIT PATNA, India); Davide Scazzoli (Politecnico di Milano, Milan, Italy.)

A Novel Non-invasive Device in the Management of Type 2 Diabetes

Aamir Hussain (Muhammad Nawaz Shareef University of Agriculture, Pakistan); Attiq ur Rehman (Muhammad Nawaz Shareef University of Agriculture, Pakistan); Qimeng Li (University of Calabria, Italy); Raffaele Gravina (University of Calabria, Italy); Giancarlo Fortino (University of Calabria, Italy)

Automatic Voice Classification Of Autistic Subjects

Jessica Vacca (University of Pavia, Italy); Natascia Brondino (University of Pavia, Italy); Fabio Dell'Acqua (University of Pavia, Italy); Anna Vizziello (University of Pavia, Italy); Pietro Savazzi (University of Pavia, Italy)

Channel Transfer Function Estimation of a Molecular-Electrical Communication based on Redox

Karthik Reddy Gorla, (University of Nebraska-Lincoln, USA); Massimiliano Pierobon (University of Nebraska-Lincoln, USA)

19:30-22:00 Gala Dinner

Agenda for the 6th of February – Morning Session

10:00-11:15 Technical Session 4

Performance Evaluation of Distance-based Random Mean Shift Clustering and Humpback Whale Optimization Algorithm for Sink Node Placement in WBAN

Maria Hanif (National University of Sciences and Technology, Pakistan); Rizwan Ahmad (National University of Sciences and Technology, Pakistan); Waqas Ahmed (Pakistan Institute of Engineering and Applied Sciences, Pakistan); Micheal Drieberg (Universiti Teknologi PETRONAS, Malaysia); Muhammad Mahtab Alam (Tallinn University of Technology, Estonia)

Ultrawideband on-body area network for navigational support

Wickramarachchi Wickramarachchi (London South Bank University, UK); Sandra Dudley (London South Bank University, UK); Robert Adam Brown (London South Bank Univeristy, UK)

Healthcare Data Governance, Privacy, and Security - A Conceptual Framework

A. Faridoon (University College Dublin, Ireland); Tahar Kechadi (University College Dublin, Ireland)

Towards Robust IoT Defense: Comparative Statistics of Attack Detection in Resource-Constrained Scenarios

Zainab Al-Waisi (IMT School for Advanced Studies, Italy); Simone Soderi (IMT School for Advanced Studies, Italy)

11:15-11:45 Coffee Break

11:45-13:00 Keynote 2

Title: TBD

Prof. Raffaele Dellacà (Politecnico di Milano, Italy)

13:00-14:30 Lunch Break

Agenda for the 6th of February – Afternoon Session

14:30-15:45 Technical Session 5

Real-Time and on-the-Edge Multiple Channel Capacitive and Inertial Fusion-Based Glove

Hymalai Bello (German Research Center for Artificial Intelligence, Germany); Sungho Suh (German Research Center for Artificial Intelligence, Germany); Daniel Geissler (German Research Center for Artificial Intelligence, Germany); Lala Ray (German Research Center for Artificial Intelligence, Germany); Bo Zhou (German Research Center for Artificial Intelligence, Germany); Paul Lukowicz (German Research Center for Artificial Intelligence, Germany)

Climbing Routes Clustering Using Energy-Efficient Accelerometers Attached to the Quickdraws

Sadaf Moaveninejad (University of Padua, Italy); Andrea Janes (FHV Vorarlberg University of Applied Sciences, Austria); Camillo Porcaro (University of Padua, Italy); Luca Barletta (Politecnico di Milano, Italy); Lorenzo Mucchi (University of Florence, Italy); Pierobon, Massimiliano (University of Nebraska-Lincoln, USA)

Finding beauty in mobile EEG when visiting art exhibitions

Maurizio Palmieri (University of Pisa, Italy); Marco Avvenuti (University of Pisa, Italy); Alejandro Luis Callara (University of Pisa, Italy); Francesco Marcelloni (University of Pisa, Italy); Alessio Vecchio (University of Pisa, Italy)

An Unsupervised Approach to Speed Up the Training of Multiple Models on Biomedical KGs

Leonardo De Grandis (Politecnico di Milano, Italy); Guido Walter Di Donato (Politecnico di Milano, Italy); Marco Domenico Santambrogio (Politecnico di Milano, Italy)