DAY 1: September 29 (Mon)	
8:00 - 8:30	**Registration**
8:30 - 9:00	**Plenary (Opening)**
9:00 - 10:30	**Session 1 (Antennas and Propagation in Body Area Networks - APBAN special track)** *Chair: Dirk Plettemeier* **Entropy based phase shift migration with de-noising algorithm for radar body area focusing imaging** *Hui Zhang, Yun Lu and Dirk Plettemeier* **Off-body Channel Measurements at 2.4 GHz and 868 MHz in an Indoor Environment** *Evangelos Mellios, Angelos Goulianos, Sema Dumanli, Geoffrey Hilton, Robert Piechocki and Ian Craddock* **Radar vertebral column imaging by inhomogeneous medium radar focusing algorithm** *Hui Zhang, Klaus Wolf and Dirk Plettemeier* **Wearable dual-polarized antenna array design for In-Body to On-Body Communication Channel in UWB Low Band** *Qiong Wang, Ronny Hahnel and Dirk Plettemeier*
10:30 - 11:00	**Coffee Break**
11:00 - 13:00	**Session 2 (BAN Communications)** *Chair: Mehmet Yuce* **Body Area Network Channels Study Using a Deterministic Ray Tracing Based Simulator** *Meriem Mhedhbi, Nicolas Amiot, Stéphane Avrillon and Bernard Uguen* **On Medical Implant Communication of IR-UWB** *Kasun Thotahewa, Jean-Michel Redoute and Mehmet Yuce* **Spectral Efficiency Optimization with Distributed Beamforming in UWB Based Implant Body Area Networks** *Jie Ding, Eryk Dutkiewicz and Xiaojing Huang* **Spectrum Occupancy Evaluations at 2.35-2.50 GHz ISM Band in a Hospital Environment** *Muhammad Hasnain Virk, Risto Vuohtoniemi, Matti Hämäläinen, Juha-Pekka Mäkelä and Jari Iinatti* **LightVest: A Wearable Body Position Monitor Using Ambient and Infrared Light** *Arsen Papisyan and Ani Nahapetian* **Virtual Cuff: Multisensory Non-Intrusive Blood Pressure Monitoring** * short paper * *Kyeong Jung, Vinh Tran, Victor Gabrielian and Ani Nahapetian*
13:00 - 14:00	**Lunch**

14:00 - 15:00	**Keynote 1** **From Wearable Sensors to Wearable Robots** *Guang-Zhong Yang - Faculty of Engineering, Department of Computing - Imperial College London*
15:00 - 15:30	**Coffee Break**
15:30 - 17:00	**Session 3 (Technologies and Applications for Telerehabilitation - TAT special track)** *Chairs: Laura Contin, Roberto Nerino, Angelo Maria Sabatini* **A Telerehabilitation Framework for Lower-Limb Functional Recovery** *Daniel Cesarini, Pasquale Buonocunto, Mauro Marinoni and Giorgio Buttazzo* **An improved solution for knee rehabilitation at home** *Roberto Nerino, Laura Contin, Antonio Tirri, Giuseppe Massazza, Antonio Chimienti, Giuseppe Pettiti, Nicola Cau and Veronica Cimolin* **Low-Complexity Inertial Sensor-based Characterization of the UPDRS Score in the Gait Task of Parkinsonians** *Federico Parisi, Matteo Giuberti, Gianluigi Ferrari, Laura Contin, Veronica Cimolin, Corrado Azzaro, Giovanni Albani and Alessandro Mauro* **Remote monitoring and rehabilitation for patients with neurological diseases** *Claudia Ferraris, Roberto Nerino, Antonio Chimienti, Giuseppe Pettiti, Daniele Pianu, Giovanni Albani, Corrado Azzaro, Laura Contin, Veronica Cimolin and Alessandro Mauro*
17:00 - 18:00	**Session 4 (Sensor-based Action Recognition)** *Chair: Giancarlo Fortino* **Piecewise Linear Dynamical Model for Actions Clustering from Inertial Body Sensors with Considerations of Human Factors** * video presentation * *Jiaqi Gong, Philip Asare, John Lach and Yanjun Qi* **Fusing On-Body Sensing with Local and Temporal Cues for Daily Activity Recognition** *Zack Zhu, Ulf Blanke, Alberto Calatroni, Oliver Brdiczka and Gerhard Tröster* **Towards Big Data for Activity Recognition: A Novel Database Fusion Strategy** *Dominik Schuldhaus, Heike Leutheuser and Bjoern Eskofier*
18:00	**Closing**

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(*regular paper* presentation is 15 minutes + 5 Q&A)

DAY 2: September 30 (Tue)	
8:00 - 8:30	**Registration**
8:30 - 9:30	**Keynote 2** **50 Billion M2M Devices in 5G?** *Mischa Dohler - Department of Informatics - King's College London*
9:30 - 10:30	**Session 5 (UNconventional Intrabody Communication - UNIC special track)** *Organizers: Enrico Natalizio, Tommaso Melodia, Laura Galluccio* *Chair: Pasquale Pace* **A Comparison of MAC Protocols for Ultrasonic Intra-body Sensor Networks** *Giuseppe Enrico Santagati, Mirko Gradillo, Francesca Cuomo and Tommaso Melodia* **Endovascular Mobile Sensor Network for Detecting Circulating Tumoral Cells** *Luca Felicetti, Mauro Femminella, Gianluca Reali and Pietro Lio'* **Multi-path 2-Port Channel Characterization for Galvanic Coupled Intra-body Communication** *Meenupriya Swaminathan, Joan Sebastia Pujol, Gunar Schirner and Kaushik R Chowdhury*
10:30 - 11:00	**Coffee Break**
11:00 - 13:00	**Session 6 (Health-Care Systems 1)** *Chair: Raffaele Gravina* **A Framework for Supporting Distributed Management of Big Clinical Data** *Alfredo Cuzzocrea, Andrea Nucita and Giorgio Grasso* **Ambulatory inertial spinal tracking using constraints** *Markus Miezal, Bertram Taetz, Norbert Schmitz and Gabriele Bleser* **Continuous, Real-Time, Tele-monitoring of Patients with Chronic Heart-Failure: Lessons Learned From a Pilot Study** *Daniel Aranki, Gregorij Kurillo, Posu Yan, David M. Liebovitz and Ruzena Bajcsy* **Reconfigurable, Wearable Sensors to Enable Long-Duration Circadian Biomedical Studies** *David C. Burnett, Benjamin L. Smarr, Sahar M. Mesri, Lance J. Kriegsfeld and Kristofer S.J. Pister* **Wireless Body Sensor for Objective Assessment of Surgical Performance on a Standardised FLS Task** *Georgina Sophie Joy Kirby, Richard Mark Kwasnicki, Caroline Hargrove, Jonathan Rees, Mikael Sodergren, Guang-Zhong Yang and Benny Lo* **A Data Collection and Communication Module for Telemedicine and mHealth Systems** *Peter Blank, Patrick Kugler, Dominik Schuldhaus and Bjoern M. Eskofier*
13:00 - 14:00	**Lunch**

14:00 - 15:30	**Session 7 (Health-Care Systems 2)** *Chair: Giancarlo Fortino* **A Six-Segment SRRC Pulse Generator for IEEE 802.15.6 WBAN Standard** * short paper * *Babita Jajodia, Anil Mahanta and Rafi Ahamed Shaik* **An Empirical Measurement of Body Hydration using Galvanic Coupled Signal Characteristics** * short paper * *Clement Ogugua Asogwa, Daniel T.H. Lai and Stephen Collins* **A Preliminary Investigation of Human Body Composition Using Galvanically Coupled Signals** *Clement Ogugua Asogwa, Mirhojjat Seyedi and Daniel. T.H. Lai* **Evaluation of the Aggregate Interference in Hospital ISM Band** * short paper * *Lorenzo Mucchi, Alessio Carpini, Timo Kumpuniemi, Matti Hamalainen and Jari Iinatti* **Public-Key Authentication for Cloud-based WBANs** *Thaier Hayajneh, Athanasios V. Vasilakos, Ghada Almashaqbeh, Bassam Mohd, Muhammad Zeeshan Shakir, Khalid A. Qaraqe and Muhammad Ali Imran*
15:30 - 16:00	**Coffee Break**
16:00 - 17:00	**Session 8 (Wearable and Mobile Computing)** *Chair: Pasquale Pace* **2C Vision Game: Visual Acuity Self-Testing Using Mobile Devices** *Dina Najeeb and Ani Nahapetian* **Improved Navigation Capabilities in Groups of Cooperative Wireless Body Area Networks** * short paper * *Jihad Hamie, Claude Chaudet and Benoit Denis* **A WBAN 802.15.6 compliant multi-band re-configurable Transceiver for Medical Applications** *Xiaoyan Wang, Nauman Kiyani, Maja Vidojkovic, Kathleen Philips, Harmke de Groot and Syoichi Masui*
17:00 - 18:00	**Session 9 (BAN Applications)** *Chair: Antonio Guerrieri* **A Stress-Free Life: Just-in-Time Interventions for Stress via Real-Time Forecasting and Intervention Adaptation** *Luis Jaimes, Martin Llofriu and Andrew Raij* **Applying Ontology in WBAN during sport exercises** *Lina Nachabe, Marc Girod Genet, Bachar El Hassan and Fadi Aro* **Semantic Interoperability in Body Area Sensor Networks and Applications** *Vinh Bui, Paul Brandt, Hang Liu, Twan Basten and Johan Lukkien* **Gradient based Temperature-aware routing in Body Area Sensor Networks** * video presentation * *Ashwin Ganesh Krishnamurthy, Junghyun Jun and Dharma Agrawal*
18:00	**Closing**
19:00 - 22:00	**Social Dinner**

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(*regular paper* presentation is 15 minutes + 5 Q&A)

DAY 3: October 1 (Wed)	
8:00 - 8:30	**Registration**
8:30 - 9:30	**Keynote 3** **From Embedded Computing Frameworks for Body Sensor Networks to Cloud-assisted Body Sensor Networks** *Prof. Giancarlo Fortino, University of Calabria, Italy* *Raffaele Gravina, University of Calabria, Italy*
9:30 - 10:30	**Session 10 (Human Body Communications - HBC special track + HBC 2)** *Chair: Yuichi Kado* **Capacitance Model of Embedded Transceiver for Intra-body Communication** *Yuki Hayashida, Ryo Sugiyama, Yusuke Ido, Akito Suzuki, Yasuaki Takizawa, Mitsuru Shinagawa, Yuichi Kado and Nozomi Haga* **Dependence of signal loss on different positions on the human body in near-field coupling communication** *Ibuki Yokota, Yuichi Kado and Masaki Ishida* **Body Heat Thermoelectric Energy Harvesting for Self-Powered Wearable Electronics** * short paper * *Muhammad Rashid Siddique, Wensi Wang, Filippo Madeo, Michael Hayes, Michael Walsh and Brendan O'Flynn* **Joint Energy Harvesting and Internetwork Interference Mitigation amongst Coexisting Wireless Body Area Networks** *Samaneh Movassaghi, Mehran Abolhasan, David Smith and Abbas Jamalipour*
10:30 - 11:00	**Coffee Break**
11:00 - 13:00	**Session 11 (Cloud-assisted Cyber-Physical Systems - CCPS special track)** *Chairs: Raffaele Gravina, Junichi Suzuki* **A smartphone-centric approach for integrating heterogeneous sensor networks** *Gianluca Aloi, Giuseppe Caliciuri, Giancarlo Fortino and Pasquale Pace* **Assessment of Proactive Transmission Power Control for Wireless Sensor Networks** *Roshan Kotian, Georgios Exarchakos and Antonio Liotta* **Towards a Human-Aware Operative System** *Nicola Bicocchi, Damiano Fontana and Franco Zambonelli* **Live Group Detection for Mobile Wireless Sensor Networks** * short paper * *Matthieu Lauzier, Antoine Fraboulet, Jean-Marie Gorce and Tanguy Risset* **Configuring Cloud-integrated Body Sensor Networks with Evolutionary Algorithms** * video presentation * *Yi Cheng-Ren, Junichi Suzuki, Dung H. Phan, Shigo Omura and Ryuichi Hosoya* **Distributed Joint Source-Channel Coding with Raptor Codes for Correlated Data Gathering in Wireless Sensor Networks** *Nikos Deligiannis, Evangelos Zimos, Dragos Mihai Ofrim, Yiannis Andreopoulos and Adrian Munteanu*
13:00 - 14:00	**Lunch**

14:00 - 15:30	**Session 12 (Electromagnetic - Body Area NanoNETworks - E-BANNET special track)** *Chairs: Valeria Loscrì, Anna Maria Vegni, Josep Miquel Jornet, Massimiliano Pierobon, Sara Pizzi* **On the Affection of the Human Immune System on a Nanoparticulate Nanomedicine System** *Valeria Loscri and Anna Maria Vegni* **A Multi-Cast Communication Scheme Using Weak Electrical Current for Intra-Body Networks** *William Tomlinson, Kaushik Chowdhury and Christopher Yu* **Epsilon-Near-Zero Nanoantennas** *Luigi La Spada* **Metasurface-Epsilon Near Zero-based Electromagnetic Wave Absorber** *Luigi La Spada* **Modeling LSPR Nano-particles by Using Neural Networks** *Daryoush Mortazavi, Abbas Kouzani and Ladislau Matekovits*
15:30 - 16:00	**Coffee Break**
16:00 - 17:00	**Session 13 (Coding for Emerging Wireless Networks - CEWN special track)** *Chairs: Akiko Manada, Junichi Suzuki, Eimear Byrne* **Energy Savings via Harnessing Partial Packets in Body Area Networks** *Georgios Angelopoulos, Anantha Chandrakasan and Muriel Medard* **Irregular Repeat Accumulate Codes Based on Max-Flow Algorithm for Energy-Saving Networks** *Ryuichi Tatsukawa, Akiko Manada and Hiroyoshi Morita* **Markov chain based analysis of IEEE 802.15.6 MAC protocol in real life scenario** * video presentation * *Bitan Bandyopadhyay, Debayan Das, Ayan Chatterjee, Sk. Jahid Ahmed, Amitava Mukherjee and Mrinal Kanti Naskar*
17:00 - 18:00	**Session 14 (Human-Body Modeling)** *Chair: Nikos Delgiannis* **Experimental On-Body Fading and Breathing Doppler Characterization on Human Torso at 60 GHz** *Luca Petrillo, Theodoros Mavridis, Julien Sarrazin, Aziz Benlarbi-Delaï and Philippe De Doncker* **Real-time automatic detection of accelerative cardiac defense response** *Raffaele Gravina and Giancarlo Fortino* **A Body Area Network-Based Detection of Sleep Apnea** * short paper * * video presentation * *Sheryl Lafleur and Imad Mahgoub*
18:00	**Conference Closing**

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UWBAN: October 1 (Wed)	
8:00 - 8:30	**Registration**
8:30 - 8:45	**Opening** *Jari Iinatti - Centre for Wireless Communications - University of Oulu, Finland*
8:45 - 10:30	**UWBAN - Plenary Session** *Chair: Matti Hämäläinen* **Minimally Intrusive UWB Body Sensor Networks for Medical Applications** *Mohammad Ghavami, London South Bank University, UK* **Ultrawideband Body Area Networks, MIMO and energy sources: recent advances and future directions** Ben Allen, *University of Bedfordshire, UK*
10:30 - 11:00	**Coffee Break**
11:00 - 13:00	**UWBAN - Regular Session** *Chair: Jari Iinatti* **Human Body Size and Shape Effect on UWB On-Body WBAN Radio Channels - Preliminary Results** *Timo Kumpuniemi, Matti Hämäläinen, Kamya Yekeh Yazdandoost and Jari Iinatti* **Impact of MAC Scheduling on Positioning Accuracy for Motion Capture with Ultra Wideband Body Area Networks** *Arturo M. Guizar, Anis Ouni, Claire Goursaud, Nicolas Amiot and Jean-Marie Gorce* **A Wearable Hybrid IEEE 802.15.4a Ultra-Wideband/Inertial Sensor Platform for Ambulatory Tracking** *Michael Walsh, Salvatore Tedesco, Tingcong Ye and Brendan O'Flynn* **Energy Efficient IR-UWB WBAN using a Generic Wake-up Radio based MAC Protocol** *Heikki Karvonen, Juha Petäjäjärvi, Jari Iinatti and Matti Hämäläinen*
13:00 - 14:00	**Lunch**