#### 

DAY 1 THURSDAY, 28 SEP.2017

#### 8:00 – 8:30

#### REGISTRATION

#### 8:30 – 8:45

#### WELCOME MESSAGE

#### 8:50 – 9:30

#### KEYNOTE 1

#### 9:30 – 10:10

#### KEYNOTE 2

#### 10:10 – 10:25

#### MORNING TEA

#### 10:25 – 12:00

#### MAIN TRACK: Wearable Computing and Smart Clothing

#### 12:00 – 13:30

#### LUNCH BREAK

#### 13:30 – 14:45

#### MAIN TRACK: Embedded Devices and Medical Applications

#### 14:45 – 15:00

#### AFTERNOON TEA

#### 15:00 – 16:00

#### MAIN TRACK: Communications and Networking

#### 16:00 – 17:00

#### MAIN TRACK: Systems and Applications - Ambient Intelligence

#### 18:00

#### CONFERENCE BANQUET

DAY 2 FRIDAY, 29 SEP.2017

#### 8:30 – 9:15

#### KEYNOTE 3 (TRIDENTCOM)

#### 9:15 – 10:15

#### SPECIAL TRACK: Antenna/Propagation and WiBEC project (APWiBEC)

#### 10:15 – 10:30

#### MORNING TEA

#### 10:30 – 11:30

#### SPECIAL TRACK: Sensors and Algorithms for Human Motion Analysis and Classification

#### 11:30 – 13:30

#### LUNCH BREAK

#### 13:30 – 15:00

#### TRIDENTCOM: Data Science and Applications of Cyber Physical Systems

#### & Technology in networking and Communications

#### 15:00 – 15:15

#### AFTERNOON TEA

#### 15:15 – 16:30

#### TRIDENTCOM: Testbed and Tools for IoT and Big Data

#### 16:30 – 17:00

#### CLOSING REMARKS

#### 18:00

#### DINNER



8:00 – 8:30 REGISTRATION

8:30 – 8:45 WELCOME MESSAGE

8:50 – 9:30 KEYNOTE SPEECH *Bodynets*

**Wearable body sensor network (**Wang Lei)

9:30 – 10:10 KEYNOTE SPEECH *Bodynets*

**Regulatory Science for Medical Wireless Body Area Network and Its Universal Platform (**Ryuji Kohno)

10:10 – 10:25 MORNING TEA

**10:25 –12:00**  **MAIN TRACK:**

**Wearable Computing and Smart Clothing**

Chairs:

Dehzangi, Omid (University of Michigan, USA)

Huang, Zhipei (University of Chinese Academy of Sciences, China)

##### 1. Characterization and Identification of Driver Distraction During Naturalistic Driving: An Analysis of ECG Dynamics

Deshmukh, Shantanu, Vijayrao; Dehzangi, Omid (University of Michigan)

##### 2. Wearable Galvanic Skin Response for Characterization and Identification of Distraction During Naturalistic Driving

Rajendra, Vikas; Dehzangi, Omid (University of Michigan-Dearborn)

##### 3. A Wearable Multi-Sensor IoT Network System for Environmental Monitoring

Wu, Fan; Rudiger, Christoph; Redoute, Jean-Michel ; Yuce, Mehmet, Rasit (Monash University)

##### 4.Fabric Sensor Array Monitoring Pressure Distribution

Hu, Jiyong;Zhang, Hele;Gu, Yuanyuan;Zhu, Yinda;Guo, Xuyuan;Yang, Xudong (Donghua University)

##### 5.Automatic EEG blink Detection using Dynamic TimeWarping Score Clustering

Dehzangi, Omid; Melville, Alexander; Taherisadr, Mojtaba (University of Michigan, Dearborn)



##### 6.Continuous Blood Pressure Estimation Using PPG and ECG Signal

Wang, Bo; Huang, Zhipei; Wu, Jiankan; Liu, Zhongdi; Liu, Yuanyuan; Zhang, Pengjie (University of Chinese Academy of Sciences)

12:00 – 13:30 LUNCH BREAK

**13:30 –14:45**  **MAIN TRACK:**

**Embedded Devices and Medical Applications**

Chairs:

QIU, SEN (Dalian University of Technology, China)

Li, Wenfeng (Wuhan University of Technology, China)

##### 1. Context-Aware Sensor Solution for Remote Monitoring of Adolescent Idiopathic Scoliosis Brace Treatment

Iftikhar, Omar ; Dehzangi, Omid ; Bache, Bhavani (University of Michigan-Dearborn); Wensman, Jeffrey ;Li, Ying (University of Michigan)

##### 2. Gait Analysis for Physical Rehabilitation via Body-Worn Sensors and Multi-information Fusion

QIU, SEN ; Wang, Zhelong ; Zhao, Hongyu ; Liu, Long ; Wang, Jiaxin ; Li, Jie (Dalian University of Technology)

##### 3. An Embedded Risk Prediction System for Wheelchair Safety Driving

Ma, Congcong ;Li, Wenfeng (Wuhan University of Technology); Li, Qimeng ; Gravina, Raffaele ; Yang, Yi ; Fortino, Giancarlo (University of Calabria)

##### 4. A Wearable, Low-Power, Real-Time ECG Monitor for Smart T-shirt and IoT Healthcare Applications

Wu, Taiyang ; Redoute, Jean-Michel ; Yuce, Mehmet, Rasit (Monash University)

##### 5.JMMM: A Mobility Model for WBANs based on Human Joint

Guan, Chengjie; Liu, Bin; Liu, Zhiqiang; Zhang, Yufei; Zhang, Xiaoyu

##### 6.A Noninvasive Continuous Fetal Heart Rate Monitoring System for Mobile Healthcare Based on Fetal Phonocardiography

Zhang, Pengjie; Ye, Shiwei; Huang, Zhipei; Jiaerken, Dina; Zhang, Lingyan;Wu, Jiankang; Zhao, Shuxia



14:45 –15:00 AFTERNOON TEA

**15:00 –16:00**  **MAIN TRACK:**

**Communications and Networking**

Chairs:

Iinatti, Jari (University of Oulu, Finland)

Khorshid, AhmedE (University of California, Irvine)

##### 1. An Encryption Method for BAN Using the Channel Characteristics

Peng, Liangguang; Lin, Jinzhao ; Bai, Tong ; Pang, Yu ; Li, Guoquan ; Wang, Huiqian ; Jiang, Xiaoming (Chongqing University of Posts and Telecommunications); Wang, Junchao ; Zilic, Zeljko (McGill University)

##### 2. Experimental Performance Evaluation of BLE 4 vs BLE 5 in Indoors and Outdoors Scenarios

Karvonen, Heikki; Carlos Pomalaza-Raez, Carlos ; Mikhaylov, Konstantin ; Hamalainen, Matti; Iinatti, Jari

##### 3. Electrode Impedance Modeling For Channel Characterization for Intra-body Communication

Khorshid, Ahmed, E.;Alquaydheb, Ibrahim, N. ;Eltawil, Ahmed, M. (University of California, Irvine)

##### 4. Analysis and Estimation of Intra-body Communications Path Loss for Galvanic Coupling

Alquaydheb, Ibrahim, N. ;Khorshid, Ahmed, E. ;Eltawil, Ahmed, M. (University of California, Irvine)

**16:00 –17:00 MAIN TRACK:**

**Systems and Applications - Ambient Intelligence**

Chairs:

Huang, Zhipei (University of Chinese Academy of Sciences, China)

Iinatti, Jari (University of Oulu, Finland)

##### 1. An Improved Mathematical Model for the Autonomic Regulation of Cardiovascular System

Liu, Yuanyuan; Sun Yingfei ;Huang, Zhipei ;Meng, Yu ;Wu, Jiankang ;Cai, Xinxia (School of Electronic, Electrical and Communication Engineering University of Chinese Academy of Sciences)

##### 2. Design of fall test system based on Arduino101

NAN WANG



##### 3. Data Reliability-Aware and Cloud-Assisted Software Infrastructure for Body Area Networks

Reeves, Joseph; Moreno, Carlos; Li, Ming(California State University, Fresno); Hu, Chengyu (China University of Geosciences); Prabhakaran, B.(The University of Texas at Dallas)

##### 4.Genetic-algorithm based feature-selection technique for fall detection using multi-placement wearable sensors

Putra, I Putu Edy Suardiyana; Vesilo, Rein (School of Engineering, Macquarie University)

##### 5.Link-level Performance of FM-UWB in the Interfered IEEE 802.15.6 Channel

Viittala, Harri;Hamalainen, Matti;Iinatti, Jari

**18:00 CONFERENCE BANQUET**



**8:30 –9:30 SPECIAL TRACK:**

**Antenna/Propagation and WiBEC project (APWiBEC)**

Chair:

Qiong Wang (Technische Universität Dresden, Germany)

##### 1. Compact Antipodal Vivaldi Antennas for Body Area Communication

Fang, Xiao; Ramzan, Mehrab; Wang, Qiong; Plettemeier, Dirk (Chair for RF Engineering, Communication Laboratory, TU Dresden)

##### 2. Study of a dipole antenna in the vicinity of lossless and lossy medium for on-body antenna analysis

Ramzan, Mehrab;Fang, Xiao;Wang, Qiong;Plettemeier, Dirk(TU Dresden)

##### 3. Estimating Eavesdropping Risk for Next Generation Implants

Awan, Muhammad Faheem; Kansanen, Kimmo(Norwegian University of Science and Technology (NTNU), Trondheim, Norway)

##### 4. A study of Implant Antenna for FSK-based Impulse Radio System in Human Body Communication Band

Liang, Qiancheng; Shi, Jingjing(Northeastern University); Nakashima, Atomu ; Wang, Jianqing (Nagoya Institute of Technology)

**9:30 –10:30 SPECIAL TRACK:**

**Sensors and Algorithms for Human Motion Analysis and Classification**

Chairs:

Wu, Donghui (Zhengzhou University of Light, China)

Huang, Zhipei (University of Chinese Academy of Sciences, China)

##### 1. Motion-Based Gait Identification Using Spectro-Temporal Transform and Convolutional Neural Networks

Dehzangi, Omid;Taherisadr, Mojtaba;Changalvala, Raghavendar;Asnani, Priyanka (University of Michigan, Dearborn)



##### 2. Voluntary EMG-to-force Estimation in Shoulder and Elbow during the Movement of Feeding Oneself

Hou, Jiateng;Sun, Yingfei;Sun, Lixin;Pan, Bingyu;Huang, Zhipei;Wu, Jiankang (University of Chinese Academy of Sciences)

##### 3. Muscle Synergistic Pattern and Kinematic Sensor Data Analysis during Upper-limb Reaching in Stroke Patients

Pan, Bingyu;Sun, Yingfei;Huang, Zhipei;Hou, Jiateng;Wu, Jiankang (School of Electronic, Electrical and Communication Engineering University of Chinese Academy of Sciences, Beijing, China);Huang, Zhen;Xie, Bin;Liu, Yijun (Rehabilitation Department Peking University First Hospital, Beijing, China)

##### 4. Inertial Sensor based Human activity recognition via Reduced Kernel PCA

Wu, Donghui;Zhang, Huanlong;Niu, Cong;Ren, Jing;Zhao, Wanwan (Zhengzhou University of Light)

10:30 – 10:45 MORNING TEA

10:45 – 11:30 KEYNOTE SPEECH *TRIDENTCOM*

**Big-Data Analytics for Cloud, IoT and Cognitive Learning (**Min Chen)

11:30 – 13:30 LUNCH BREAK

**13:30 –15:00**  **TRIDENTCOM:**

**Data Science and Applications of Cyber Physical Systems & Technology in networking and Communications**

Chair:

Min Chen (Huazhong University of Science and Technology, China)

##### Design of Energy-saving Drone Using Tire Type Vehicle

Ryunosuke Tadoh, Huimin Lu, Yujie Li, Joze Guna, Quan Zhou, Shiyuan Yang, Seiichi Serikawa

##### Industrial Big Data Analytics for Remaining Useful Life of Equipment

Boxing Yin, Baotong Chen

##### DineTogether: A Social-Aware Group Sequential Recommender System

Zheyu Chen, Anqi Hu, Jie Xu, Chi Harold Liu

##### Design and Implementation of a Smart Home Router based on Intel Galileo Gen 2

Watipatsa W. Nsunza, Samuel Rutunda, Xiaojun Hei

##### Efficient Deployment Policy for Cyber Physical Systems

Xiao Liu, Anfeng Liu

##### Wireless Cooperative Caching in Device-to-Device Networks: Simulation and Modeling

Wei Li, Jiayi Lu, Yi Xu, Zeru Wei, Yuanwen Tian, Yiming Miao

15:00 –15:15 AFTERNOON TEA

**15:15 –16:30**  **TRIDENTCOM:**

**Testbed and Tools for IoT and Big Data**

Chair:

Min Chen (Huazhong University of Science and Technology, China)

##### A Scalable and Virtualized Testbed for IoT Experiments

Ruichun Gu, Hongyu Zhang, Dong Pei, Junxing Zhang

##### Big Data Strategy for Load Balancing

Baotong Chen

##### Toward Dynamic Resources Management for Load Balance in Smart Factory

Juncheng Liu, Boxing Yin, Baotong Chen

##### A novel data quality assessment framework for vehicular network testbeds

Daxin Tian, Yukai Zhu, Jianshan Zhou, Xuting Duan, Yunpeng Wang

##### PLDetect: A Testbed for Middlebox Detection using PlanetLab

Paul Kirth, Vahab Pournaghshband

**16:30 –17:00 CLOSING REMARKS**

**18:00 DINNER**

