Program of BigHealth-2016

October 29, Saturday

7:50	Bus pickup in front of Washington Hotel to the University of Aizu
8:00-8:30	Registration
8:30-8:45	Opening Speech Toshiyo Tamura, Waseda University, Japan Kwang-Suk Park, Seoul National University, Korea Wenxi Chen, the University of Aizu, Japan
8:45-9:15	Keynote Lecture Session Chair: Prof. Wenxi Chen, the University of Aizu, Japan Handling Big Data and Information in Disaster Scene *Toshiaki Miyazaki, the University of Aizu, Japan*
9:15-10:15	Invited Speech I Chair: Prof. Toshiyo Tamura, Waseda University, Japan Authentication Using Physiological Signals for Ubiquitous Healthcare *Kwang-Suk Park, Seoul National University, Korea* What Can We Do for Realizing Healthy life in the Remote Future? *Tatsuo Togawa, Waseda University, Japan*
10:15-10:30	Coffee break
10:30-12:00	Session I: Nonintrusive and Noncontact Measurement Chair: Prof. Hyung-Jin Yoon, Seoul National University Hospital, Korea Multi-frequency Radar in Non-Contact Fall Detection for Elderly *Maria Dremina, Lesya Anishchenko, Maxim Ryzhii*, Bauman Moscow State Technical University, Russia* Estimation for Dropping Water Volume of Swinging Water into Toilet Bowls Using Noncontact Temperature Sensors *Koya Fujita*, Juhyon Kim, Kazuki Nakajima, University of Toyama, Japan*

	Development of an Electrode for Absorption Volume Evaluation of the Pad Type Diaper to Reduce the Capacitance Change Due to Change in the Posture
	
	    Shujiro Konno*, Juhyon Kim, Kazuki Nakajima, University of Toyama, Japan
	
	Measurement of Electrocardiogram in Daily Life with Smart-Wear Developed by Stretchable Conductive Film
	
	    Yusuke Sakaue*, Naruhiro Shiozawa, Masaaki Makikawa, Ritsumeikan University, Japan
	
	Physiological Significance of Periodic Limb Movements in Insomnia Patients
	
	    Hyunbin Kwon*, Jaewon Choi, Yujin Lee, Do-Un Jeong, Kwangsuk Park, Seoul National University, Korea
	
	Unconstrained Abnormal Respiration Detection using Ultra Wide Band Radar
	
	    MyungJun Koh*, HanByul Kim, Haesung Kim, KwangSuk Park, Seoul National University, Korea

12:00-13:00	Lunch

13:00-14:30	Session II: Healthcare System
	
	    Chair: Prof. Sung-Min Park, Seoul National University, Korea
	
	Electric Wheelchair Control Using EMG-Based Tongue Interface
	
	    Ryosuke Oikawa, Makoto Sasaki*, Mamoru Kikuchi, Atsushi Nakayam, Katsuhiro Kamata, Iwate University, Japan
	
	EMG-based Classification of Tongue Training Motion
	
	    Shumpei Ito, Makoto Sasaki*, Isamu Shibamoto, Atsushi Nakayama, Katsuhiro Kamata, Iwate University, Japan
	
	Remote Rehabilitation System with the Fusion of Noninvasive Wearable Device and Motion Sensing for Pulmonary Patients
	
	    Chung-Kit Tey, Jinyoung An, Wan-Young Chung*, Pukyong National University, Korea
	
	Current Status and Trends of mHealth Apps for Smartphones
	
	    Kazuaki Yamauchi*, Wenxi Chen, the University of Aizu, Japan

	Continuous Health Monitoring Based on Data-Oriented Estimation of Cuffless Blood Pressure Using a Wristwatch-type Photoplethysmograph Sensor *Kengo Atomi*, Haruki Kawanaka, Md. Shoaib Bhuiyan and Koji Oguri, Aichi Prefectural University, Japan* The Precision Verification on Pulse Transit Time Detecting Method *Yuka Maeda*, Masaki Sekine, Toshiyo Tamura, Koichi Mizutani, University of Tsukuba, Japan*
14:30-14:45	Coffee break
14:45-16:15	Invited Speech II Chair: Kwang-Suk Park, Seoul National University, Korea Synthesized Electrocardiogram: A New Technology for Advanced Cardiology and Smart Healthcare *Daming Wei, The EKG Technology Lab, Japan* Development of Screening Test of Cognitive Function in Elderly People Using Time-Resolved Near-Infrared Spectroscopy *Kaoru Sakatani, Nihon University, Japan* Home Blood Pressure Monitor as a IoT and New Platform for Telemedicine to Manage Hypertension in Japan *Junichi Yatabe, Tokyo Women's Medical University, Japan*
16:15-16:30	Coffee break
16:30-18:00	Session III: Classification, Modeling and Simulation Chair: Koji Oguri, Aichi Prefectural University, Japan Preliminary Study of an Unobtrusive Health Monitoring System for Elderly People in Daily Living *Zunyi Tang*, Linlin Jiang, Lizhen Hu, Yutaka Sato, Yuta Murayama, and Kaoru Sakatani, Engineering College, Nihon University, Japan* Development of a Wearable Body Core Temperature Monitor -Preliminary Study for Reduction of Power Consumption- *Shohei Muto*, Noriko Sakai, Masamichi Nogawa, Hisashi Naito, Shinobu Tanaka, Tetsu Nemoto, Tatsuo Togawa, Kanazawa University, Japan*

	A Personalized Model to Predict Human Thermal State Based on Sequential Physiological Measurements
	Ming Huang*, Toshiyo Tamura, Takumi Yoshimura, Nara Institute of Science and Technology, Japan
	A Cardiac Reaction-Diffusion Model Based on TRPM4 Channel
	Yanghua Shen*, Xuming Zheng, Wenfeng Shen, Xin Zhu, Yaopeng Hu, and Ryuji Inoue, Shanghai University, China
	Parallel Computation for Computer Simulation of Electrocardiograms Based on Tegra K1 Board
	Kai Xu, Feng Qiu*, Wenfeng Shen, Huiran Zhang, Daming Wei, Xin Zhu, Shanghai University, China
	Finite-Difference-Method Calculations of Bio-Impedance of Skeletal Muscles Using Equivalent Elements Representing Bundles of Muscle Cell
	Hiromasa Hirakawa, Katsuhisa Sekine*, Kanazawa University, Japan
18:10-	Washington Hotel bus pickup from the University of Aizu
18:30-	Conference Banquet at Washington Hotel

October 30, Sunday

7:50	Bus pickup in front of Washington Hotel to the University of Aizu
8:00-8:15	Registration
8:15-9:15	Invited Speech III Chair: Prof. Toshiyo Tamura, Waseda University, Japan Mobile Healthcare Opportunities and Trends for Personalized Connected Care – Industry Perspectives *Sung-Min Park, Pohang University of Science and Technology, Korea* Medical Big Data: Promise and Challenges *Hyung-Jin Yoon, Seoul National University Hospital, Korea*
9:15-9:30	Coffee break
9:30-10:15	Session IV: Medical Image and Data Analysis Chair: Kazuki Nakajima, University of Toyama, Japan

	Visualization of Tooth Brushing Skills *Shota Tanaka, Makoto Sasaki*, Fumiya Kato, Mamoru Kikuchi, Atsuko Shishido, Soshi Hanawa, Kazuko Igari, Keiichi Sasaki, Iwate University, Japan* Development of Medical Imaging Viewer Matching System by Diseases *Si-Hyung No, Ji-Eon Kim, Chang-Won Jeong*, Jong-Hyun Ryu, Hong-Young Jun, Tea-Hoon Kim, Jinseok Lee, Su-Chong Joo, and Kwon-Ha Yoon, Wongkwang University, Korea* Two Modes of Speed Adjusting Operation Revealed in Joystick Maneuver of Power Wheelchair — Toward Wheelchair Skills Assessment with Life-Logging — *Kengo Komoto*, Jun Suzurikawa, Research Institute of the National Rehabilitation Center for Persons with Disabilities, Japan*

10:20-10:50	Panel Discussion on Big Data
	    Acquisition, Analysis, and Presentation of Big Data in Healthcare Domain
	    Chairs: Wenxi Chen, Toshiyo Tamura, Kwang-Suk Park
	    Panelists: Hyung-Jin Yoon, Junichi Yatabe, Toshiaki Miyazaki

10:50-10:55	Announcement on IEEE EMBC 2017 Kwang-Suk Park, Seoul National University, Korea
10:55-11:00	Closing Speech Toshiyo Tamura, Waseda University, Japan
11:00	Bus for Excursion
12:00	Tour including lunch, hot springs and dinner