

Brief Schedule

Sunday, Oct. 31

18:00~20:30	Registration and welcome party	The University of Aizu
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Monday, Nov. 1st

9:00~11:30	Registration	The University of Aizu
9:00~9:15	Opening ceremony	3D Theater, UBIC the University of Aizu
9:15~10:45	Chairman: Prof. Daming Wei Keynote I-1 Prof. Jaakko Malmivuo Keynote I-2 Prof. Shankar Reddy	3D Theater, UBIC the University of Aizu Page 11
10:45~11:00	Coffee Break Chairman: Prof. Kozmann György Poster I-1 Prof. Kazuo Nakazawa Poster I-2 Prof. Wenxi Chen Poster I-3 Dr. Shuxue Ding	Keyaki restaurant the University of Aizu Page 29
11:00~12:30	Session-I EEG modeling and analysis Chairman: Prof. Shanghai Gao Session I-1 Prof. Junichi Hori Session I-2 Prof. Laura Astolfi Session I-3 Prof. Andrzej Cichocki	Research Quadrangles 147 the University of Aizu Page 17
11:00~12:30	Session-II Molecular, Ion-channel, Cardiac modeling, simulation and analysis Chairman: Prof. Junko Kimura Session II-1 Prof. Akinori Noma Session II-3 Prof. Lukas Pichl Session II-3 Dr. Osamu Okazaki	Research Quadrangles 148 the University of Aizu Page 20
12:30~	Excursion	Lunch, Tsurugajo, and Ura bandai
18:30~20:30	Banquet	Washington Hotel

Tuesday, Nov. 2nd

9:00~11:30	Registration	The University of Aizu
9:00~10:30	Chairman: Prof. Akinori Noma KeynoteII-1 Prof. Fabio Babiloni KeynoteII-2 Prof. Kozmann György	3D Theater, UBIC the University of Aizu Page 13
10:30~10:45	Coffee Break Chairman: Prof. Michiyasu Yamaki PosterII-1 Prof. Junko Kimura PosterII-2 Prof. Michiyasu Yamaki PosterII-3 Mr. Xin Zhu	Keyaki restaurant the University of Aizu Page 32
10:45~11:45	Session-III EEG analysis and diagnosis Chairman: Prof. Fabio Babiloni SessionIII-1 Prof. Toshimitsu Musha SessionIII-2 Prof. Yoshiwo Okamoto	Research Quadrangles 147 the University of Aizu Page 23
10:45~12:15	Session-IV ECG analysis and diagnosis Chairman: Prof. Robert L. Lux SessionIV-1 Prof. Takeshi Tsutsumi SessionIV-2 Dr. N.K.Suresh Kumar SessionIV-3 Mr. Masaaki Hirai	Research Quadrangles 148 the University of Aizu Page 25
12:15~13:15	Lunch	Keyaki restaurant the University of Aizu
13:15~14:45	KeynoteIII-1 Prof. Rober L. Lux KeynoteIII-2 Prof. Shangkai Gao	3D Theater, UBIC the University of Aizu
14:45~15:00	Coffee Break	Keyaki restaurant the University of Aizu
15:00~15:30	Session-V Healthcare system Chairman: Prof. Jaakko Malmivuo SessionV-1 Prof. Daming Wei	3D Theater, UBIC the University of Aizu Page 28
15:30~	Campus and Lab visiting	the University of Aizu

Workshop Program

Sunday, Oct. 31

18:00~20:30 Registration and welcome party The University of Aizu

Monday, Nov. 1

9:00~11:30 Registration The University of Aizu

9:00~9:15 Opening ceremony
3D Theater, UBIC
the University of Aizu

9:15~10:45 Keynote I (3D Theater, UBIC, the University of Aizu)

Chairman: Prof. Daming Wei, the University of Aizu, Japan

Keynote I-1 *Comparison of the properties of EEG and MEG;*

Prof. Jaakko Malmivuo, Ragnar Granit Institute, Finland

Keynote I-2 *Cardiac Rhythm Analysis in computerized ECG Interpretation*

Prof. Shankar Reddy, Philips Medical System, USA

10:45~11:00 Coffee Break (Keyaki restaurant, the University of Aizu)

Poster I

Chairman: Prof. Kozmann György, University of Veszprem, Hungary

Poster I-1 *Virtual Heart: Virtually Reproduced Heart Model on a Supercomputer - A Comprehensive Simulator for the Electrophysiological Phenomena in the Heart*

Prof. Kazuo Nakazawa, National Cardiovascular Center Research Institute, Japan

Poster I-2 *An m-Healthcare Solution Using Mobile Telephony*

Prof. Wenxi Chen, the University of Aizu, Japan

Poster I-3 *Derivation of Respiratory Signal from a Single-Lead ECG Based on a Statistical Approach*

Dr. Shuxue Ding, the University of Aizu, Japan

- 11:00~12:30 **Session I EEG modeling and analysis**
(Research Quadrangles 147, the University of Aizu)
Chairman: Prof. Shangkai Gao, Tsinghua University, China
 Session I-1 *Spatiotemporal Dipole Imaging of Brain Electrical Activity*
 Prof. Junichi Hori, University of Niigata, Japan
- Session I-2 *Assessing Effective and Functional Cortical Connectivity on Linear Inverse Estimates by Directed Transfer Function and Structural Equation Modeling*
 Prof. Laura Astolfi, University of Rome "La Sapienza", Italy
- Session I-3 *Blind Source Separation Methods for Analyzing Multichannel Brain Signals*
 Prof. Andrzej Cichocki, BSI, Riken, Japan
- 11:00~12:30 **Session II-1 Molecular, Ion-channel, Cardiac modeling, simulation, and analysis**
(Research Quadrangles 148, the University of Aizu)
Chairman: Prof. Junko Kimura, Fukushima Medical University, Japan
 Session II-1 *Developing the comprehensive cardiac cell model; a basis for future medical and industrial applications*
 Prof. Akinori Noma, University of Kyoto, Japan
- Session II-2 *Challenges in molecular dynamics simulations of lipid protein ensembles*
 Prof. Lukas Pichl, the University of Aizu, Japan
- Session II-3 *QRS interval on upgrade to CRT in an elderly patient with cardiac sarcoidosis*
 Dr. Osamu Okazaki, International medical center of Japan
- 12:30~ **Excursion** **Lunch,**
Tsurugajo, and urabandai
- 18:30~20:30 **Banquet** **Washington Hotel**

Tuesday, Nov. 2

9:00~11:30 Registration The University of Aizu

9:00~10:30 Keynote II (3D Theater, UBIC, the University of Aizu)

Chairman: Prof. Akinori Noma, University of Kyoto, Japan

Keynote II-1 *Pro and cons in the multimodal integration of high resolution EEG, MEG and fMRI data;*

Prof. Fabio Babiloni, University of Rome "La Sapienza", Italy

Keynote II-2 *Comprehensive assessment of cardiac activation and repolarization by body surface potential mapping*

Prof. Kozmann György, University of Veszprem, Hungary

10:30~10:45 Coffee Break (Keyaki restaurant, the University of Aizu)

Poster II

Chairman: Dr. Osamu Okazaki, International medical center of Japan

Poster II-1 *Dual signaling pathways of Na⁺/Ca²⁺ exchanger activation by hydrogen peroxide in guinea pig cardiac ventricular myocytes*

Prof. Junko Kimura, Fukushima Medical University, Japan

Poster II-2 *Altered regional restitution properties cause ventricular arrhythmia*

Prof. Michiyasu Yamaki, Yamagata University, Japan

Poster II-3 title undetermined

Mr. Xin Zhu, the University of Aizu, Japan

10:45~12:15 Session III ECG analysis and diagnosis

(Research Quadrangles 147, the University of Aizu)

Chairman: Prof. Robert L. Lux, University of Utah, USA

Session III-1 *Application of Wavelet Transform for Analyzing Time-frequency Power Spectrum Limited to QRS complex*

Prof. Takeshi Tsutsumi, Showadai Fujigaoka Hospital, Japan

Session III-2 *Non-invasive electrical imaging of heart – a patient specific approach*

Dr. N.K.Suresh Kumar, Indian Institute of Technology Madras, India

Session III-3 *Medical Waveform Standards and the Role of MFER*

Mr. Masaaki Hirai, Japan MFER committee

10:45~11:45 **Session IV EEG analysis and diagnosis**

(Research Quadrangles 148, the University of Aizu)

Chairman: Prof. Fabio Babiloni, University of Rome "La Sapienza", Italy

Session IV-1 *Localization of Cortical Neuronal Impairment by Spontaneous EEG Analysis*

Prof. Toshimitsu Musha, Brain Functions Lab., Japan

Session IV-2 *Development of a user-friendly EEG analyzing system specialized for the equivalent dipole method*

Prof. Yoshiwo Okamoto, Chiba Institute of Technology, Japan

12:15~13:15 **Lunch**

Keyaki restaurant

the University of Aizu

13:15~14:45 **Keynote III (3D Theater, UBIC, the University of Aizu)**

Chairman: Prof. Toshimitsu Musha, Brain functions lab, Japan

Keynote III-1 *Assessment of ventricular repolarization: heterogeneity and dynamics*

Prof. Robert L. Lux, University of Utah, USA

Keynote III-2 *EEG-based Brain Computer Interface*

Prof. Shangkai Gao, Tsinghua University, China

14:45~15:00 **Coffee break**

Keyaki restaurant

the University of Aizu

15:00~15:00 **Session V Healthcare system**

(3D Theater, UBIC, the University of Aizu)

Chairman: Prof. Takeshi Tsutsumi, Showadai Fujigaoka Hospital, Japan

Session V-1 *12-LEAD ECG Telemonitoring with Derived Electrocardiogram*

Prof. Daming Wei, the University of Aizu, Japan

15:30~

Campus and Lab visiting