Monday, June 14

9:00    Registration
9:45    Coffee
10:00   Opening Ceremony
10:20   **Keynote**
        Implicit sensorimotor controls for interaction with dynamic environments
        *Hiroaki Gomi* (Japan)
        Chairman: *Jaromír Volf*

11:00   **HUMAN MOTION ANALYSIS 1**
        Chairman: *Jaromír Volf*

11:00   Muscle activation pattern in step-tracking wrist movement predicted by “final-
        position control hypothesis” with internal models
        *Kambara, H.*, *Shin, D.*, *Koike, Y.* (Japan)

11:20   Combined mechanisms of internal model control and impedance control
        during reaching movements under complex force fields
        *Naoki Tomi*, *Manabu Gouko*, *Koji Ito* (Japan)

11:40   Measurement of step length in pedestrian counterflow
        *Yamasaki, H.*, *Sekiya, N.* (Japan)

12:00   Lunch

13:40   **HUMAN MOTION ANALYSIS 2**
        Chairman: *Koji Ito*

13:40   Choosing a control strategy in unstable bimanual task
        *Devjani J. Saha*, *Pietro Morasso* (Italy)

14:00   Sparse linear regression for reconstructing EMG from EEG current sources
        estimated using variational bayes
        *Yoshimura, Natsue*, *Omata, Kei*, *DaSalla, Charles S.*, *Hanakawa, Takashi*, *Sato, Masa-aki*, *Koike, Yasuharu* (Japan)

14:20   Lung motion prediction by static neural networks
        *Ricardo Rodriguez*, *Kei Ichiji*, *Ivo Bukovsky*, *Jiri Bila*, *Noriasu Hojna* (Czech Republic/Japan)
14:40 **MOTOR LEARNING**  
Chairman: *Yasuharu Koike*

14:40 Case study of EEG (electroencephalogram) – FES (functional electrical stimulation) system  
*Mitsuru Takahashi, Kotaro Takeda, Yohei Otaka, Rieko Osu, Takashi Hanakawa, Manabu Gouko, Koji Ito* (Japan)

15:00 Motor learning by attentive observation  
*Toshiyuki Kondo, Kazuto Nakamura, Takayuki Nozawa* (Japan)

15:20 A power assist device based on joint equilibrium point estimation from electromyography  
*Kawase Toshihiro, Kambara Hiroyuki, Koike Yasuharu* (Japan)

15:40 Coffee Break

16:00 – 17:00 **POSTER PRESENTATIONS**  
Chairman: *Yasuharu Koike*

**P1** Evaluation of functional roles of phase resetting in generation of adaptive human bipedal locomotion based on a neuromusculoskeletal model  
*Shinya Aoi, Naomichi Ogihara, Tetsuro Funato, Yasuhiro Sugimoto, Kazuo Tsuchiya* (Japan)

**P2** A robust patterns embedded in the kinematics of human locomotion under various environments  
*Funato Tetsuro, Aoi Shinya, Tsuchiya Kazuo* (Japan)

**P3** Motion measurement of 2-wheeled skateboard and sinusoidal approximation of input force trajectory  
*Satoshi Ito, Shouta Takeuchi, Minoru Sasaki* (Japan)

**P4** Identification of feedforward-like and feedback-like controllers for wrist movement in human  
*Jongho Lee, Yasuhiro Kagamihara and Shinji Kakei* (Japan)

**P5** Human hand abilities analyses  
*Mihaela Ioana Baritz* (Romania)

19:30 Symposium Dinner
Tuesday, June 15

9:00 **Keynote**
New neural architectures and new adaptive evaluation of chaotic time series
Jiří Bíla (Czech Republic)
Chairman: Pietro Morasso

9:40 **HUMAN PERCEPTION AND COGNITION**
Chairman: Pietro Morasso

9:40 A fundamental study of a state representation for robots using f-divergence
Manabu Gouko, Koji Ito (Japan)

10:00 Study of optimization of cooperative motion between two persons by mutual tracking experiments
Yoshikatsu Hayashi, Ken Sugawara, Yasuji Sawada (Japan)

10:20 Unexpected versus ill separable situations
Jiri Bila, Jakub Jura (Czech Republic)

10:40 Modeling handwriting: from critical points to shapes
Zenzeri Jacopo, Mohan Vishwanathan, Morasso Pietro (Italy)

11:00 Coffee Break

11:20 **INTERACTION OF PERCEPTION AND MOVEMENT 1**
Chairman: Kanstantsin Miatliuk

11:20 Intermanual transfer of handwriting skills: role of visual and haptic assistance
Angelo Basteris, Lino Bracco, Vittorio Sanguineti (Italy)

11:40 The effect of voluntary movement in audio-haptic temporal order judgment task
M. Yokoyama, S. Yoshida, H. Ora, K. Nozawa, T. Ogata, Y. Miyake (Japan)

12:00 Human’s – pilot’s features during aircraft flight control from Automatic regulation viewpoint
Jalovecky Rudolf, Janu Premysl (Czech Republic)

12:20 Lunch

14:00 **INTERACTION OF PERCEPTION AND MOVEMENT 2**
Chairman: Dušan Šimšík

14:00 Analysis of synergy for dampening hand vibration during walking
Shunta TOGQ, Takahiro KAGAWA and Yoji UNO (Japan)

14:20 Postural responses of backward balance loss during walking on a treadmill
Takahiro Kagawa, Yu Ohta, Yoji Uno (Japan)

14:40 Research of the fall risks decreasing in the senior’s gait in Slovakia
Samer Abdo Saleh Al-Rabeei, Dušan Šimšík, Alena Galajdová, Marianna Andrášová (Slovak Republic)

15:00 Interaction modeling of biomechanical object and its environment
Kanstantsin Miatliuk (Poland)

15:20 Coffee Break

15:40 - **EXCURSION – LABORATORY**

16:40

19:30 Concert
Wednesday, June 16

9:00  Keynote
Tactile information and its using by measurement and analysis of human functions
*Jaromír Volf* (Czech Republic)
Chairman: *Stanislava Papežová*

9:40  MEASUREMENT OF QUANTITIES RELATED TO HUMAN FUNCTIONS 1
Chairman: *Stanislava Papežová*

9:40  Kinanthropometry: Measuring and accuracy of measurement achieved through e-learning
*Fragoso, Isabel, Fernandes, António A., Massuça, Luís, Fernandes, Ana* (Portugal)

10:00  An analysis of kinematic gait data variability
*Dolna Zlatica, Simsik Dusan, Galajdova Alena, Andrejiova Miriam, Szerdiova Lenka* (Slovak Republic)

10:20  Coffee Break

10:40  MEASUREMENT OF QUANTITIES RELATED TO HUMAN FUNCTIONS 2
Chairman: *Isabel Fragoso*

10:40  Hand expander as the tool for a sportsman’s physiological condition estimation
*Oleg Dmitriyev, Vladimir Fetisov, Dmitriy Ilyuschenkov* (Russia)

11:00  Evaluation of the influence of the magnetic field on a living tissue
*Papezova Stanislava, Papez Vaclav* (Czech Republic)

11:20  Nonlinear modelling improvement of stochastic processes analysis in posturography
*Miroslav Kopecky, Ondrej Cakrt, Josef Kokes* (Czech Republic)

11:45  Closing Ceremony