

**2007 Joint Meeting of
the 6th International Symposium on
Noninvasive Functional Source Imaging of the
Brain and Heart and
the International Conference on Functional
Biomedical Imaging**

Dates: **Oct 12-14, 2007**

Venue: **Zhejiang University, Hangzhou, China**

Final Scientific Program	
Thursday, October 11, 2007	
7:00 – 8:30 pm	Reception (Huagang Hotel)
Friday, October 12, 2007	
8:50 – 9:00 am	Welcome remarks – Prof. <i>Shanan Zhu</i>
9:00 – 9:40 am	Keynote Lecture (ROOM #117) Prof. <i>Bin He</i> University of Minnesota, USA "Electrophysiological Source Imaging of the Brain and Heart: Past, Present, and Future" Chair: <i>Shanan Zhu, Zhejiang University, China</i>
9:40 – 10:20 am	Keynote Lecture (ROOM #117) Prof. <i>Bernhard Tilg</i> The University for Health Sciences, Medical Informatics and Technology (UMIT), Austria "Noninvasive Imaging of Cardiac Electrical Function: Achievements, Pitfalls and Limitations" Chair: <i>Bin He, University of Minnesota, USA</i>
10:20 – 11:00 am	Keynote Lecture (ROOM #117) Prof. <i>Gian Luca Romani</i> Chieti University, Italy "MEG-EEG-fMRI: What Can Be Gained in the Study of the Brain with a Multimodal Approach" Chair: <i>Sylvain Baillet, Cognitive Neuroscience and Brain Imaging CNRS Laboratory, France</i>
11:00 – 11:10 am	Break

11:10 – 11:50 <i>am</i>	<p>Keynote Lecture (ROOM #117) Prof. Sylvain Baillet Cognitive Neuroscience and Brain Imaging CNRS Laboratory, France "Mapping and Tracking the Flow of Brain Activations using MEG/EEG: Hypothesis and Methods" Chair: Gian Luca Romani, Chieti University, Italy</p>
11:50 – 12:30 <i>am</i>	<p>Keynote Lecture (ROOM #117) Prof. Jens Haueisen Ilmenau Technical University, Germany "The Influence of Forward Model Conductivities on EEG/MEG Source Reconstruction" Chair: Zoltan Koles, University of Alberta, Canada</p>
12:30 – 1:40 <i>pm</i>	<p>Lunch (EXHIBIT HALL)</p>
1:40 – 3:20 <i>pm</i>	<p>Oral Session O1: EEG/MEG Inverse Problems (ROOM #211) Oral Session O2: Biomedical Imaging (ROOM #212)</p>
3:20 – 4:20 <i>pm</i>	<p>Poster Session P1: Student Paper Competition (EXHIBIT HALL) Poster Session P2: Brain Forward Modeling and Image Segmentation Break</p>
4:20 – 6:00 <i>pm</i>	<p>Oral Session O3: Functional MRI and EEG/MEG (ROOM #211) Oral Session O4: Biosignal Processing (ROOM #212)</p>
6:30 – 7:30 <i>pm</i>	<p>Student Paper Competition Committee Meeting (ROOM #206)</p>
Saturday, October 13, 2007	
8:30 – 9:10 <i>am</i>	<p>Keynote Lecture (ROOM #117) Prof. Zhi-Pei Liang University of Illinois at Urbana-Champaign, USA "Spatiotemporal Imaging with Partially Separable Functions" Chair: Yi Wang, Cornell University, USA</p>
9:10 – 9:50 <i>am</i>	<p>Keynote Lecture (ROOM #117) Prof. Wei Chen University of Minnesota, USA "Advanced Neuroimaging Approaches of Magnetic Resonance for Brain Function Research" Chair: Zhi-Pei Liang, University of Illinois at Urbana-Champaign, USA</p>
9:50 – 10:30 <i>am</i>	<p>Keynote Lecture (ROOM #117) Prof. Yi Wang Cornell University, USA "Noninvasive Functional Imaging of the Heart Using MRI: Opportunities and Challenges" Chair: Zhi-Pei Liang, University of Illinois at Urbana-Champaign, USA</p>

10:30 – 10:45 am	Break
10:45 – 11:25 am	Keynote Lecture (ROOM #117) Prof. Kensuke Sekihara Tokyo Metropolitan University, Japan "Adaptive Spatial filter and Adaptive Inverse Modeling for Electromagnetic Source Imaging" Chair: Fabio Babiloni, University of Rome La Sapienza, Italy
11:25 – 11:50 am	Plenary Lecture (ROOM #117) Prof. James Ashe University of Minnesota, USA "Learning, Prediction and the Neural Control of Behavior" Chair: Andrew Chen, Capital Medical University, China
11:50 – 12:15 am	Plenary Lecture (ROOM #117) Prof. Daming Wei University of Aizu, Japan "Whole-heart Modeling and Computer Simulation for Electrophysiology Study" Chair: Bernhard Tilg, The University for Health Sciences, Medical Informatics and Technology, Austria
12:15 – 1:30 pm	Lunch (EXHIBIT HALL)
1:30 – 1:55 pm	Plenary Lecture (ROOM #117) Prof. Fabio Babiloni University of Rome La Sapienza, Italy "Simultaneous Tracking of Multiple Brains Activity with High Resolution EEG Hyperscannings" Chair: Kensuke Sekihara, Tokyo Metropolitan University, Japan
1:55 – 2:20 pm	Plenary Lecture (ROOM #117) Prof. Jyh-Horng Chen National Taiwan University, China "Neural Architecture Revealed by High Temperature Superconducting MR Imaging" Chair: Wei Chen, University of Minnesota, USA
2:30 – 4:00 pm	Visit new campus of Zhejiang University
4:00 – 9:00 pm	Tour the West Lake Banquet (S.P.C. awards announcement)
Sunday, October 14, 2007	
8:30 – 8:55 am	Plenary Lecture (ROOM #117) Prof. Eung Je Woo Kyung Hee University, South Korea "Recent Development of Magnetic Resonance Electrical Impedance Tomography (MREIT) toward High-Resolution Conductivity Imaging" Chair: Bin He, University of Minnesota, USA

8:55 – 9:20 am	Plenary Lecture (ROOM #117) Prof. Shan'an Zhu Zhejiang University, China "Imaging Human Head Conductivity Distribution by Means of MREIT" Chair: Eung Je Woo, Kyung Hee University, South Korea
9:20 – 9:45 am	Plenary Lecture (ROOM #117) Prof. Jin Keun Seo Yonsei University, South Korea "Equivalent Isotropic Conductivity Image Reconstruction in MREIT" Chair: Shan'an Zhu, Zhejiang University, China
9:45 – 10:10 am	Plenary Lecture (ROOM #117) Prof. Zoltan Koles University of Alberta, Canada "Head Modeling for E/MEG Source Analysis: Image Segmentation and Domain Decomposition, Solution of the Forward Problem" Chair: Jens Haueisen, Ilmenau Technical University, Germany
10:10 – 10:35 am	Plenary Lecture (ROOM #117) Prof. Andrew Chen Capital Medical University, China "EEG Default Mode Network in the Human Brain: Spectral Field power, Coherence Topology, and Current Source Imaging" Chair: James Ashe, University of Minnesota, USA
10:35 – 11:50 am	Poster session P3: Functional Neuroimaging (EXHIBIT HALL) Poster session P4: Functional Biomedical Imaging Poster session P5: Magnetic Stimulation and Imaging Break
11:50 – 1:00 pm	Lunch (EXHIBIT HALL)
1:00 – 2:40 pm	Oral Session O5: ECG/MCG Modeling and Imaging (ROOM #211) Oral Session O6: Emerging Methods in Functional Imaging (ROOM #212)
2:40 – 3:00 pm	Break
3:00 – 5:00 pm	Oral Session O7: MREIT and MRCDI (ROOM #211) Oral Session O8: Functional Neuroimaging (ROOM #212)

ORAL SESSIONS**Oct. 12, Friday 1:40 – 3:20 pm:****Session O1 - EEG/MEG Inverse Problems****Chairs: Kensuke Sekihara** (Tokyo Metropolitan University, Japan) **and Junichi Hori** (Niigata University, Japan)Paper O1-1: **Sparse Source Imaging in EEG (00255)***Lei Ding and Bin He*

University of Minnesota, USA

Paper O1-2: **EM Algorithms for Generalizing MCE and FOCUSS (00208)***David Wipf, Kensuke Sekihara, Srikantan Nagarajan*

UC San Francisco, USA

Paper O1-3: **A MEG Multiresolution Model Selection Procedure Reveals The Cortical Somatotopy of Hand-Fingers (00241)***Benoit Cottureau, Karim Jerbi and Sylvain Baillet*

Cognitive Neuroscience and Brain Imaging CNRS Laboratory, France

Paper O1-4: **Dipole Source Localization of Flash Visual Evoked Potentials to Cone Specific Stimuli (00117)**
SPC*J.Liebermann, S.Klee, J.Haueisen*

Ilmenau Technical University, Germany

Paper O1-5: **Dipole Sources Localization of MRPs using ICA and Cortical Dipole Layer Imaging (00148)***Junichi Hori and Naotoshi Aoki*

Niigata University, Japan

Oct. 12, Friday 1:40 – 3:20 pm:**Session O2 – Biomedical Imaging****Chair: Jin Kuen Seo** (Yonsei University, Korea) **and Rosalind J. Sadleir** (University of Florida, USA)Paper O2-1: **The Empirical Type I Error of Dynamic Statistical Parameter Mapping (00224)***Richard E. Frye*

University of Texas, USA

Paper O2-2: **Optical Monitoring of Stimulus Evoked Neural Activities in Isolated Retina (00135)***Xin-Cheng Yao and John S. George*

University of Alabama at Birmingham, USA

Paper O2-3: **GATE simulation of a BGO based high sensitivity small animal PET scanner (00136)***Qinan Bao, Arion F. Chatziioannou*

UCLA, USA

Paper O2-4: **Using Numerical Model to Predict Hydrocephalus Based on MRI Images (00158)***Xiaobin Shen, Guillermo Narsilio, Hongxin Wang, David Smith, Gary Egan*

University of Melbourne, Australia

Paper O2-5: **Biomedical application of high sensitive synchrotron X-ray imaging techniques to assess the microstructures and function of hamster heart (00219)***Jin Wu, Tohoru Takeda, Thet Thet Lwin, Tetsuya Yuasa, Manabu Minami, Takao Akatsuka*

University of Tsukuba, Japan

Oct. 12, Friday 4:20 – 6:00 pm:

Session O3 - Functional MRI and EEG/MEG

Chairs: *Fabio Babiloni* (University of Rome La Sapienza, Italy) **and *Geertjan Huiskamp*** (University Medical Center Utrecht, Netherlands)

- Paper O3-1: **Source Inversion Technique using Bayesian Inference: Combined MEG/fMRI (00220)**
Sung C. Jun, John S. George, Sergey M. Plis, Doug M. Ranken, David M. Schmidt, Woochan Kim
 Gwangju Institute of Science and Technology, South Korea
- Paper O3-2: **The impact of uncertain spike identification in event related EEG-fMRI in epilepsy (00202)**
Huiskamp GJ, Hersevoort M, Zijlmans M and Leijten F
 University Medical Center Utrecht, Netherlands
- Paper O3-3: **Unbiased large-scale coherence mapping for simultaneously acquired EEG and fMRI data (00156)**
SPC
Marzetti L, Nolte G., Perrucci M.G., Romani G.L., Del Gratta C.
 Gabriele D'Annunzio University, Italy
- Paper O3-4: **Comparison of Hemodynamic Response Models in a Combined EEG-fMRI Study of an Epileptic Patient (00249) SPC**
Todd J.M. Penney, Zoltan J. Koles, Bradley Goodyear, Paolo Federico, Daniel Pittman
 University of Alberta, Canada
- Paper O3-5: **Adaptive Wiener filter formulation on the fMRI-EEG integrated spatiotemporal neuroimaging (00263)**
Zhongming Liu and Bin He
 University of Minnesota, USA

Oct. 12, Friday 4:20 – 6:00 pm:

Session O4 - Biosignal Processing

Chairs: *Yi Peng* (Chinese Academy of Medical Science, China) **and *Rangaraj M. Rangayyan*** (University of Calgary, Canada)

- Paper O4-1: **Heart Rate Variability Analysis of Ischemic and Heart Rate Related ST-segment Deviation Episodes Based on Time-frequency Method (00204)**
WANG Xing, XU Liang, SUN Zhongwei, PENG Yi
 Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences, China
- Paper O4-2: **More Normal EEGs of Depression Patients during Mental Arithmetic than Rest (00154)**
Yang Li, Yingjie Li, Shanbao Tong, Yingying Tang, Yisheng Zhu
 Shanghai Jiao Tong University, China
- Paper O4-3: **Low Dimensional Representations of MEG/EEG Data Using Laplacian Eigenmaps (00175) SPC**
Alexandre Gramfort, Maureen Clerc
 INRIA Sophia Antipolis, France
- Paper O4-4: **Filtering of Noise in Electrocardiographic Signals Using An Unbiased and Normalized Adaptive Artifact Cancellation System (00118) SPC**
Yunfeng Wu, Rangaraj M. Rangayyan, Ye Wu, and Sin-Chun Ng
 Beijing University of Posts and Telecommunications, China
- Paper O4-5: **Accurate Removal of Baseline Wander in ECG Using Empirical Mode Decomposition (00133) SPC**
Na Pan, Vai Mang I, Mai Peng Un, Pun Sio hang
 University of Macau, China

Oct. 14, Sunday 1:00 – 2:40 pm:

Session O5 – ECG/MCG Modeling and Imaging

Chairs: *Berhard Pfeifer* (UMIT, Austria) **and *Shiqin Jiang*** (Tongji University, China)

- Paper O5-1: **Contributions of Epi-, Endo- and Myocardium to the Body Surface Potential (00176)**
Pfeifer B, Seger M, Modre-Osprian R, Hintermüller Ch, Hayn D, Schreier G, and Tilg B
 The University for Health Sciences, Medical Informatics and Technology, Austria
- Paper O5-2: **Reconstruction of Myocardial Infarction Using the Improved Spatio-Temporal MAP-based Regularization (00134) SPC**
Yuan Jiang, Dima Farina, Olaf Doessel
 Universitaet Karlsruhe (TH), Germany
- Paper O5-3: **Dominant Frequency Maps of Epicardial and Body Surface Potentials During Ventricular Fibrillation - a computer model study (00143)**
CN Nowak, L Wieser, G Fischer, B Tilg, HU Strohmenger
 The University for Health Sciences, Medical Informatics and Technology, Austria
- Paper O5-4: **Separative Surface Potential Activation Beamformer for Localizing Reentrant Excitation of Atrial Fibrillation (00166)**
Kiwoong Kim, Doosang Kim, Eun-Bo Shim, Yong-Ho Lee, Hyukchan Kwon, Yong-Ki Park
 Korea Research Institute of Standards and Science, South Korea
- Paper O5-5: **Dipole Source Localization in Magnetocardiography (00127)**
SHIQIN JIANG, LEI ZHANG , MING CHI , MING LUO , LEMIN WANG
 Tongji University, China

Oct. 14, Sunday 1:00 – 2:40 pm:

Session O6 - Emerging Methods in Functional Imaging

Chair: *George Zouridakis* (University of Houston, USA)

- Paper O6-1: **Spatiotemporal Profiles of Brain Activation During Learning and Strategy Formulation (00205)**
George Zouridakis, Farhan R. Baluch, Ian Stevenson, Devika Subramanian
 University of Houston, USA
- Paper O6-2: **Cortical Imaging of Sensorimotor Rhythm during On-line Control of Brain-computer Interface (00232) SPC**
Han Yuan, Alexander J Doud, Arvind Gururajan, Bin He
 University of Minnesota, USA
- Paper O6-3: **Online Detection of Gamma Oscillations in Ongoing Intracerebral Recordings: From Functional Mapping to Brain Computer Interfaces (00225)**
K. Jerbi, O. Bertrand, B. Schoendorff, J. Bastin, D. Hoffmann, L. Minotti, P Kahane, A. Berthoz, J-P. Lachaux
 National Center for Scientific Research, France
- Paper O6-4: **Measurements of EEG evoked by Transcranial Magnetic Stimulation at Various Stimulus Points on the Head (00172)**
Takeshi Arimatsu, Hideyuki Sato, Sheng Ge, Shoogo Ueno, Keiji Iramina
 Kyushu University, Japan
- Paper O6-5: **Influence of low-frequency rTMS on EEG of epileptic rats (00207)**
Zhang Guanghao, Li Linxia, Huo Xiaolin, Song Tao
 Institution of Electrical Engineering, Chinese Academy of Science, China

Oct. 14, Sunday 3:00 – 5:00 pm:

Session O7 – MREIT and MRCDI

Chairs: Eung Je Woo (Kyung Hee University, South Korea) and **Shanan Zhu** (Zhejiang University, China)

- Paper O7-1: **Feasibility Study of Radio Frequency Current Density Imaging with Only One Rotation (00230)**
SPC
Dinghui Wang, Weijing Ma, Tim P. DeMonte, Adrian I. Nachman and Michael L. Joy
 University of Toronto, Canada
- Paper O7-2: **Conductivity Imaging of Postmortem and In-vivo Canine Brains using MREIT (00183)**
Eung Je Woo, Hyung Joong Kim, Byung Il Lee, Soo Yeol Lee, Jin Keun Seo and Hee Myung Park
 Kyung Hee University, South Korea
- Paper O7-3: **Design of anisotropic phantoms for use in electrical conductivity imaging and modeling (00247)**
Rosalind J. Sadleir
 University of Florida, USA
- Paper O7-4: **Noninvasive Bioimpedance Imaging by Means of Current Reconstruction Magnetic Resonance Electrical Impedance Tomography (00227)**
Nuo Gao and Bin He
 University of Minnesota, USA
- Paper O7-5: **Noise Analysis of Current Density Imaging: A Pilot Study (00242)**
Xiaotong Zhang, Xingyao Yan, Dandan Yan, Minming Zhang, Fei Sun, Shanan Zhu and Bin He
 Zhejiang University, China
- Paper O7-6: **Inverse Problem of Inductive Magnetic Resonance Electrical Impedance Tomography (00179)**
Guoqiang Liu, Meng Meng, Hao Wang, Lingtong Jiang, Shiqiang Li
 Institution of Electrical Engineering, Chinese Academy of Science, China

Oct. 14, Sunday 3:00 – 5:00 pm:

Session O8 – Functional Neuroimaging

Chairs: Cosimo Del Gratta (G. D'Annunzio University, Italy) and **Lei Ding** (University of Oklahoma, USA)

- Paper O8-1: **From where to how: assessing mechanisms of neural plasticity in patients with unilateral brain lesions (00192)**
Belardinelli P., Ciancetta L., Staudt M., Pizzella V., Londei A., Birbaumer N., Romani, G.L., Braun C.
 Gabriele D'Annunzio University, Italy
- Paper O8-2: **Estimation of Time-varying Cortical Connectivity during the Intention of Movement in Spinal Cord Injured Patients (00167)**
L. Astolfi, D. Mattia, F. Cincotti, F. De Vico Fallani, A. Tocci, A. Colosimo, S. Salinari, M.G. Marciani, S.Gao, H. Witte and F. Babiloni
 University of Rome La Sapienza, Italy
- Paper O8-3: **Conductivity estimation for EEG: what is relevant? (00177)**
Sylvain Vallaghe, Maureen Clerc
 National Institute for Research, France
- Paper O8-4: **Fusion of EEG and fMRI for the Investigation of Functional Connectivity during a Visual Oddball Task (00161)**
Dante Mantini, Simone Cugini, Gian Luca Romani, and Cosimo Del Gratta
 Gabriele D'Annunzio University, Italy
- Paper O8-5: **Canonical Decomposition of scalp EEG as preprocessing for source localization (00210)**
Maarten De Vos, Lieven De Lathauwer, Bart Vanrumste, Wouter Deburchgraeve, Sabine Van
 Katholieke Universiteit Leuven, Belgium

POSTER SESSIONS**Oct. 12, Friday 3:20 – 4:20 pm:****Session P-1 - Student Paper Competition**

- Paper P1-1: **High-resolution spatio-temporal neuronal activation in the visual oddball task: a simultaneous EEG/fMRI study (00155) SPC**
Marzetti L., Mantini D., Cugini S., Romani G.L., Del Gratta C.
Gabriele D'Annunzio University, Italy
- Paper P1-2: **Magnetic Imaging of Nanoparticles Using Minimum Norm Algorithms (00147) SPC**
Daniel Baumgarten, Mario Liehr, Jens Haueisen
Ilmenau Technical University, Germany
- Paper P1-3: **Event-Related EEG-Changes during Attempted Standing up Task (00125) SPC**
ZHOU Zhong-xing, MING Dong, WAN Bai-kun, CHENG Long-long
Tianjin University, China
- Paper P1-4: **Comparison of different auto-solid angle approximations in BEM for EEG dipole source localization (00139) SPC**
Asseconi S., Hallez H., D'Asseler Y., Lemahieu I.
Ghent University, Belgium
- Paper P1-5: **A Cortical Potential Imaging Analysis of Mu Rhythm during On-line Control of Brain-Computer Interface (00231) SPC**
Han Yuan, Bin He
University of Minnesota, USA
- Paper P1-6: **Online and Offline Implementation of Time-frequency Template Matching Method for Classifying Motor Imagery in Brain Computer Interface (00141) SPC**
Qi Yang, Yin Fang, Vlodk Siemionow, Guang H. Yue
Cleveland Clinic, USA
- Paper P1-7: **Effects of anisotropy in a physical torso phantom on source reconstructions from a current dipole (00162) SPC**
Mario Liehr, Gökhan Şengül, Uğur Baysal, Jens Haueisen
Jena University Hospital, Germany
- Paper P1-8: **Dipole Estimation Errors Due to Skull Conductivity Perturbations: Simulation Study in Spherical Head Models (00228) SPC**
F. Chen, H. Hallez, P. Van Hese, Y. D'Asseler, I. Lemahieu
Ghent University, Belgium
- Paper P1-9: **Dipole estimation errors due to not incorporating anisotropic conductivities of white matter in EEG source localization in realistic head models (00145) SPC**
Hans Hallez, Bart Vanrumste, Steven Delputte, Peter Van Hese, Sara Asseconi, Yves D'Asseler and Ignace Lemahieu
Ghent University, Belgium
- Paper P1-10: **Using Principal Component Analysis to Detect the Wavefront of Cortical Spreading Depression (00171) SPC**
Salwa Saleh, Shangbin Chen, Dong Chen
Huazhong University, China
- Paper P1-11: **Imaging Adult Zebrafish Brain Structures Using Micro-fabricated RF Coil on 3T MRI System (00187) SPC**
Meng-Chi Hsieh, Li-Wei Kuo, Edzer Wu, Jyh-Horng Chen

- National Taiwan University, China
- Paper P1-12: **Probabilistic Anatomical Connection Derived from QBI with MFACT Approach (00190) SPC**
Yi-Ping Chao, Chia-Yen Yang, Kuan-Hung Cho, Chun-Hung Yeh, Kun-Hsien Chou, Jyh-Horng Chen, Ching-Po Lin
National Taiwan University, China
- Paper P1-13: **The Application of Single- and Multi-Level Fast Evolution Strategies for the Reconstruction of Multiple Neuromagnetic Sources (00199) SPC**
Roland Eichardt, Jens Haueisen, Thomas R. Knösche, Ernst G. Schukat-Talamazzini
Ilmenau Technical University, Germany
- Paper P1-14: **Analysis of Vector-ECG and Magneto-ECG Based on MCG Data (00215) SPC**
QINGWEN GU, SHIQIN JIANG, WEIYUAN WANG, WEIWEI QUAN
Tongji University, China
- Paper P1-15: **Keyhole Diffusion Tensor Imaging – a Fast Spin-Echo Based DTI Technique (00142) SPC**
Chu W. C., CHEN Y. R., CHOU K. S., SUN S. W.
National Yang Ming University, China
- Paper P1-16: **Dipole Source Localization of Flash Visual Evoked Potentials to Cone Specific Stimuli (00117) SPC**
J.Liebermann, S.Klee, J.Haueisen
Ilmenau Technical University, Germany
- Paper P1-17: **Unbiased large-scale coherence mapping for simultaneously acquired EEG and fMRI data (00156) SPC**
Marzetti L, Nolte G., Perrucci M.G., Romani G.L., Del Gratta C.
Gabriele D'Annunzio University, Italy
- Paper P1-18: **Comparison of Hemodynamic Response Models in a Combined EEG-fMRI Study of an Epileptic Patient (00249) SPC**
Todd J.M. Penney, Zoltan J. Koles, Bradley Goodyear, Paolo Federico, Daniel Pittman
University of Alberta, Canada
- Paper P1-19: **Low Dimensional Representations of MEG/EEG Data Using Laplacian Eigenmaps (00175) SPC**
Alexandre Gramfort, Maureen Clerc
INRIA Sophia Antipolis, France
- Paper P1-20: **Filtering of Noise in Electrocardiographic Signals Using An Unbiased and Normalized Adaptive Artifact Cancellation System (00118) SPC**
Yunfeng Wu, Rangaraj M. Rangayyan, Ye Wu, and Sin-Chun Ng
Beijing University of Posts and Telecommunications, China
- Paper P1-21: **Accurate Removal of Baseline Wander in ECG Using Empirical Mode Decomposition (00133) SPC**
Na Pan, Vai Mang I, Mai Peng Un, Pun Sio Hang
University of Macau, China
- Paper P1-22: **Reconstruction of Myocardial Infarction Using the Improved Spatio-Temporal MAP-based Regularization (00134) SPC**
Yuan Jiang, Dima Farina, Olaf Doessel
Universitaet Karlsruhe (TH), Germany
- Paper P1-23: **Cortical Imaging of Sensorimotor Rhythm during On-line Control of Brain-computer Interface (00232) SPC**
Han Yuan, Alexander J Doud, Arvind Gururajan, Bin He
University of Minnesota, USA

- Paper P1-24: **Feasibility Study of Radio Frequency Current Density Imaging with Only One Rotation (00230) SPC**
Dinghui Wang, Weijing Ma, Tim P. DeMonte, Adrian I. Nachman and Michael L. Joy
 University of Toronto, Canada
- Paper P1-25: **Brain Tissue Conductivity Reconstruction Based on Diffusion Tensor Magnetic Resonance Imaging: A Simulation Study (00248) SPC**
Dandan Yan, Xiaotong Zhang, Nuo Gao, Shanan Zhu, Bryon Mueller, Kelvin Lim, Zhongming Liu, and Bin He
 Zhejiang University, China

Oct. 12, Friday 3:20 – 4:20 pm:

Session P-2 - Brain Forward Modeling & Image Segmentation

- Paper P2-1: **Evaluating the Accuracy of an Anisotropic Finite-Volume Head Model for the EEG Forward Problem (00181)**
Michael Cook, Zoltan Koles
 University of Alberta, Canada
- Paper P2-2: **Influence of anisotropic conductivity on the EEG forward and inverse solution (00200)**
Daniel Güllmar, Jürgen R. Reichenbach, Jens Haueisen
 Jena University Hospital, Germany
- Paper P2-3: **A New Algorithm to Extract the Anisotropic Conductivity Distribution of White Matter from DT-MRI (00253)**
Kun Wang, Jing Li, Shanan Zhu, Bryon Mueller, Kelvin Lim, Zhongming Liu, Bin He
 Zhejiang University, China
- Paper P2-4: **A Study of White Matter Anisotropic Conductivity on EEG Forward Solutions (00236)**
Jing Li, Kun Wang, Shanan Zhu, Bryon Mueller, Kelvin Lim, Zhongming Liu, Bin He
 Zhejiang University, China
- Paper P2-5: **Finite Element Modeling of Human Head from Medical Images (00243)**
Jun Liu, Shanan Zhu and Bin He
 Zhejiang University, China
- Paper P2-6: **A Fast Volume Conductor Segmentation and Modeling Pipeline for NICE (00159)**
Pfeifer B, Seger M, Fischer G, Nowak CN, Aschaber J, and Tilg B
 The University for Health Sciences, Medical Informatics and Technology, Austria
- Paper P2-7: **Medical Image Segmentation: Methods and Software (00178)**
D.J. Withey and Z.J. Koles
 University of Alberta, Canada

Oct. 14, Sunday 10:10 – 11:30 am:

Session P-3: Functional Neuroimaging

- Paper P3-1: **Power map during painful and nonpainful stimulation using beamformer technique (00193)**
R Franciotti, L Ciancetta, S Della Penna, P. Belardinelli, V Pizzella, G.L. Romani
 Gabriele D'Annunzio University, Italy
- Paper P3-2: **Automated neonatal spike train detection as part of a neonatal seizure detection system (00209)**
W. Deburchgraeve, P.J. Cherian, M. De Vos, R.M. Swarte, J.H. Blok, G.H. Visser, P. Govaert and S. Van Huffel
 Katholieke Universiteit Leuven, Belgium
- Paper P3-3: **An ERP Study of Face Expression (00174)**
Yufang Wei, Guizhi Xu, Yang Song, Lei Wang, Shuo Yang

- Hebei University of Technology, China
- Paper P3-4: **A Flexible Multichannel Electrode for Mouse Brain and Its Application to Mouse EEG (00223)**
Jee Hyun Choi, Minah Lee, Jong-ho Kim, and Hee-Sup Shin
Korea Institute of Science and Technology, South Korea
- Paper P3-5: **A new method based on Correlation Coefficients to map coherent brain sources (00128)**
ZHANG Junpeng, CUI Yuan
Chengdu Medical College, China
- Paper P3-6: **Simultaneous Evoked Potentials-fMRI acquisition in the rat (00160)**
Pai-Feng Yang, Jyh-Horng Chen
National Taiwan University, China
- Paper P3-7: **An Event-related Analysis for Identifying Networks Integrated by P300 Simultaneously Measured with EEG and fMRI (00198)**
Li-qun Wang
Tokyo Denki University, Japan
- Paper P3-8: **Neural Correlates of Mindfulness and Concentration in Buddhist Monks: A fMRI study (00163)**
Antonino Raffone, Antonietta Manna, Gianni Mauro Perrucci, Antonio Ferretti, Cosimo Del Gratta, Marta Olivetti Belardinelli and Gian Luca Romani
Gabriele D'Annunzio University, Italy
- Paper P3-9: **Buddhist Meditation: An fMRI Study (00152)**
Chao-Hsien Hsieh, Chien-Hui Liou, Chang-Wei Hsieh, Pai-Feng Yang, Chi-Hong Wang, Li-Kang Ho, Jyh-Horng Chen
National Taiwan University, China
- Paper P3-10: **Research on Event Related Potential Elicited by Number Recognizing and Arithmetic Calculating (00186)**
Lei Wang, Guizhi Xu, Shuo Yang, Yang Song, Yufang Wei and Weili Yan
Hebei University of Technology, China
- Paper P3-11: **Neural Basis For Cortical-Network Responses To TV Spots: a High Resolution EEG study (00146)**
Fabrizio De Vico Fallani, Fabio Babiloni, Febo Cincotti, Donatella Mattia, Andrea Tocci, Luigi Bianchi, Serenella Salinari, Maria Grazia Marciani, Vittorio Meroni, Alfredo Colosimo Laura Astolfi
University of Rome, Italy

Oct. 14, Sunday 10:10 – 11:30 am:

Session P-4: Functional Biomedical Imaging

- Paper P4-1: **Dynamic Contrast Enhanced Imaging of Mice Kidney Metabolism Using High-Temperature Superconducting RF Coil on a 3T MRI System (00188)**
Kai-Yuan Chen, Li-Wei Kuo, Wei-Ting Lin, Chia-Hao Su, Jyh-Horng Chen
National Taiwan University, China
- Paper P4-2: **Comparing the Spatial and Temporal Reproducibility of Brain Activation Using Three fMRI Techniques: BOLD, FAIR, and VASO (00189)**
Chia-Wei Lee, Der-Yow Chen, Chang-Wei Wu, Jyh-Horng Chen
National Taiwan University, China
- Paper P4-3: **The Construction of a Chinese Brain MRI Template (00191)**
Edzer L. Wu, Der You Chen, Jyh-Horng Chen
National Taiwan University, China
- Paper P4-4: **An Active Noise Cancellation System for fMRI (00194)**
Kuan-Hung Cho, Tzi-Dar Chiueh, Ching-Po Lin, Casper K. Chen, Jyh-Horng Chen

- National Taiwan University, China
- Paper P4-5: **Evaluation of BOLD Sensitivity Using a Realistic MRI Simulator (00197)**
Ali-Reza Mohammadi-Nejad, G.-Ali Hossein-Zadeh, Hamid Soltanian-Zadeh
University of Tehran, Iran
- Paper P4-6: **Imaging Three-Dimensional Ventricular Activation Sequence under Dual-site Pacing in a Rabbit Model (00226)**
Chengzong Han, Zhongming Liu, Chenguang Liu, Steven Pogwizd, Bin He
University of Minnesota, USA
- Paper P4-7: **Comparison of Meshless FEM and Conventional FEM for Solving ECG Forward Problem: A Simulation Study (00246)**
Zhongshi Li, Yingchun Zhang, Shanan Zhu, Bin He
Zhejiang University, China

Oct. 14, Sunday 10:10 – 11:30 am:

Session P-5: Magnetic Stimulation and Imaging

- Paper P5-1: **Current Distributions inside 3D Abdomen Models as Obtained by Electrical and Magnetic Stimulations for the Treatment of Urinary Incontinence (00149)**
Masato Odagaki, Yoshio Uomori, Hidehiro Hosaka
Tokyo Denki University, Japan
- Paper P5-2: **Effect of Electrical Stimulus Intensity to Hemodynamic Responses of Somatosensory (00195)**
Hirotsugu Takata, Mingdi Xu, Takehito Hayami, Keiji Iramina
Kyushu University, Japan
- Paper P5-3: **Effect of Magnetic Stimulation at SHENMEN Point on the Electroencephalogram (00185)**
Shuo Yang, Guizhi Xu, Lei Wang, Yaohua Geng, Xiu Zhang, Qingxin Yang and Weili Yan
Hebei University of Technology, China
- Paper P5-4: **Magnetoacoustic Tomography of Biological Tissue with Magnetic Induction (00235)**
Rongmin Xia, Xu Li, Bin He
University of Minnesota, USA
- Paper P5-5: **Magnetically induced magnetoacoustic generation and conductivity reconstruction for a multi-layer cylindrical model (00233)**
Qingyu Ma and Bin He
University of Minnesota, USA
- Paper P5-6: **Inverse Problem of Magnetoacoustic Tomography with Magnetic Induction (00180)**
Hao Wang, Guo qiang Liu, Lingtong Jiang, Shiqiang Li
Institution of Electrical Engineering, Chinese Academy of Science, China
- Paper P5-7: **A Comparison of Several Phase Unwrapping Methods in MREIT (00217)**
Yuyu Wang, Huixian Wang, Wenhui Yang, and Tao Song
Institution of Electrical Engineering, Chinese Academy of Science, China
- Paper P5-8: **Multichannel MCG Systems with Optimum Combinations of Pickup Coils and Shielded Rooms (00182)**
Y. H. Lee, K. K. Yu, K. Kim, J. M. Kim, C. S. Kang, H. Kwon, H. K. Lim and Y. K. Park
Korea Research Institute of Standards and Science, South Korea
- Paper P5-9: **A Simulation Study of Two Dimensional Magnetoacoustic Tomography with Magnetic Induction (00266)**
Xun Li, Xu Li, Shanan Zhu and Bin He
Zhejiang University, China