

ISBET2009 Program Overview

	Tuesday, September 29		Wednesday, September 30	
9:00			Event Hall	
			9:00- Registration	9:00-10:30 <i>Conference Room 1,3,4</i>
			9:30-9:40 Opening Ceremony	Poster Mounting
10:00			9:40-11:10 SYMPOSIUM 1: SY1	
			Exploring brain functions through ERP: Up to date	
11:00				
			11:25-12:00 Didactic Lecture 1: DL1	
			Alan Gevins	
12:00		12:00-13:00 Hands-on Seminar (LORETA) Registration	12:00-13:00 Luncheon Seminar	
			Masanori Nakagawa	
13:00	13:00-17:00 <i>Seminar Room</i> Hands-on Seminar LORETA		13:10-14:40 SYMPOSIUM 2: SY2	13:30-16:00 <i>Seminar Room</i>
14:00	Roberto D. Pascual-Marqui		New technology in NIRS and its application to educational brain sciences	BCI Workshop
15:00			14:55-15:30 Didactic Lecture 2: DL2	
			Roberto D. Pascual-Marqui	
16:00			15:30-16:45	
		16:00-19:00 Registration	Oral Session 1: OS1	
17:00				16:55-18:15 <i>Conference Room 1,3,4</i> Poster Session: PS 1 ~ 4
				18:15-19:00 Poster Unmounting
18:00	18:00-20:00 <i>Special Conference Room</i>			18:15-19:00 <i>Seminar Room</i> ISBET Executive Committee Meeting
19:00	Welcome Party			
20:00				

	Thursday, October 1		Friday, October 2	
	Event Hall	Conference Room 1, 3, 4	Event Hall	Seminar Room
9:00	9:00- Registration	9:00-10:30 Poster Mounting	9:00- Registration	
10:00	9:25-10:00 Didactic Lecture 3: DL3 Peter KH Wong		10:10-11:50 Oral Session 2: OS2	
		9:55-10:30 Didactic Lecture 5: DL5 Ikuko Honma		
11:00			10:45-12:15 SYMPOSIUM 4: SY4 "What can brain-wave tell?" Present and future of Brain Computer Interface (BCI)	
12:00	11:50-12:50 Luncheon Seminar Syuhei Yamaguchi		12:15-12:30 Closing Ceremony	
13:00	13:00-14:30 SYMPOSIUM 3: SY3 Cortical electromagnetic oscillations in epileptic brain: Up to date			12:30-13:30 JSBET Council Meeting
14:00	14:30-15:20 Special Lecture: SL Shintaro Funahashi			
15:00	15:20-15:35 General Assembly of ISBET Members			
16:00		15:40-17:00 Poster Session: PS 5 ~ 8		
17:00	17:00-18:00 Evening Seminar Hidenao Fukuyama			
18:00		18:00-18:30 Poster Unmounting		
19:00	18:30-21:00 <i>The Westin Miyako Hotel</i> <i>(Mizuho-no-ma)</i> Banquet			
20:00				

Program

Wednesday, September 30

SY1 9:40 – 11:10

SYMPOSIUM 1 : Exploring brain functions through ERP: Up to date

Chair : Mikio Osawa (Tokyo Women's Medical University, Japan)

Hirooki Yabe (Fukushima Medical University, Japan)

SY101 Event-related potentials (ERPs) in patients with adult attention-deficit/hyperactivity disorder (Adult AD/HD) in comparison with schizophrenia

Shuntaro Itagaki, Yu Le, Michinari Nozaki, Haruo Fujimori, Hirooki Yabe, Shin-ichi Niwa

Department of Neuropsychiatry, Fukushima Medical University, Japan

SY102 Ultra-fast novelty detection in the human auditory system

S. Grimm, L. Slabu, J. Costa-Faidella, C. Escera

Institute for Brain, Cognition and Behavior (IR3C), University of Barcelona, Spain

SY103 Electrophysiological dynamics of working memory in human brain

S. Abe, K. Onoda, S. Yamaguchi

Department of Neurology, Faculty of Medicine, Shimane University, Japan

SY104 Event-related synchronization/desynchronization of gamma band activity during a visual go/nogo paradigm

M. Iijima, M. Osawa

Department of Neurology, Tokyo Women's Medical University, Tokyo Japan

DL1 11:25 – 12:00

Didactic Lecture 1

Lecturer : Alan Gevins

(San Francisco Brain Research Institute & SAM Technology, USA)

Chair : Shozo Tobimatsu (Kyushu University, Japan)

DL1 High throughput neurophysiological neurocognitive testing system

Alan Gevins

San Francisco Brain Research Institute & SAM Technology, San Francisco, California, USA

LS1 12:00 – 13:00

Luncheon Seminar 1

Lecturer : Masanori Nakagawa

(Kyoto Prefectural University of Medicine, Japan)

Chair : Toshihiko Kinoshita (Kansai Medical University, Japan)

LS1 Pathophysiology and treatments for Alzheimer's disease

Masanori Nakagawa

Department of Neurology, Kyoto Prefectural University of Medicine, Japan

SY2 13:10 – 14:40

SYMPOSIUM 2 : New technology in NIRS and its application to

educational brain sciences

Chair : Hideo Eda (The Graduate School for the Creation of New Photonics Industries, Japan)
Yasufumi Kuroda (Bukkyo University, Japan)

- SY201 **NIRS instrument basics and a new multiple NIRS system with the CDMA technique**
Mitsuo Ohashi¹, Hideo Eda^{2*}
¹Spectratech Inc. Yokohama, Japan
²Grad. School of GPI, Hamamatsu, Japan
- SY202 **Near-infrared optical imaging of human prefrontal cortex activity**
Hui GONG*, Jiahuan ZHAI, Ting LI, Zhongxing ZHANG, Qingming LUO
Britton Chance Center for Biomedical Photonics, Wuhan National Laboratory for Optoelectronics,
Huazhong University of Science and Technology, Wuhan, China
- SY203 **Imaging brain function and disease with laser speckle: Instruments and applications**
P.C. Li*, J.J. Qiu, H.Y. Zhang, W.H. Luo, S.B. Chen, Q.M. Luo
Britton Chance Center for Biomedical Photonics, Wuhan National Laboratory for Optoelectronics-
Huazhong University of Science and Technology, China
- SY204 **Overview of application of brain science in educational research field**
Y. Kuroda¹, B. Chance², S. Nioka²
¹Bukkyo University, Japan
²University of Pennsylvania, U.S.A.
- SY205 **Practical research of education and brain science**
N. Okamoto, T. Maesako
Osaka University, Japan

DL2 14:55 – 15:30

Didactic Lecture 2

Lecturer : Roberto D. Pascual-Marqui
(University Hospital of Psychiatry, Switzerland)

Chair : Hideaki Tanaka (Dokkyo Medical University, Japan)

- DL2 **Assessment of oscillatory brain transactions using exact low resolution brain electromagnetic tomography (eLORETA)**
Roberto D. Pascual-Marqui¹, Rolando J. Biscay-Lirio², Michaela Esslen³, Martin Meyer³,
Lorena R. R. Gianotti¹, Pascal Faber¹, Kieko Kochi¹, Dietrich Lehmann¹
¹The KEY Institute for Brain-Mind Research, University Hospital of Psychiatry, Zurich
²Institute for Cybernetics, Mathematics, and Physics, Havana
³Institute of Psychology, University of Zurich

OS1 15:30 – 16:45

Oral Session 1

Chair : Koji Abe (Okayama University, Japan)
Takashi Nagamine (Sapporo Medical University, Japan)

- OS101 **Brain glucose metabolism in early blind subjects**
Ron Kupers^{1,2}, Rune Christensen², Maurice Ptito³
¹Institute of Neuroscience and Pharmacology, Panum Institute, University of Copenhagen, Denmark
²PET Center, Rigshospitalet, University of Copenhagen, Denmark
³School of Optometry, University of Montreal, Québec, Canada

- OS102 **Neuronal abnormality topography (NAT)**
 Toshimitsu Musha¹, Haruyasu Matsuzaki¹, Takashi Asada², Chiaki Kudoh³
¹Brain Functions Laboratory, Inc.
²Tsukuba University
³KUDOH Clinic for Neurosurgery & Neurology
- OS103 **Visual-evoked magnetic fields in early stage of Alzheimer's disease: An optic flow stimulation study**
 Mitsuru Kikuchi¹, Tsunehisa Tsubokawa², Isamu Ozaki³, Yoshio Minabe¹, Isao Hashimoto⁴
¹Department of Psychiatry and Neurobiology, Graduate School of Medical Science, Kanazawa University, Kanazawa 920-8641, Japan
²Department of Anesthesiology, Graduate School of Medical Science, Kanazawa University, Kanazawa 920-8641, Japan
³Faculty of Health Sciences, Aomori University of Health and Welfare, Aomori, 030-8505, Japan
⁴Kanazawa Institute of Technology, Tokyo Office, 102-0083, Japan
- OS104 **Localization and dynamics of semantic human brain functions by neuroimaging, electrical stimulation and electrocorticogram**
 K. Kamada, T. Ota, N. Kunii, K. Kawai, N. Saito
 Department of Neurosurgery, Faculty of Medicine, The University of Tokyo
- OS105 **Comparison of MEG source estimation with human cortical recording**
 M. Matsushashi¹, T. Kobayashi², Y. Yokoyama^{1,3}, Nobuhiro Mikuni³, Riki Matsumoto⁴, Akio Ikeda⁴, H. Fukuyama¹
¹Human Brain Research Center, Kyoto University, Japan
²Department of Electrical Engineering, Kyoto University, Japan
³Department of Neurosurgery, Kyoto University, Japan
⁴Department of Neurology, Kyoto University, Japan
- OS106 **Robust single-trial ERP detection for rapid image triage**
 K. Q. Shen¹, S. Y. Shao¹, Y. Ke¹, W. C. Ng¹, K. Kwok², V. G. Boopathi², X. P. Li¹
¹Neuroensors Laboratories, National University of Singapore, Singapore
²Temasek Laboratories, National University of Singapore, Singapore

PS1 16:55 – 18:15

Poster Session 1: Language

Chair : Masato Yumoto (University of Tokyo, Japan)

- PS101 **Effects of development and non-native language activities on the semantic processing of native language in preschool children**
 Junichi Takahashi^{1,2}, Yuika Suzuki^{1,3}, Hiroshi Shibata^{3,4}, Yuichiro Fukumitsu⁵, Jiro Gyoba^{1,2}, Hiroko Hagiwara^{2,6}, Masatoshi Koizumi^{1,2}
¹Tohoku University, Japan
²RISTEX, Japan Science and Technology Agency, Japan
³Japan Society for the Promotion of Science, Japan
⁴Kyoto University, Kyoto, Japan
⁵Niihama National College of Technology, Niihama, Japan
⁶Tokyo Metropolitan University, Hachioji, Japan
- PS102 **An ERP study on the semantic processing of native language in children enrolled in a foreign language immersion program**
 Yuika Suzuki^{1,2}, Junichi Takahashi^{1,3}, Hiroshi Shibata^{2,4}, Yuichiro Fukumitsu⁵, Jiro Gyoba^{1,3}, Hiroko Hagiwara^{3,6}, Masatoshi Koizumi^{1,3}
¹Tohoku University, Japan
²Japan Society for the Promotion of Science, Japan
³RISTEX, Japan Science and Technology Agency, Japan
⁴Kyoto University, Japan
⁵Niihama National College of Technology, Japan
⁶Tokyo Metropolitan University, Japan

- PS103 **Word processing related to multi-sensory stimulus processing: Comparison of early and late components of evoked brain activity**
W. Skrandies, A. Hiessl, S. Hörner
Institute of Physiology, Justus Liebig University, Giessen, Germany
- PS104 **Word processing related to multi-sensory stimulus processing: Gender-specific differences of components of evoked brain activity**
W. Skrandies, A. Hiessl, S. Hörner
Institute of Physiology, Justus Liebig University, Giessen, Germany
- PS105 **Early topographical differences of electrical brain activity elicited by food and color words**
W. Skrandies, N. Reuther
Institute of Physiology, Justus Liebig University, Giessen, Germany
- PS106 **Auditory perception of Japanese vowels or numbers under working memory task on MEG**
Noriko Tsuru, M.D.¹, Toshiaki Otsubo, M.D.², Toshiro Fujimoto, M.D.², Yasuhiro Haruta³
¹Kyushu University of Health and Welfare, Japan
²Fujimoto Hospital, Japan
³Yokogawa Electric Corporation, Japan
- PS107 **Recognition of fillers in normal and dementia brains**
Chie Yamane-Yoshinaga¹, Noriko Hatanaka², Hidenori Yoshida³, Yasuyuki Ohta², Koji Abe²
¹Sanyo Gakuen University Faculty of Human Sciences Department of Language and Culture
²Okayama University Graduate School of Medicine, Dentistry, and Pharmacological Sciences Department of Neuropology
³Okayama Ryogo Center Department of Neuropsychiatry, Japan
- PS108 **Semantic incongruency activates frontal and parieto-temporal cortices: An MEG study**
K. Sutani, S. Iwaki
Living Informatics Group, Institute for Human Science and Biomedical Engineering (HSBE), National Institute of Advanced Industrial Science and Technology (AIST)
- PS109 **Effects of English experiences on preschoolers' brain activity in listening to /ra/ and /la/ contrast: A NIRS study**
A. Konno^{1*}, S. Maruyama¹, S. Hidaka¹, A. Tanaka², J. Gyoba^{1,3}, H. Hagiwara^{3,4}, M. Koizumi^{1,3}
¹Graduate School of Arts and letters, Tohoku University, Japan
²Cognitive and Affective Neuroscience Laboratory, Tilburg University, The Netherlands
³Japan Science and Technology Agency, RISTEX, Japan
⁴Graduate School of Humanities, Tokyo Metropolitan University, Japan
*Present affiliation: Graduate School of Arts and Science, The University of Tokyo, Japan

PS2 16:55 – 18:15

Poster Session 2: Clinical Application

Chair : Harumi Yoshinaga (Okayama University, Japan)

- PS201 **Detection of high-frequency EEG oscillations in sleep-induced electrical status epilepticus in childhood**
Katsuhiro Kobayashi, Yoshiaki Watanabe, Makio Oka, Harumi Yoshinaga, Yoko Ohtsuka
Department of Child Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, and Okayama University Hospital, Okayama, Japan
- PS202 **Investigation on the synchronizing appearance of occipital and frontopolar spike in childhood epilepsy**
Harumi Yoshinaga, Katsuhiro Kobayashi, Yoko Ohtsuka
Department of Child Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, JAPAN

- PS203 **Auditory P300 reduction in patients with temporal lobe epilepsy**
K. Hara^{1,2}, M. Miyajima^{1,4}, H. Iino¹, Y. Emori¹, A. Matsuda¹, K. Ohta^{1,3,4}, T. Maehara⁵,
M. Inaji⁵, E. Matsushima³, M. Hara², M. Matsuura¹
¹Department of Life Sciences and Bio-informatics, Graduate School of Health Care Sciences, Tokyo
Medical and Dental University, Japan
²Hara Clinic
³Onda-Daini Hospital
⁴Section of Liaison Psychiatry and Palliative Medicine, Graduate School of Medical and Dental Sci-
ences, Tokyo Medical and Dental University
⁵Department of Neurosurgery, Tokyo medical and Dental University
- PS204 **Spike source identification in MEG to detect epileptogenesis**
Hiroatsu Murakami, Hiroshi Masuda, Shigeki Kameyama
Nishi-Niigata Chuo National Hospital, Japan
- PS205 **Magnetoencephalographic analysis of paroxysmal fast activity in patients
with epileptic spasms could predict the focal epileptogenic area**
Keitaro Sueda¹, Fumiya Takeuchi², Hideaki Shiraishi¹, Shingo Nakane³, Kotaro Sakurai⁴,
Kazuyori Yagyū¹, Naoko Asahina¹, Shinobu Kohsaka¹, Shinji Saitoh¹
¹Department of Pediatrics, Hokkaido University Graduate School of Medicine
²Department of Health Science, Hokkaido University School of Medicine
³Division of Magnetoencephalography, Hokkaido University Hospital
⁴Department of Psychiatry and Neurology, Hokkaido University Graduate School of Medicine
- PS206 **Magnetoencephalographic analysis for the mechanism of epileptic spike
propagation in cerebral cortex**
Hideaki Shiraishi¹, Fumiya Takeuchi², Yuki Ueda¹, Tomoshiro Itoh¹, Yumi Takahashi¹,
Kazuyori Yagyū¹, Keitaro Sueda¹, Kayoko Takahashi³, Shingo Nakane³, Shinobu Kohasaka¹,
Shinji Saitoh¹
¹Department of Pediatrics, Hokkaido University Graduate School of Medicine, Japan
²Faculty of Health Sciences, Hokkaido University Graduate School of Health Sciences
³Division of Magnetoencephalography, Hokkaido University Hospital
- PS207 **Neuromagnetic temporo-parietal theta activity correlates with misery per-
fusion in patients with internal carotid artery occlusive disease**
Satoru Ohtomo¹, Nobukazu Nakasato², Hiroaki Shimizu³, Shintarou Seki³, Akitake Kanno⁴,
Teiji Tominaga³
¹Department of Neurosurgery, South Miyagi Medical Center, Japan
²Department of Neurosurgery, Kohnan Hospital, Japan
³Department of Neurosurgery, Tohoku University Graduate School of Medicine, Japan
⁴Tohoku Ryogo Center, Kohnan Hospital, Japan
- PS208 **Statistical assessment of cortical EEG activities with sLORETA using nor-
mative data for Alzheimer's disease**
H. Tanaka, R. Takashima, Y. Hoshino, T. Ogawa, K. Sakurai, Y. Watanabe, K. Hirata
Department of Neurology, Dokkyo Medical University, Japan
- PS209 **Suggestive sumatriptan pharmacokinetics terminating migraine attack - In
vivo analysis with near infrared spectroscopy and skin laser flowmeter**
Y. Watanabe, H. Tanaka, R. Takashima, Y. Hoshino, T. Ogawa, K. Sakurai, K. Hirata
Department of Neurology, Dokkyo Medical University, Japan
- PS210 **Measurement of brain activity in children without restraint using wireless
EEG**
Saki Fujiyama, Keiji Iramina
Graduate School of Systems Life Sciences, Kyushu University, Japan

PS211 Physiological changes observed in a woman with severe motor and intellectual disabilities as a result of care staff intervention: A near-infrared spectroscopy case study

Daisuke Hirano¹, Takamichi Taniguchi², Kotaro Takeda^{3,4}, Keiko Arai⁵, Shinichiro Takiguchi¹

¹Nasu Institute for Developmental Disabilities, International University of Health and Welfare Rehabilitation Center, Tochigi, Japan

²Graduate School of Health and Welfare Sciences, International University of Health and Welfare, Tochigi, Japan

³Department of Neurology, International University of Health and Welfare Hospital, Tochigi, Japan

⁴CREST, Japan Science and Technology Agency, Saitama, Japan

⁵Utsunomiya City Child Development Center, Tochigi, Japan

PS212 sLORETA-based age dependent norms of “default mode” electric neuronal activity: Validation in acute cerebral cortical infarction confirmed by SPECT and MRI

Hideaki Tanaka¹, Yuya Hoshino¹, Koichi Hirata¹, E. Roy John², Leslie Prichep², R. Isenhardt², R.D. Pascual-Marqui³

¹Department of Neurology, Dokkyo Medical University, Tochigi, Japan

²Brain Research Laboratories, Department of Psychiatry, NY University School of Medicine, NY, USA

³The KEY Institute for Brain-Mind Research, University Hospital of Psychiatry, Zurich, Switzerland

PS3 16:55 – 18:15

Poster Session 3: NIRS

Chair : Hisaki Ozaki (Ibaraki University, Japan)

PS301 Noise separation of optical topography signals using ICA

T. Katura¹, H. Sato¹, N. Tanaka², A. Maki¹

¹Hitachi, Ltd.

²Toyo university

PS302 Considerations on fluctuation in optical topography signals by using an information amount

N. Matsushiro¹, K. Yamashita¹, Y. Kasagi², X. Wei³, I. Shimoyama²

¹Grad. Sch. Med., Chiba Univ., Japan

²Human Neurophysiology, Frontier Medical Eng., Chiba Univ., Japan

³Grad. Sch. Ad. Int. Sci., Chiba Univ., Japan

PS303 Effect of delayed auditory feed-back on the prefrontal cortex in near-infrared spectroscopy

K. Yamashita*, I. Shimoyama, K. Nakazawa, Y. Asano, Y. Kasagi, N. Matsushiro

Section for Human Neurophysiology, Research Center for Frontier Medical Engineering, Chiba University, Japan

PS304 Brain activity during perception of reachability

Noriyuki Kamata¹, Yoshimi Matsuo², Ayako Matsuya³, Satoru Inoue¹, Kazuo Abe^{3,4}

¹Rehabilitation Unit, Osaka University Hospital, Japan

²Faculty of Rehabilitation, Kobe Gakuin University, Japan

³Faculty of Nursing and Rehabilitation, Konan Woman's University, Japan

⁴Department of Neurology and Rehabilitation Center, Konan Hospital, Japan

PS305 The neural correlates of simulated car driving: A NIRS study

H. Shoji, H. Ozaki

College of Education, Ibaraki University, Japan

PS306 Effects of real/virtual musical performance on a time sequential oxy-hemoglobin pattern in frontal cortex

N. Okabe, T. Toratani, M. Iwasaka, S. Agehara, K. Sugita

Chiba University, Japan

PS307 Hemodynamic activity of frontal brain during repeating vocal task

T. Toratani, M. Iwasaka, H. Okabe, K. Sugita

Chiba University, Japan

- PS308 **Individual differences in changes in cerebral hemoglobin concentrations during a cognitive task and their mutual relationships**
Tadash Niioka, Soichiro Ohnuki
Graduate School of Environmental Earth Science, Hokkaido University, Sapporo, Japan
- PS309 **Prefrontal activity due to probability change of target in go-nogo task**
T. Mizutani¹, H. Ozaki², H. Shoji², H. Shinoda³
¹Rissho University, Graduate school of Psychology, Japan
²Ibaraki University, College of Education, Japan
³Rissho University, Faculty of Psychology, Japan
- PS310 **Near-infrared spectroscopy over the frontal lobes during the mirror drawing test**
Y. Asano^{1,2}, I. Shimoyama^{2,3}, A. Murata^{1,2}, Y. Kasagi², K. Nakazawa^{2,3}, S. Yoshida^{2,4}, H. Yoshizaki², A. Yoshida², F. Hayashi²
¹Department of Rehabilitation, Chiba University Hospital
²Human Neurophysiology, Research Center for Frontier Medical Engineering, Chiba University
³Graduate School of Medicine, Chiba University
⁴Department of Physical Therapy, Chiba Prefectural University of Health Science
- PS311 **Influences of curvature and overlying tissues on cerebral oxygenation measurement using spatially-resolved and single-point NIRS**
K. Ohishi, M. Niwayama
Graduate School of Engineering, Shizuoka University, Japan

PS4 16:55 – 18:15

Poster Session 4: TMS, Basic Research

Chair : Masuro Shintani (Tokyo Dental College, Japan)

- PS401 **Changes in sleep architecture after high-frequency left prefrontal transcranial magnetic stimulation in treatment-resistant depression**
Takashi Hasegawa, Shinsuke Kito, Toru Nakajima, Hiroshi Yamadera, Yoshihiko Koga
Department of Neuropsychiatry, Kyorin University School of Medicine, Japan
- PS402 **Plastic changes of intra-cortical and cortico-muscular circuitries induced by theta burst transcranial magnetic stimulation in humans**
Y. Hayashida¹, M. Sağlam¹, N. Murayama¹, K. Matsunaga², R. Nakanishi²
¹Graduate school of Science and Technology, Kumamoto University, Japan
²Department of Neurology, Kumamoto Kinoh Hospital, Japan
- PS403 **Numeric calculation of the eddy current distributions and the stimulated area by transcranial magnetic stimulation**
S. Tsuyama¹, Y. Katayama¹, A. Hyodo², T. Hayami³, S. Ueno⁴, K. Iramina^{1,2}
¹Department of Intelligent Systems, Graduate School of Information Science and Electrical Engineering, Kyushu University, Fukuoka 819-0935, Japan
²Graduate School of Systems Life Sciences, Kyushu University, Fukuoka 819-0935, Japan
³Digital Medicine Initiative, Kyushu University, Fukuoka 819-0935, Japan
⁴Department of Applied Quantum Physics, Graduate School of Engineering, Kyushu University, Fukuoka 812-8581, Japan
- PS404 **Appropriate MPG parameters for diffusion weighted functional MRI**
S. Nagahara, T. Oida, T. Kobayashi
Graduate School of Engineering, Kyoto University, Japan
- PS405 **High/low discounting rates in reward prediction are differentially involved in dorsal/ventral striatum**
K. Onoda¹, Y. Okamoto², Y. Kunisato², G. Okada², S. Yamaguchi¹, S. Yamawaki²
¹Shimane University, Japan
²Hiroshima University, Japan

- PS406 **Acquisition parameters in MR diffusion tensor imaging for clarifying the direction of nerve fibers**
T. Oida, S. Nagahara, T. Kobayashi
Graduate School of Engineering, Kyoto University, Japan
- PS407 **A MR diffusion tensor imaging study on disruption of cerebral white matter integrity in schizophrenia: Fiber tracking of the superior longitudinal fasciculus**
U. Yamamoto¹, T. Kobayashi¹, S. Kito², Y. Koga²
¹Kyoto University, Japan
²Kyorin University, Japan
- PS408 **Phantom measurements of magnetic field distributions by a newly developed optically-pumped atomic magnetometer: A basic study toward biomagnetic applications**
Shuji Taue¹, Yasuyuki Sugihara¹, Tetsuo Kobayashi¹, Sunao Ichihara², Kiyoshi Ishikawa^{1,3}, Natsuhiko Mizutani²
¹Kyoto University, Japan
²Canon Inc., Japan
³University of Hyogo, Japan
- PS409 **A study on electroencephalogram-based indices for seizure duration prediction and efficacy estimation of electroconvulsive therapy**
E. Furutani, T. Umemoto, Y. Yokokawa, T. Suwa, H. Suga
Kyoto University, Japan
- PS410 **The impaired wakefulness at active - Nonactive shift period in depressive patients**
S. Tanaka, T. Nakajima, H. Yamadera, Y. Koga
Dept. of Neuropsychiatry, Kyorin University, Japan
- PS411 **Study of mental workload measurement of pre and post mental work of the long time based on CNV**
Takuya Ichikawa, Masato Sakurai, Sakae Yamamoto
Tokyo University of Science, Japan
- PS412 **The reproducibility of the quality of wakefulness measured by actigraph**
T. Nakajima, S. Tanaka, H. Yamadera, Y. Koga
Dept. of Neuropsychiatry, Kyorin University, Japan

Thursday, October 1

DL3 9:25 – 10:00

Didactic Lecture 3

Lecturer : Peter K.H. Wong

(The University of British Columbia, Canada)

Chair : Shigeki Kameyama (Nishi-Niigata Chuo National Hospital, Japan)

DL3 Improved EEG localization for epilepsy surgery

Peter KH Wong, M. Connolly, P. Steinbok

The University of British Columbia, Canada

OS2 10:10 – 11:50

Oral Session 2

Chair : Shuhei Yamaguchi (Shimane University, Japan)

Hisao Tachibana (Hyogo College of Medicine, Japan)

- OS201 **Sparseness in space meets sparseness in time: EEG synchronization is associated with fMRI resting state networks**
 T. Koenig, K. Jann, M. Kottlow, W. Strik, C. Boesch, T. Dierks
 Department of Psychiatric Neurophysiology, University Hospital of Psychiatry
 Department of Clinical Research / AMSM, University of Bern, Switzerland
- OS202 **Spatio-temporal analysis of activation in a visual oddball task**
 C. Del Gratta¹, D. Mantini¹, L. Marzetti¹, M. Corbetta², GL. Romani¹
¹Department of Clinical Sciences and Bioimaging, G. D'Annunzio University, Chieti, Italy
²Department of Neurology, Washington University, St. Louis, Missouri, USA
- OS203 **Continuous face integration in combined EEG/fMRI**
 M. Kottlow, K. Jann, T. Dierks, T. Koenig
 Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, University of Bern, Switzerland
- OS204 **Brain imaging for second language acquisition research: An fMRI study of L2 learners' different levels of word semantic processing**
 Shin'ichiro Ishikawa¹, Qiang Wei²
¹Kobe University, Japan
²NICT, Japan
- OS205 **Connotative semantic meaning of words and evoked brain activity in children: Evidence for rapid processing of emotional content**
 W. Skrandies
 Institute of Physiology, Justus Liebig University, Giessen, Germany
- OS206 **Estimation of time-varying cortical activity and connectivity from high resolution EEG during single subject and simultaneous multi-subject recordings**
 Laura Astolfi^{1,2,3}, Fabio Babiloni^{2,3}
¹Dept. of Computer Science and Systems, Sapienza University, Rome, Italy
²Dept. of Human Physiology and Pharmacology, Sapienza University, Rome, Italy
³IRCCS "Fondazione Santa Lucia", Rome, Italy
- OS207 **Electroencephalographic study of gender difference in brain's response to cold pressor pain**
 S. Y. Shao¹, W. S. Tan¹, K. Q. Shen¹, W. C. Ng¹, E. P. V. Wilder-Smith², X. P. Li¹, C. J. Ong¹
¹Neuroensors Laboratories, National University of Singapore, Singapore
²Division of Neurology, National University Hospital, Singapore
- OS208 **Quasi-stable phase synchrony in ongoing and evoked EEG activity**
 A.R. Nikolaev¹, S. Gepshtein^{1,2}, P. Gong^{1,3}, J. Ito¹, C. van Leeuwen¹
¹RIKEN Brain Science Institute, Wako-shi, Japan
²Salk Institute for Biological Studies, La Jolla, USA
³School of Physics and Faculty of Medicine, University of Sydney, Australia

LS2 11:50 – 12:50

Luncheon Seminar 2

Lecturer : Shuhei Yamaguchi

(Shimane University, Japan)

Chair : Koichi Hirata (Dokkyo Medical University, Japan)

LS2 Electrophysiological study in cognitive dysfunction in neurological disorders

Shuhei Yamaguchi

Department of Neurology, Faculty of Medicine, Shimane University

SY3 13:00 – 14:30

SYMPOSIUM 3 : Cortical electromagnetic oscillations in epileptic brains: Up to date

Chair : Nobukazu Nakasato (Kohnan Hospital, Japan)

Hiroshi Otsubo (The Hospital for Sick Children, University of Toronto, Canada)

- SY301 High frequency oscillations in normal and epileptic brain**
Anatol Bragin
Department of Neurology, David Geffen School of Medicine at UCLA, Los Angeles, California, USA
- SY302 Ictal epileptogenic high frequency oscillations**
Hiroshi Otsubo MD
Division of Neurology, The Hospital for Sick Children University of Toronto, Ontario, Canada
- SY303 Ictal high-frequency oscillations in the supplementary motor cortex recorded with subdural macro-electrodes**
M. Iwasaki¹, N. Nakasato², T. Tominaga¹
¹Department of Neurosurgery, Tohoku University Graduate School of Medicine
²Department of Neurosurgery, Kohnan Hospital, Sendai, Japan
- SY304 Ictal high and low frequency oscillations in mesial temporal lobe epilepsy**
K. Terada, N. Usui, M. Yamaguchi, K. Baba, F. Nakamura, Y. Inoue
National Epilepsy Center, Shizuoka Institute of Epilepsy and Neurological Disorders, Japan

SL 14:30 – 15:20

Special Lecture

Lecturer : Shintaro Funahashi

(Kyoto University, Japan)

Chair : Tetsuo Kobayashi (Kyoto University, Japan)

- SL Prefrontal cortex and decision-making**
Shintaro Funahashi
Kokoro Research Center, Kyoto University, Kyoto, Japan

PS5 15:40 – 17:00

Poster Session 5: BCI, Somatosensory Function

Chair : Takahiro Yamanoi (Hokkai-Gakuen University, Japan)

- PS501 Somatotopic representation of the tongue in human secondary somatosensory cortex**
Kiwako Sakamoto^{1,2}, Hiroki Nakata^{2,3}, Ryusuke Kakigi²
¹Advanced Research Institute for the Sciences and Humanities (ARISH), Nihon University, Tokyo, Japan
²Department of Integrative Physiology, National Institute for Physiological Sciences, Okazaki, Japan
³Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan
- PS502 Centrifugal modulation of human pain-related cortical activities to a task-relevant noxious stimulation triggering voluntary movement**
Hiroki Nakata^{1,2,3}, Kiwako Sakamoto^{2,3,4}, Ryusuke Kakigi³
¹Graduate School of Arts and Sciences, The University of Tokyo, Tokyo, Japan
²Japan Society for the Promotion of Science, Tokyo, Japan
³Department of Integrative Physiology, National Institute for Physiological Sciences, Okazaki, Japan
⁴Advanced Research Institute for the Sciences and Humanities, Nihon University, Tokyo, Japan
- PS503 Modulated somatosensory cortices by interfering stimulus**
June Sic Kim, Chun Kee Chung
MEG Center, Department of Neurosurgery, Seoul National University Hospital, Republic of Korea

- PS504 **Patients with congenital insensitivity to pain and anhidrosis exhibit no dysfunction in peripheral/central nervous system encoding tactile sensation**
 Y. Shibukawa^{1,2}, T. Tomioka³, N. Matsuura⁴, Y. Tamura⁴, M. Sumitani³, M. Shintani¹, T. Ichinohe^{1,4}, M. Tazaki², N. Haga⁵, Y. Yamada³
¹Laboratory of Brain Research, Tokyo Dental College, Chiba, Japan
²Department of Physiology, Tokyo Dental College, Chiba, Japan
³Department of Anesthesiology, Faculty of Medicine, The University of Tokyo, Tokyo, Japan
⁴Department of Dental Anesthesiology, Tokyo Dental College, Chiba, Japan
⁵Department of Rehabilitation Medicine, Faculty of Medicine, The University of Tokyo, Tokyo, Japan
- PS505 **Somatosensory evoked magnetic fields to evaluate lingual nerve dysfunction**
 S. Koeda DDS, PhD¹, M. Kumagai DDS, PhD², N. Satomi DDS¹, A. Kanno PhD³, N. Nakasato MD, PhD⁴
¹Department of maxillofacial surgery, Tohoku University Graduate School of Dentistry, Japan
²Department of oral and maxillofacial surgery, Tohoku Kosai Hospital, Japan
³Tohoku Ryogo Center, Kohnan Hospital, Japan
⁴Department of Neurosurgery, Kohnan Hospital, Japan
- PS506 **A Bayesian network approach to single-trial-EEG-based BCI**
 Maiko Sakamoto, Toshimasa Yamazaki
 Department of Bioscience and Bioinformatics, Kyusyu Institute of Technology
- PS507 **Classifiers of EEG beta rhythms between right and left wrist-bending hand movements and their imageries**
 T. Sasayama, J. Jung, T. Kobayashi
 Kyoto University, Japan
- PS508 **Spatial filtering of steady-state somatosensory evoked potentials toward the development of brain-machine interface**
 H. Kawaguchi, T. Sasayama, J. Jung, T. Oida, T. Kobayashi
 Kyoto University, Japan
- PS509 **Micro-robot control by use of EEG from frontal lobe at silent reading**
 Takahiro Yamanoi¹, Atsushi Moritaka², Nobuhiro Kakumori¹, Hiroshi Takayanagi³, Toshimasa Yamazaki⁴, Michio Sugeno⁵, Hidetoshi Nonaka²
¹Hokkai-Gakuen University, Japan
²Hokkaido University, Japan
³Information Science Research Center, Japan
⁴Kyusyu Institute of Technology, Japan
⁵Doshisha University, Japan
- PS510 **Estimation of ambiguous states from a single-trial EEG recording**
 Yosuke Noritake, Tetsuto Minami, Shigeki Nakauchi
 Toyohashi University of Technology, Japan

PS6 15:40 – 17:00

Poster Session 6: Auditory Function

Chair : Shinichi Wada (Ootemachi Hospital, Japan)

- PS601 **Mechanisms of bone-conducted ultrasonic (BCU) perception assessed by EEG and MEG measurements**
 S. Nakagawa
 National Institute of Advanced Industrial Science and Technology (AIST), Japan

- PS602 EEG/MEG exploration on human auditory temporal assimilation**
T. Mitsudo¹, Y. Nakajima², G. B. Remijn³, A. Nagaike¹, Y. Goto⁴, S. Tobimatsu¹
¹Department of Clinical Neurophysiology, Neurological Institute, Faculty of Medicine, Kyushu University, Fukuoka, Japan
²Department of Acoustic Design, Faculty of Design, Kyushu University, Shiobaru, Minami-ku, Fukuoka, Japan
³Graduate School of Human and Socio-Environment Studies, Kanazawa University, Kanazawa, Japan
⁴Department of Occupational Therapy, Faculty of Rehabilitation, International University of Health and Welfare, Fukuoka, Japan
- PS603 Residual auditory function detected by auditory steady state fields in patients of minimally conscious state**
Akitake Kanno¹, Nobukazu Nakasato¹, Tetsuaki Kawase², Yoshihide Nagamine¹, Satoru Fujiwara¹
¹Department of Neurosurgery and Ryogo Center, Kohnan Hospital, Sendai, Japan
²Department of Otorhinolaryngology, Head and Neck Surgery, Tohoku University Graduate School of Medicine, Sendai, Japan
- PS604 Automatic discriminative dysfunction of Parkinson's disease assessed by mismatch negativity**
Y. Hoshino¹, H. Tanaka¹, R. Takashima¹, T. Ogawa¹, K. Sakurai¹, Y. Watanabe¹, R. Asai², H. Yabe³, K. Hirata¹
¹Department of Neurology, Dokkyo Medical University, Japan
²Department of Neuropsychiatry, Hirosaki University school of medicine, Japan
³Department of Neuropsychiatry, Fukushima Medical University, Japan
- PS605 Stability for auditory steady-state responses**
I. Shimoyama, K. Nakazawa, Y. Kasagi, K. Yamashita, X. Wei
Section for Human Neurophysiology, Research Center for Frontier Medical Engineering, Chiba University, Japan
- PS606 Association of event-related potentials with working memory in the presence of ambient noises**
K. Kato¹, K. Suzuki², A. Shikoda¹, K. Sugawara³, A. Ishikawa², T. Kobayashi⁴
¹Department of Electronic Engineering, Tohoku Gakuin University, Tagajyo, Japan
²Takenaka Research and Development Institute, Takenaka Corporation, Inzai, Japan
³Department of Information Science, Tohoku Gakuin University, Sendai, Japan
⁴Graduate School of Engineering, Kyoto University, Kyoto, Japan
- PS607 The effect of lavender odor on auditory P300 event-related potentials in patients with temporal lobe epilepsy**
M. Miyajima^{1,2}, K. Hara^{2,3}, H. Iino³, Y. Emori³, A. Matsuda³, K. Ohta^{1,3,4}, T. Maehara⁵, M. Inaji⁵, M. Hara², M. Matsuura², E. Matsushima¹
¹Section of Liaison Psychiatry and Palliative Medicine, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University
²Hara Clinic
³Department of Life Sciences and Bio-informatics, Graduate School of Health Care Sciences, Tokyo Medical and Dental University
⁴Onda-Daini Hospital
⁵Department of Neurosurgery, Tokyo medical and Dental University
- PS608 Mismatch response as a prediction error signal in the forward model**
Megumi Ando^{1,2}, Masato Yumoto², Kenji Itoh², Katsura Masaki², Yutaka Yatomi²
¹Tokyo Medical and Dental University, Tokyo, 113-8519 Japan
²University of Tokyo, Tokyo, 113-8655 Japan

PS7 15:40 – 17:00

Poster Session 7: EEG, Signal Processing

Chair : Keiji Iramina (Kyushu University, Japan)

- PS701 **Spatial brain electric activity changes after Kakurin-qigong**
Y. Minegishi^{1,2}, T. Isotani^{3,4}, M. Yoshimura⁴, K. Yamada⁴, K. Nishida⁴, S. Morita⁴, Y. Saito⁴, S. Irisawa^{4,5}, M. Ichikawa², T. Kinoshita⁴, H. Kihara²
¹Course of Theoretical Nursing, School of Nursing, Yamagata University Faculty of Medicine, Yamagata, Japan
²Department of Physics, Kansai Medical University, Osaka, Japan
³Department of Psychiatry, Jinkokai Koizumi Hospital, Hiroshima, Japan
⁴Department of Neuropsychiatry, Kansai Medical University, Osaka, Japan
⁵Department of Psychiatry, Soshindo Shichiyama Hospital, Osaka, Japan
- PS702 **The effects of fruity floral fragrance bath milk on sleep architecture**
Toru Nakajima¹, Mari Hagihara², Masato Saito², Yoshihiko Koga¹
¹Department of Neuropsychiatry, Kyorin University, School of Medicine, Japan
²Kracie Home Products, Ltd., Japan
- PS703 **Analysis of evoked response and induced response in alpha wave and gamma wave during visual attention**
Takahiro Matsunaga, Yoshinori Katayama, Keiji Iramina
Kyushu University, Japan
- PS704 **Multisensory processing and gamma band activity in the unnaturalness and cross-modal priming**
Yusuke Yokota, Tetsuto Minami, Shigeki Nakauchi
Toyohashi University of Technology, Japan
- PS705 **Suppressive phenomenon in the higher-order functional regions: An EEG study with paired stimulus paradigm**
Mingdi XU, Saki Fujiyama, Keiji Iramina
Graduate School of System Life Sciences, Kyushu University, Japan
- PS706 **Randomization techniques specific for the analysis of ERP data**
T. Koenig, T. Dierks
Department of Psychiatric Neurophysiology, University Hospital of Psychiatry Bern, University of Bern
- PS707 **A case report: The change of EEG findings in general paresis before and after penicillin G treatment**
K. Nishida¹, M. Yoshimura¹, A. Suwa¹, S. Kono¹, Y. Kitaura¹, T. Isotani^{1,2}, T. Kinoshita¹
¹Department of Neuropsychiatry, Kansai Medical University, Osaka, Japan
²Department of Psychiatry, Koizumi Hospital, Hiroshima, Japan
- PS708 **Cortical hypersensitibility during photic stimulation of migraine patients assessed by sLORETA**
R. Takashima, H. Tanaka, Y. Hoshino, T. Ogawa, K. Sakurai, Y. Watanabe, K. Hirata
Department of Neurology, Dokkyo Medical University, Japan
- PS709 **3D cortical dipole imaging of brain electrical activity considering median plane**
J. Hori, T. Koide
Dept. Biocybernetics, Niigata University, Niigata, Japan
- PS710 **GPU accelerated lead field calculation by indirect boundary element method for voxel models**
S. Hamada
Department of Electrical Engineering, Kyoto University, Japan
- PS711 **Magnetoencephalography topographies overlaid with brain surface images**
A. Hashizume^{1,2}, K. Kurisu², K. Iida², K. Kagawa², T. Akimitsu¹
¹Gamma Knife Center, Takanobashi Central Hospital, Japan
²Department of Neurosurgery, Hiroshima University, Japan
- PS712 **Central modulation of autonomic function in uremics studied by spectral analysis of heart rate variability and electroencephalography**
Li-Min Liou^{1,2}, Chiou-Lian Lai³
¹Department of Neurology, Kaohsiung Municipal Hsiaokang Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan
²Department of Neurology, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan
³Department of Neurology and Graduate Institute of Behavioral Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan

PS8 15:40 – 17:00

Poster Session 8: Visual Function

Chair : Yoshiki Kaneoke (National Institute for Physiological Sciences, Japan)

- PS801 **Effect of spatial/temporal cues and different target size on visual spatial attention**
Jiajia Yang, Jinglong Wu
Division of Industrial Innovation Sciences, The Graduate School of Natural Science and Technology, Okayama University, Japan
- PS802 **Cross-modal links in spatial attention: An MEG study**
T. Kida, K. Inui, E. Tanaka, R. Kakigi
Department of Integrative Physiology, National Institute for Physiological Sciences, Japan
- PS803 **Event-related fields in a common fate grouping task**
Jiuk Jung, Tetsuo Kobayashi
Department of Electrical Engineering, Graduate school of Engineering, Kyoto University, Japan
- PS804 **Modulation of extrastriate visual processing by audio-visual attention**
Sunao Iwaki
National Institute of Advanced Industrial Science and Technology (AIST), Japan
- PS805 **Brain activations associated with determination of depth order in transparent motion perception: An MEG study**
Hiroaki Natsukawa, Jiuk Jung, Tetsuo Kobayashi
Dep. of Electrical Engineering, Graduate School of Engineering Kyoto University, Kyoto, Japan
- PS806 **Gamma band activity during gaze perception in schizophrenia**
K. Kirihara¹, T. Araki¹, Y. Kawakubo¹, T. Onitsuka², T. Kobayashi³, K. Kasai¹
¹Department of Neuropsychiatry, Graduate School of Medicine, University of Tokyo, Japan
²Department of Neuropsychiatry, Graduate School of Medical Sciences, Kyushu University, Japan
³Department of Electrical Engineering, Graduate School of Engineering, Kyoto University, Japan
- PS807 **The developmental change in the perception of dynamic facial emotion using ERPs**
Kensaku Miki¹, Shoko Watanabe¹, Mika Teruya¹, Yasuyuki Takeshima¹, Tomokazu Urakawa^{1,2}, Masahiro Hirai^{1,3}, Yukiko Honda¹, Ryusuke Kakigi^{1,2}
¹Department of Integrative Physiology, National Institute for Physiological Sciences, Okazaki, Aichi, Japan
²Department of Physiological Sciences, School of Life Sciences, The Graduate University for Advanced Studies (SOKENDAI), Hayama, Kanagawa, Japan
³Japan Society for the Promotion of Science, Chiyoda-ku, Tokyo, Japan
- PS808 **Non-arbitrary detection of the flicker fusion threshold with visual evoked magnetic field**
N. Harada¹, S. Iwaki¹, M. Tonoike²
¹AIST, Ikeda, Japan
²Chiba University, Chiba, Japan
- PS809 **Steady-state visual evoked potentials for stereoscopic vision**
I. Shimoyama^{1,2}, Y. Kasagi¹, R. Okamoto¹, S. Shirato^{1,3}, Y. Asano^{1,3}, X. Wei⁴, K. Nakazawa^{1,2}, H. Shimada^{1,2}
¹Section for Human Neurophysiology, Research Center for Frontier Medical Engineering, Chiba University
²Graduate School of Medicine, Chiba University
³University Hospital, Chiba University
⁴Graduate School of Advanced Integration Science, Chiba University
- PS810 **Neuromagnetic responses related to the recognition of three-dimensional objects**
K. Tanaka¹, M. Kawakatsu¹, Y. Uchikawa¹, G. Wang²
¹Tokyo Denki University, Japan
²Kagoshima University, Japan

PS811 Transient and steady-state brain responses by dynamic random dot stereograms

Y. Kasagi, I. Shimoyama, R. Okamoto

Section for Human Neurophysiology, Research Center for Frontier Medical Engineering, Chiba University

ES 17:00 – 18:00

Evening Seminar

Lecturer : Hidenao Fukuyama

(Kyoto University, Japan)

Chair : Masafumi Nakagawa (Mitsuwadai General Hospital, Japan)

ES Alzheimer disease: Neuroimaging and treatment

Hidenao Fukuyama, M.D., Ph.D.

Human Brain Research Center, Kyoto University Graduate School of Medicine

Friday, October 2

DL4 9:20 – 9:55

Didactic Lecture 4

Lecturer : Thomas Dierks

(University of Bern, Switzerland)

Chair : Yoshihiko Koga (Kyorin University, Japan)

DL4 Contribution of multimodal neurophysiology in the understanding of the neurobiology of schizophrenia

Thomas Dierks

Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, University of Bern, Bern, Switzerland

DL5 9:55 – 10:30

Didactic Lecture 5

Lecturer : Ikuo Homma

(Showa University, Japan)

Chair : Ryusuke Kakigi (National Institute for Physiological Sciences, Japan)

DL5 Emotion and respiration

Ikuo Homma

Dept. Physiol. Showa Univ. School of Med., Tokyo, Japan

SY4 10:45 – 12:15

SYMPOSIUM 4 : “What can brain-wave tell?” Present and future of Brain Computer Interface (BCI)

Chair : Nobuki Murayama (Kumamoto University, Japan)

Junichi Ushiba (Keio University, Japan)

- SY401 Using brain-computer interfaces for control: A virtual smart home application study**
Günter Edlinger¹, Chris Groenegrass², Clemens Holzner¹, Robert Prückl¹, Christoph Guger¹, Mel Slater²
¹g.tec medical engineering, Guger Technologies OEG, Herbersteinstrasse 60, 8020 Graz, Austria
²Centre de Realitat Virtual (CRV), Universitat Politècnica de Catalunya, Barcelona, Spain
- SY402 Topography of cortical activity in patients with motor disorders**
J. Ushiba^{1,2,3}
¹Department of Biosciences and Informatics, Faculty of Science and Technology, Keio University, Japan
²Department of Rehabilitation Medicine, School of Medicine, Keio University, Japan
³Tsukigase Rehabilitation Center, Keio University, Japan
- SY403 Real-time robotic arm control based on the cerebral oscillatory changes using human electrocorticograms**
M. Hirata¹, T. Yanagisawa^{1,2}, Y. Saitoh¹, T. Goto¹, R. Fukuma^{2,3}, H. Yokoi⁴, Y. Kamitani^{2,3}, T. Yoshimine¹
¹Department of Neurosurgery, Osaka University Medical School, Japan
²ATR Computational Neuroscience Laboratories, Japan
³Nara Institute of Science and Technology, Japan
⁴Department of Mechanical Engineering and Intelligent Systems, The University of Electro-Communications, Japan
- SY404 An examination of cursor control using synchronous-type BCI with band power of single-channel EEG**
T. Igasaki, M. Yahata, K. Fujiwara, N. Murayama
Kumamoto Univ., Japan