

ICCN2010 Scientific Program (As of February 19, 2010)

Named Lectures

NL1 (A1) Adrian lecture

Mauguiere F (Lyon) Functions of insula

Chairperson: Tanaka T (Asahikawa)

NL2 (A2) Berger lecture

Luders HO (Cleveland) Epilepsy and cortical functions

Chairperson: Kato M (Fukuoka)

NL3 (A3) Kugelberg lecture

Rossini PM (Rome) Neuronal plasticity in human

Chairperson: Hashimoto I (Tokyo)

ICCN2010 Named Lectures

ICCN2010-NL1 Buchthal Lecture

Lehmann-Horn F (Ulm) Myotonia as channelopathies

Chairperson: Arimura K (Kagoshima)

ICCN2010-NL2 Halliday Lecture

Naatanen R (Helsinki) Clinical use of mismatch
negativity

Chairperson: Koga Y (Mitaka)

ICCN2010-NL3 Narabayashi Lecture

Graybiel A (Cambridge, Mass.) The basal ganglia and mind

Chairperson: Kaji R (Tokushima)

Special Lecture for Opening Ceremony

Lucking CH (Freiburg) and Nuwer MR (Los Angeles) History of IFCN

Chairperson: Shibasaki H (Kyoto)

**Memorial Lectures (Joint Session of ICCN2010 and the 40th Annual Meeting of
Japanese Society of Clinical Neurophysiology (JSCN40))**

(Monday, November 1, 2010, 17:30-18:40, before Closing Ceremony)

Chair: Yanagisawa N (Tokyo)

Shimazono Lecture

Hashimoto I (Tokyo)

Cortical representation of attention focus:

short-term plasticity in the human somatosensory cortex

Tokizane Lecture

Shibasaki H (Kyoto)

Cortical activities associated with voluntary and involuntary
movements

Special Lectures

SL1 (B1) Ziemann U (Frankfurt)

Neuropharmacology of intracortical inhibition

Chairperson: Hanajima R (Tokyo)

SL2 (C1) Tobimatsu S (Fukuoka)

Physiology of visual cortex

Chairperson: Kuroiwa Y (Yokohama)

SL3 (D1) Guerit JM (Brussels)

Use of evoked potentials for intraoperative monitoring

Chairperson: Cibils D (Montevideo)

SL4 (E1) Valeriani M (Rome)

Somatosensory evoked potentials

Chairperson: Ozaki I (Aomori)

SL5 (F1) Stam CJ (Amsterdam)

Cortico-cortical functional coupling: what can we learn
from graph theory?

Chairperson: Hallett M (Bethesda)

- SL6 (G1) Valls-Sole J (Barcelona)
Electrophysiological studies of cranial nerve functions
Chairperson: Kimura J (Iowa City)
- SL7 (H1) Lauritzen M (Copenhagen)
Hemodynamic vs. electrophysiologic activities of brain
Chairperson: Fukuyama H (Kyoto)
- SL8 (B2) Rothwell JC (London, UK)
Future of TMS
Chairperson: Ugawa Y (Fukushima)
- SL9 (C2) Stalberg EV (Uppsala)
EMG study of myopathy
Chairperson: Sonoo M (Tokyo)
- SL10 (D2) Garcia-Larrea L (Lyon)
Cortical pain processing
Chairperson: Kakigi R (Okazaki)
- SL11 (E2) Hallett M (Bethesda)
Physiology of psychogenic movement disorders
Chairperson: Shibasaki H (Kyoto)
- SL12 (F2) Mills KR (London, UK)
Generation of abnormal spontaneous electrical activity in
muscle
Chairperson: Komori T (Saitama)
- SL13 (G2) Burke D (Sydney)
Action potentials and impulse conduction in sensory and
motor axons
Chairperson: Kuwabara S (Chiba)

- SL14 (H2) Baehr M (Goettingen)
Neurophysiological correlates of axonal and neuronal
degeneration in experimental optic neuritis
Chairperson: Tobimatsu S (Fukuoka)
- SL 15 (B3) Deuschl G (Kiel)
Clinical physiology of tremor
Chairperson: Elble RJ (Springfield, Ill.)
- SL16 (C3) Sanders DB (Durham)
Physiology of neuromuscular junction
Chairperson: Oh SJ (Birmingham, Ala.)
- SL17 (D3) Bostock H (London, UK)
Threshold electrotonus and related techniques
Chairperson: Burke D (Sydney)
- SL18 (E3) Kimura J (Iowa City)
Recent advance in F wave
Chairperson: Yanagisawa N (Tokyo)
- SL19 (G3) Daube JR (Rochester, Minn.)
Pitfalls of needle electromyography: a case based
discussion
Chairperson: Kohara N (Kobe)
- SL20 (B4) Romani GL (Chieti)
Multimodal neuroimaging
Chairperson: Sadato N (Okazaki)
- SL21 (D4) Stegeman DF (Nijmegen)
New insights into high density surface EMG
Chairperson: Kimura A (Izu)

SL22 (E4) Hari R (Espoo)

Brains in social interaction

Chairperson: Nagamine T (Sapporo)

SL23 (F4) Brown P (London, UK)

Significance of oscillations in the basal ganglia circuit

Chairperson: Hashimoto T (Matsumoto)

SL24 (G4) Eisen A (Vancouver)

Electrophysiological diagnosis of ALS

Chairperson: Dengler R (Hannover)

Award Lectures

M.A.B. Brazier Young Investigator Award Lecture (F3)

W.A. Cobb Young Investigator Award Lecture (F3)

Symposium

S1 (A1) (120 min) Sleep monitoring

Chairpersons: Chokroverty S (Edison, N.J.), Kohyama J (Tokyo)

1. Tachibana N (Osaka) Historical overview of sleep scoring – how and why it has been modified
2. Miyamoto T, Miyamoto M (Mibu) Clinical and polysomnographic features of idiopathic REM sleep behavior disorder
3. Nakajima T (Mitaka) Abnormal awaking state detected by activity monitoring
4. Chokroverty S (Edison, N.J.) Rhythm of the sleeping brain
5. Svanborg E (Stockholm) Neurophysiological testing in obstructive sleep apnea syndrome
6. Kohyama J (Tokyo) Sleep disorders in children

S2 (B1) (120 min) Working memory and social brain

Chairpersons: Stephane M (Minneapolis), Osaka M (Osaka)

1. Osaka M (Osaka) Neural bases of working memory
2. Clark CR (Adelaide) Working memory in post-traumatic stress disorder
3. Stephane M (Minneapolis) Working memory in schizophrenia
4. Osaka N (Kyoto) Cognitive aspects of social brain
5. Sadato N (Okazaki) Social brain by fMRI study

S3 (C1) (120 min) Axonal conduction and threshold tracking

Chairpersons: Burke D (Sydney), Kuwabara S (Chiba)

1. Bostock H (London, UK) Clinical application of threshold electrotonus
2. Krarup C (Copenhagen) Axonal conduction in degenerating and regenerating nerve fibers
3. Kuwabara S (Chiba) Diabetic neuropathy
4. Kiernan M (Sydney) Toxic and metabolic neuropathy
5. Nodera H (Tokushima) Conduction block and ALS

S4 (D1) (120 min) Intracortical inhibition

Chairpersons: Di Lazzaro V (Rome), Hanajima R (Tokyo)

1. Sohn YH (Seoul) Surround inhibition
2. Hanajima R (Tokyo) Mechanism of intracortical inhibition
3. Chen R (Toronto) Intracortical inhibition in movement disorders
4. Di Lazzaro V (Rome) Transcranial brain stimulation and cortical plasticity

S5 (E1) (120 min) High frequency oscillations (HFOs)

Chairpersons: Restuccia D (Rome), Hashimoto I (Tokyo)

1. Hashimoto I (Tokyo) Physiological basis of HFOs
2. Restuccia D (Rome) Pharmacological modulation of HFOs
3. Hamada M (Tokyo) HFOs in amyotrophic lateral sclerosis
4. Alegre M (Pamplona) Cortical myoclonus

S6 (F1) (120 min) Small fiber physiology

Chairpersons: Cole J (Poole, UK), Iwase S (Nagoya)

1. Cole J (Poole, UK) Physiology of low threshold unmyelinated sensory fibres
2. Inui K (Okazaki) Physiology of nociceptive fibers
3. Schmelz M (Heidelberg) Small fiber neuropathy and pain
4. Iwase S (Nagoya) Sympathetic nerve conduction

S7 (G1) (120 min) Evaluation of radiculopathy and myelopathy

Chairpersons: Nobrega J (Sao Paulo), Tani T (Kochi)

1. Kuruoglu R (Ankara) Evaluation of radiculopathy
2. Lo YL (Singapore) Cervical spondylosis
3. Tani T (Kochi) Spinal cord evoked potentials in cervical compression myelopathies with conduction block
4. Nobrega J (Sao Paulo) F wave

S8 (H1) (120 min) Brain computer interface

Chairpersons: Hallett M (Bethesda), Babiloni F (Rome)

1. Hallett M (Bethesda), Matsushashi M (Kyoto) Intention to move
2. Cichocki A (Wako) Current trends in noninvasive brain computer interfaces
3. Ushiba J (Tokyo) Instrumentation
4. Yoshimine T (Osaka) Decoding of electrocorticogram
5. Babiloni F (Rome) Brain computer interfaces for communication and control of robotic devices and applications

S9 (A1) (150 min) Physiological studies of cognitive functions

Chairpersons: Polich J (San Diego), Farina J (Porto Alegre)

1. Polich J (San Diego) Overview
2. Tomberg C (Brussels) Factors influencing ERP
3. Kuroiwa Y (Yokohama) Cognitive VEP
4. Olichney JM (Davis, Calif.) ERP studies of memory disorders
5. Yamaguchi S (Izumo) Neurological disorders
6. Tachibana H (Nishinomiya) Movement disorders
7. Tucker DM (Eugene, Oreg.) Dense array EEG and mechanisms of epilepsy

S10 (B1) (150 min) Clinical application of MEG: Epilepsy and brain mapping

Chairpersons: Papanicolaou A (Houston), Nakasato N (Sendai)

1. Nakasato N (Sendai) Practical reasons for applying MEG clinically
2. Bast T (Kehl-Kork) Combined EEG and MEG analysis for epilepsy
3. Papanicolaou A (Houston) Presurgical language lateralization and mapping
4. Birbaumer N (Tubingen) Clinical application of neuromagnetic brain-computer interface
5. Roberts TP (Philadelphia) Language impairment in autism spectrum disorders
6. Otsubo H (Toronto) MEG and intracranial video EEG in pediatric neocortical epilepsy

S11 (C1) (150 min) Clinical application of rTMS

Chairpersons: Rossi S (Siena), Wang Y (Beijing)

1. Rossi S (Siena) Safety issue of rTMS
2. Bestmann S (London, UK) Combined TMS and fMRI
3. Saitoh Y (Osaka) Pain
4. Kito S (Mitaka) Neuroanatomical correlates of therapeutic efficacy of transcranial magnetic stimulation (TMS) in depression
5. Wang Y (Beijing) Epilepsy
6. Enomoto H (Fukushima) Drug effects in normal and basal ganglia disorders

S12 (D1) (150 min) Physiological abnormalities in psychiatric diseases

Chairpersons: Salisbury DF (Boston), Niwa S (Fukushima)

1. Matsuura M (Tokyo) Introduction
2. Salisbury DF (Boston) ERP indices of static and progressive brain abnormalities in schizophrenia
3. Niwa S (Fukushima) ERP in schizophrenia and developing disorders
4. Stephane M (Minneapolis) Working memory in schizophrenia
5. Michie PT (Callaghan) Mismatch negativity: a physiological index of structural and functional brain abnormalities in schizophrenia
6. Takizawa R (Tokyo) Near-infrared spectroscopy (NIRS) in psychiatric disorders
7. Araki T, Kasai K (Tokyo) ERP and neuroimaging study in schizophrenia

S13 (E1) (150 min) Deep brain recording and stimulation

Chairpersons: Katayama Y (Tokyo), Rektor I (Brno)

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|----|-------------------------|-------------------------------------|
| 1. | Hashimoto T (Matsumoto) | Physiological findings |
| 2. | Rektor I (Brno) | Basal ganglia recording in epilepsy |
| 3. | Fraix V (Grenoble) | Parkinson's disease |
| 4. | Zhuang P (Beijing) | Dystonia |
| 5. | Katayama Y (Tokyo) | Chronic pain |
| 6. | Chang JW (Seoul) | Mental disorders |

S14 (F1) (150 min) Development and brain functions

Chairpersons: Vanhatalo S (Helsinki), Ozaki H (Mito)

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|----|-------------------------|---|
| 1. | Vanhatalo S (Helsinki) | Neonatal EEG beyond the graphoelements |
| 2. | Pihko E (Helsinki) | Neonatal MEG |
| 3. | Martinovic Z (Belgrade) | EEG evolution in children with epilepsy |
| 4. | Inagaki M (Kodaira) | Magnocellular VEP in dyslexics |
| 5. | Chan AS (Hong Kong) | Autistic children |
| 6. | Ozaki H (Mito) | Neurophysiological contribution to evidence based education |

S15 (A2) (120 min) Auditory system

Chairpersons: Starr A (Irvine), Ozaki I (Aomori)

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|----|---------------------|--|
| 1. | Starr A (Irvine) | Physiology of auditory nerve |
| 2. | Okamoto H (Munster) | Auditory evoked magnetic field |
| 3. | Ozaki I (Aomori) | Human tonotopic maps and their rapid task-related changes studied by MEG |
| 4. | Fischer C (Lyon) | Cognitive auditory evoked potentials in uncommunicative patients |
| 5. | Satoh M (Sendai) | Music and the brain: cognition and emotion |

S16 (B2) (120 min) Event-related desynchronization/synchronization (ERD/ERS)

Chairpersons: Derambure P (Lille), Hirata M (Osaka)

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| 1. | Neuper C (Graz) | New concepts of ERD/ERS for the study of mental processes |
| 2. | Hirata M (Osaka) | Language study based on the cerebral oscillatory changes using beam forming magnetometry |
| 3. | Wheaton L (Atlanta) | Praxis movement |
| 4. | Derambure P (Lille) | Clinical application |

S17 (C2) (120 min) Sensorimotor integration

Chairpersons: Tecchio F (Rome), Mima T (Kyoto)

1. Ohki Y (Mitaka) Basic physiology
2. Tecchio F (Rome) Local cortical and cortico-spinal neural synchrony for sensorimotor control
3. Quartarone A (Messina) Paired associative stimulation
4. Kida T (Okazaki) EEG/MEG study
5. Mima T (Kyoto) Combined study

S18 (D2) (120 min) Visual system

Chairpersons: Holder GE (London, UK), Tobimatsu S (Fukuoka)

1. Holder GE (London, UK) Clinical application of ERG
2. Miyake Y (Nagoya) Electrodiagnosis of retinal diseases with normal fundus
3. Tobimatsu S (Fukuoka) Modality-specific VEP
4. Hirai M (Kingston, Ontario) Neural response to perception of biological motion
5. Puce A (Bloomington, Ind.) Neural measures of non-verbal communication

S19 (E2) (120 min) Use of TMS for treatment

(Sponsored by Magstim)

Chairpersons: Mills KR (London, UK), Tsuji S (Kitakyushu)

1. Mills KR (London, UK) Overview
2. Terao Y (Tokyo) Implications of hemispheric lateralization in motor recovery
3. Ugawa Y (Fukushima) Parkinson disease
4. Pascual-Leone A (Boston) Neurological diseases
5. Paulus W (Gottingen) Transcranial electrical stimulation techniques

S20 (F2) (120 min) Pathophysiology of essential tremor

Chairpersons: Vaillancourt DE (Chicago), Katayama Y (Tokyo)

1. Volkmann J (Kiel) Lessons deep brain stimulation told us about the pathophysiology of essential tremor
2. Katayama Y (Tokyo) Role of thalamus
3. Louis ED (New York) Neuropathology
4. van Rootselaar AF (Amsterdam) Cortical tremor
5. Vaillancourt DE (Chicago) Dynamics of tremor in Parkinson's disease

S21 (G2) (120 min) Infralow cortical activities

Chairpersons: Fabricius M (Copenhagen), Ikeda A (Kyoto)

1. Fabricius M (Copenhagen) Cortical spreading depolarizations
2. Rodin E (Salt Lake City) Intracranial infralow EEG
3. Ikeda A (Kyoto) Epilepsy
4. Vanhatalo S (Helsinki) Slow events in child's brain

S22 (H2) (120 min) EEG/MEG and epilepsy in children

Chairpersons: Pihko E (Helsinki), Kaga M (Kodaira)

1. Negoro T (Okazaki) Development of EEG and age dependent epilepsy
2. Kubota M (Tokyo) Use of MEG in the study of development
3. Pihko E (Helsinki) Neonatal MEG
4. Ochi A, Otsubo H (Toronto) MEG and scalp EEG in children
5. Kaga M (Kodaira) Auditory perception in Landau-Kleffner syndrome

S23 (A2) (150 min) Intraoperative and ICU monitoring

(Sponsored by CareFusion Japan)

Chairpersons: Nuwer MR (Los Angeles), Cibils D (Montevideo)

1. Cibils D (Montevideo) Overview
2. Guerit JM (Brussels) Cortical functions
3. Fabricius M (Copenhagen) Long term electrocorticography in acute brain injury
4. Fischer C (Lyon) Auditory event-related potentials in comatose patients
5. Machado C (Havana) Diagnosis of brain death and other disorders of consciousness
6. Yamamoto T (Tokyo) Neurosurgical monitoring
7. Yingling CD (San Francisco) Mapping corticospinal tract

S24 (B2) (150 min) Use of near-infrared spectroscopy (NIRS)

Chairpersons: Mackert BM (Berlin), Koizumi H (Saitama)

1. Koizumi H (Saitama) Principle of NIRS
2. Hoshi Y (Tokyo) Basic study of NIRS
3. Watanabe E (Tochigi) Clinical application
4. Fukuda M (Maebashi) Psychiatric disorders
5. Fallgatter AJ (Wurzburg) Attention deficit/hyperactivity disorder
6. Yamaguchi M (Tokyo) NIRS study in infants
7. Mackert BM (Berlin) Combined DC-MEG and NIRS to study simultaneously neuronal and vascular brain functions

S25 (C2) (150 min) Use of botulinum toxin for neurological disorders

(Sponsored by GlaxoSmithKline)

Chairpersons: Rogers J (Singapore), Kaji R (Tokushima)

1. Rogers J (Singapore) Beyond the neuromuscular junction and implication for clinical application
2. Mezaki T (Tsu) Dystonia
3. Altenmuller E (Hannover) Musician's cramp
4. Kaji R (Tokushima) Spasticity
5. Rosales RL (Manila) Spasticity in stroke and botulinum toxin therapy: Whom and when to inject?
6. Nezu A (Yokohama) Cerebral palsy and botulinum toxin
7. Bouhassira D (Boulogne-Billancourt) Pain and headache

S26 (D2) (150 min) Sleep disorders

Chairpersons: Montplaisir J (Montreal), Hirata K (Mibu)

1. Hirata K (Mibu) Overview
2. Bassetti CL (Lugano/Zurich) Sleep.wake disorders and focal brain damage
3. Dyken ME, Yamada T (Iowa City) The clinical diagnostic pitfalls of polysomnography
4. Inoue Y (Tokyo) Clinical application of PSG
5. Montplaisir J (Montreal) REM sleep behavior disorders
6. de Weerd AW (Hague) Periodic limb movement during sleep

S27 (E2) (150 min) Physiology of polyneuropathies

Chairpersons: Reisin R (Buenos Aires), de Carvalho MA (Lisbon)

1. Reisin R (Buenos Aires) Introduction
2. Goh K-J (Kuala Lumpur) Guillain-Barré syndrome: clinical and electrophysiological spectrum
3. Franssen H (Utrecht) Demyelinating neuropathies
4. Misawa S (Chiba) Diabetic neuropathy
5. Huang CC (Taipei) Toxic neuropathies
6. de Carvalho MA (Lisbon) Familial amyloid polyneuropathy
7. Lin CS (Sydney) Porphyric neuropathy: insane in the membrane

S28 (F2) (150 min) Mapping and monitoring for eloquent area during neurosurgery

Chairpersons: Sala F (Verona), Tamaki T (Wakayama)

1. Tamaki T (Wakayama) History of the development of intraoperative monitoring of neural tissue
2. Sala F (Verona) MEP monitoring and subcortical mapping in brain tumor surgery
3. Fukaya C (Tokyo) D-wave monitoring in brain tumor surgery
4. Szelenyi A (Frankfurt) MEP monitoring in vascular neurosurgery
5. Shinomiya K and Kawabata S (Tokyo) Multimodal intraoperative monitoring during spine surgery
6. Mikuni N (Kyoto) Integrated functional neuronavigation during neurosurgery

S29 (A3) (120 min) Mismatch negativity (MMN)

Chairpersons: Naatanen R (Helsinki), Yabe H (Fukushima)

1. Naatanen R (Helsinki) Principle
2. Yabe H (Fukushima) Basic study
3. Escera C (Barcelona) Ultrafast mechanisms of auditory novelty detection in the human brain
4. Kirino E (Shizuoka) Simultaneous EEG-fMRI recording of MMN in schizophrenia
5. Michie PT (Callaghan) MMN in schizophrenia: relationship to functional status, generator sources and grey matter loss

S30 (B3) (120 min) High resolution EEG analysis

Chairpersons: Stam CJ (Amsterdam), Koga Y (Mitaka)

1. Koga Y (Mitaka) Overview
2. Pascual-Marqui RD (Zurich) Functional localization and cortical connectivity: discovering the parts and their interactions using exact LORETA
3. Stam CJ (Amsterdam) Analysis methods: new approaches to the characterization of functional brain networks
4. Babiloni C (Rome) Mechanisms of cortical neural synchronization in humans as revealed by advanced EEG techniques
5. Harmony T (Mexico City) Narrow frequency EEG source analysis in the first year of life

S31 (C3) (120 min) Somatosensory system

Chairpersons: Yamada T (Iowa City), Tinazzi M (Verona)

1. Sonoo M (Tokyo) Generator mechanism of SEP
2. Yamada T (Iowa City) Effect of sleep
3. Hoshiyama M (Nagoya) Two point discrimination
4. Valeriani M (Rome) Clinical use of SEP
5. Tinazzi M (Verona) Sensory functions in movement disorders

S32 (E3) (120 min) Functional recovery of stroke patients

Chairpersons: Cohen LG (Bethesda), Miyai I (Osaka)

1. Cohen LG (Bethesda) Cortical physiology and rehabilitation in stroke patients
2. Miyai I (Osaka) Neural mechanisms underlying functional recovery after stroke
3. Hummel FC (Hamburg) Mechanism of stroke recovery
4. Fujiwara T (Tokyo) Effect of hybrid assistive neuromuscular dynamic electrical stimulation (HANDS) for recovery after stroke

S33 (G3) (120 min) Psychophysiology of attention-deficit/hyperactivity disorders (AD/HD)

Chairpersons: Fallgatter AJ (Wurzburg), Yasuhara A (Hirakata)

1. Yasuhara A (Hirakata) Evaluation of attention in AD/HD by the continuous performance test
5. Yamashiro D, Goto Y, Kaga Y, Aihara M (Kofu) Psychophysiological evidences of poor inhibition in AD/HD
3. Tripp G (Okinawa) AD/HD and reward system
4. Fallgatter AJ (Wurzburg) ERP and NIRS in AD/HD

S34 (H3) (120 min) Neurophysiology of rehabilitation

Chairpersons: Robinson LR (Seattle), Kimura A (Izu)

1. Li LSW (Hong Kong) Current status of neurorehabilitation
2. Kimura A (Izu) Motor recovery from hemispheric stroke
3. Ikoma K (Sapporo) Use of TMS for rehabilitation
4. Takahashi H (Mitaka) Spasticity reduction by inhibitive orthosis
5. Robinson LR (Seattle) Carpal tunnel syndrome

S35 (A3) (150min) Fasciculation and motor neuron disease

Chairpersons: Fuglsang-Frederiksen A (Aarhus), Sonoo M (Tokyo)

1. Eisen A (Vancouver) Clinical aspect
2. de Carvalho MA (Lisbon) Physiology of ALS
3. Dengler R (Hannover) Electrophysiological diagnosis of ALS
4. Sonoo M (Tokyo) EMG in ALS
5. Kleine BU, Stegeman DF (Nijmegen) Mechanisms of fasciculation
6. Fawcett PRW (Newcastle upon Tyne) Macro EMG in neurogenic disorders
7. Fuglsang-Frederiksen A (Aarhus) Sensory nerve in ALS

S36 (B3) (150 min) Recent advance in magnetoencephalography

Chairpersons: Romani GL (Chieti), Nagamine T (Sapporo)

1. Romani GL (Chieti) Overview
2. Ahonen A (Helsinki) Techniques and analysis methods
3. Nagamine T (Sapporo) Correlation with invasive recording
4. Kaneoke Y (Okazaki) Motion perception
5. Hirata M (Osaka) Event-related desynchronization and synchronization
6. Okada Y (Albuquerque) Brain activities during development

S37 (C3) (150 min) Update of TMS

Chairpersons: Ziemann U (Frankfurt), Nakashima K (Yonago)

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|----|-----------------------|----------------------------------|
| 1. | Nakashima K (Yonago) | Introduction |
| 2. | Ziemann U (Frankfurt) | Pharmacology and TMS |
| 3. | Huang Y-Z (Taipei) | Theta burst stimulation |
| 4. | Magistris MR (Geneva) | The triple stimulation technique |
| 5. | Ugawa Y (Fukushima) | Quadripulse stimulation |
| 6. | Cincotta M (Florence) | Mirror movement |
| 7. | Murase N (Tokushima) | Treatment of focal hand dystonia |

S38 (E3) (150 min) Face perception

Chairpersons: Puce A (Bloomington, Ind.), Kakigi R (Okazaki)

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| 1. | Puce A (Bloomington, Ind.) | Overview |
| 2. | Kakigi R (Okazaki) | EEG/MEG |
| 3. | Iidaka T (Nagoya) | fMRI |
| 4. | Gunji A (Kodaira) | Facial cognition in autistic children |
| 5. | Nakato E (Tokyo) | Familiar vs. unfamiliar faces to infants studied by NIRS |
| 6. | Eifuku S (Toyama) | Neural correlates of face recognition and memory in monkeys |
| 7. | Rossion B (Louvain) | The neurophysiology of acquired prosopagnosia |

S39 (F3) (150 min) Physiological studies of language

Chairpersons: Salmelin R (Espoo), Sakai K (Tokyo)

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| 1. | Salmelin R (Espoo) | Neurophysiology of language: the MEG approach |
| 2. | Sakai K (Tokyo) | fMRI and MEG |
| 3. | Fujimaki N (Akashi) | Linguistic brain functions and contextual effects measured with MEG and fMRI |
| 4. | Papanicolaou A (Houston) | Presurgical language lateralization |
| 5. | Kamada K (Tokyo) | Intraoperative monitoring |
| 6. | Usui K (Shizuoka) | Basal temporal language area |

S40 (A4) (120 min) Rapid eye movements and sleep: EEG and fMRI study

Chairpersons: Bodizs R (Budapest), Miyauchi S (Kobe)

1. Bodizs R (Budapest) Emergence of REM sleep features during wakefulness-sleep transition
2. Abe T (Tokyo) Gamma band EEG activities before and after REM
3. Ogawa K (Saitama) Event-related potential accompanying REM
4. Miyauchi S (Kobe) fMRI activation time-locked to REM during REM sleep
5. Bodis-Wollner I (New York) Perisaccadic modulation of brain activity: EEG and fMRI

S41 (D4) (120 min) Gait disturbance

Chairpersons: Lamontagne A (Montreal), Takakusaki K (Asahikawa)

1. Takakusaki K (Asahikawa) Basic physiology of locomotion
2. Marchand-Pauvert V (Paris) Spinal reflex in gait
3. Hanakawa T (Kodaira) Mechanism of gait control
4. Miyai I (Osaka) Functional NIRS study
5. Lamontagne A (Montreal) Post-stroke gait disturbance: innovative rehabilitation approaches

S42 (E4) (120 min) Digital EEG and EEG standards

Chairpersons: Nuwer MR (Los Angeles), Guerit J-M (Brussels)

1. Nuwer MR (Los Angeles) Digital EEG and EEG standards: overview
2. Nakamura M (Saga) Automatic EEG interpretation
3. Kobayashi K, Yoshinaga H (Okayama) Epilepsy in children
4. Guerit J-M (Brussels) EEG standards for ICU monitoring

S43 (F4) (120 min) Vestibular physiology and postural control

Chairpersons: Colebatch JG (Sydney), Murofushi T (Tokyo)

1. Murofushi T (Tokyo) Neurophysiology of vestibular function
2. Colebatch JG (Sydney) Ocular vestibular evoked myogenic potentials
3. Kim Ji Soo (Seoul) Central mechanisms of vestibular function
4. Fujiwara K (Kanazawa) Postural control and EEG during platform perturbation

S44 (G4) (120 min) Channel disorders

Chairpersons: Lehmann-Horn F (Ulm), Arimura K (Kagoshima)

1. Kiernan M (Sydney) Methods of physiological studies
2. Kuwabara S (Chiba) Peripheral nerves
3. Maselli RA (Davis, Cal.) Neuromuscular junction
4. Arimura K (Kagoshima) Muscles
5. Lehmann-Horn F (Ulm) Myotonia

S45 (H4) (120 min) Physiological evaluation of myopathies

Chairpersons: Zalewska E (Warsaw), Imai T (Sapporo)

1. Zalewska E (Warsaw) Motor unit potentials
2. Imai T (Sapporo) Measurement of excitation-contraction coupling time of masseter in mandibular movement
3. Ciafaloni E (Rochester, N.Y.) Channelopathy
4. Jurkat-Rott K (Ulm) Periodic paralysis

S46 (A4) (150 min) Neuroimaging and electrophysiology

Chairpersons: Lauritzen M (Copenhagen), Fukuyama H (Kyoto)

1. Fukuyama H (Kyoto) Neurovascular coupling
2. Lauritzen M (Copenhagen) Neurometabolic coupling
3. Magistretti PJ (Lausanne) Role of neuron-glia metabolic coupling in functional brain imaging
4. Le Bihan D (Paris) Water, diffusion and membranes: What to expect for neuroimaging?
5. Nagata K (Akita) Stroke and dementia
6. Ushida T (Nagakute) Neuroimaging for pain

S47 (B4) (150 min) Epilepsy

(Sponsored by Otsuka Pharmaceutical/UCB Japan)

Chairpersons: Ebersole JS (Chicago), Chauvel P (Marseille)

1. Sakamoto AC (Ribeirao Preto) Diagnosis and treatment of epilepsies
2. Lee BI (Seoul) Neuroimaging of epilepsy
3. Kwan P (Hong Kong) Drug treatment of epilepsy
4. Ebersole JS (Chicago) Source analysis of scalp EEG
5. Chauvel P (Marseille) Intracerebral EEG
6. Ikeda A (Kyoto) Broad band EEG for source detection
7. Inoue Y (Shizuoka) Symptomatology and long-term postoperative outcome of temporal lobe epilepsy

S48 (C4) (150 min) Functional and effective connectivity

Chairpersons: Stam CJ (Amsterdam), Honda M (Kodaira)

1. Honda M (Kodaira) Sensorimotor integration
2. Matsumoto R (Kyoto) Corticocortical evoked potentials
3. Stam CJ (Amsterdam) The breakdown of functional connectivity in neuropsychiatric disease
4. Ilmoniemi RJ (Helsinki) TMS and EEG
5. Mochizuki H (Fukushima) TMS and NIRS
6. Mima T (Kyoto) TMS and fMRI

S49 (D4) (150 min) Entrapment neuropathies

Chairpersons: Medici M (Montevideo), Tani T (Kochi)

1. Medici M (Montevideo) Overview
2. Tani T (Kochi) Experimental focal compression of the median nerve at the wrist
3. Wilder-Smith EP (Singapore) Carpal tunnel syndrome - diagnostic and pathophysiologic considerations
4. Veerendrakumar M (Bangalore) Ulnar nerve palsy
5. Campero M (Santiago) Sensory nerve conduction
6. Us O (Istanbul) Plantar and sural nerve conduction

S50 (E4) (150 min) Physiology of pain and itch

Chairpersons: Treede R-D (Mainz), Kakigi R (Okazaki)

1. Treede R-D (Mainz) Physiological study of pain
2. Kakigi R (Okazaki) New stimulation method for pain
3. Garcia-Larrea L (Lyon) Cortical mechanism of pain perception
4. Valeriani M (Rome) Generators of laser-evoked potentials
5. Schnitzler A (Dusseldorf) Pain processing and cortical oscillations
6. Mochizuki H (Mannheim) Itch perception

S51 (F4) (150 min) Basal ganglia circuitry

Chairpersons: Vaillancourt DE (Chicago), Brown P (London, UK)

1. Hashimoto T (Matsumoto) Deep brain recording from basal ganglia
2. Nambu A (Okazaki) Cortical inputs to the subthalamic nucleus
3. Fraix V (Grenoble) Findings in Parkinson's disease
4. Brown P (London, UK) Physiological significance of oscillations
5. Vaillancourt DE (Chicago) Long-term effects of deep brain stimulation for Parkinson's disease
6. Sawamoto N (Kyoto) Cognitive functions

Workshop

WS1 (G1-1) (75 min) Clinical use of motion logger

Chairpersons: Meadows R (Surrey, UK), Nakajima T (Mitaka)

1. Meadows R (Surrey, UK) Actigraphic analysis techniques
2. Enomoto M (Kodaira) Appropriate method of activity measurement
3. Nakajima T (Mitaka) The reproducibility of actigraph
4. de Weerd AW (Hague) Use for polysomnography

WS2 (G1-2) (75 min) Spinal reflex

Chairpersons: Nielsen JB (Copenhagen), Masakado Y (Isehara)

1. Nielsen JB (Copenhagen) Overview
2. Marchand-Pauvert V (Paris) Spinal interneurons
3. Masakado Y (Isehara) H reflex in rehabilitation
4. Morita H (Matsumoto) Parkinson disease

WS3 (H1-1) (75 min) Neurophysiology of urination and pelvic floor muscles

Chairpersons: Ertekin C (Izmir), Hattori T (Chiba)

1. Sakakibara R (Chiba) Sphincter physiology
2. Tello A (Mexico City) Neurophysiology of pelvic floor
3. Vodusek DB (Ljubljana) Clinical study
4. Ertekin C (Izmir) Human cremaster muscle and cremasteric reflexes

WS4 (H1-2) (75 min) Restoration of injured peripheral nerve function

Chairpersons: Xavier de Castro JH (Porto Alegre), Chu N-S (Taipei)

1. Zhu Y (Shanghai) Use of physiological test
2. Kwon HK (Seoul) Electrodiagnosis as a prognostic factor
3. Montero J (Barcelona) Facial nerve
4. Chu N-S (Taipei) Outcome of toe-to-finger graft

WS5 (G2-1) (75 min) Drug effect on EEG

Chairpersons: Saletu B (Vienna), Konoshita T (Osaka)

1. Saletu B, Anderer P, Saletu-Zyhlarz G (Vienna) Drug effects on EEG topography and tomography
2. Kinoshita T (Osaka) Clinical application
3. Strik W (Bern) Pathophysiology of thought disorders and Hallucinations
4. Tanaka H (Mibu) Clinical application in neurology

WS6 (G2-2) (75 min) Physiology of neuromuscular junction

Chairpersons: Sanders DB (Durham), Witoonpanich R (Bangkok)

1. Sanders DB (Durham) Overview
2. Witoonpanich R (Bangkok) Myasthenia gravis
3. Oh SJ (Birmingham, Ala.) Lambert-Eaton syndrome
4. Maselli RA (Davis, Cal.) Electrophysiology of congenital myasthenic syndromes

WS7 (H2-1) (75 min) Ocular movement

Chairpersons: Bodis-Wollner I (New York), Terao Y (Tokyo)

1. Bodis-Wollner I (New York) Saccade-related cortical activity
2. Romani GL (Chieti) Activation of human oculomotor centers during planning of eye movements
3. Terao Y (Tokyo) Saccades in neurological disorders
4. Yugeta A (Tokyo) DBS and saccade performance

WS8 (H2-2) (75 min) Respiratory physiology

Chairpersons: Podnar S (Ljubljana), Homma I (Tokyo)

1. Homma I (Tokyo) Emotional breathing
2. Podnar S (Ljubljana) Quantitative EMG of diaphragm and genioglossus
3. Chokroverty S (Edison, N.J.) Physiology of breathing during sleep

WS9 (G3-1) (75 min) Neurophysiology of hyperkinetic movement disorders

Chairpersons: Deuschl G (Kiel), Shibasaki H (Kyoto)

1. Elble RJ (Springfield, Ill.) Tremor
2. De Koning-Tijssen MA (Amsterdam) Myoclonus
3. Hallett M (Bethesda) Dystonia

WS10 (G3-2) (75 min) Studies of cranial nerve functions

Chairpersons: Kimura J (Iowa City), Valls-Sole J (Barcelona)

1. Kimura J (Iowa City) Differential diagnosis of facial weakness
2. Nobrega J (Sao Paulo) Trigeminal nerve
3. Valls-Sole J (Barcelona) Blink reflex and startle response
4. Yingling CD (San Francisco) Facial monitoring surgery

WS11 (H3-1) (75 min) Motor unit number estimation

Chairpersons: Bromberg MB (Salt Lake City), Komori T (Saitama)

1. Bromberg MB (Salt Lake City) Clinical application
2. Lee K-W (Seoul) Motor neuron disease
3. Komori T (Saitama) Neuropathies

Proposed Workshop

PW1 (105 min) The cellular mechanisms of EEG rhythms

Chairpersons: Amzica F (Montreal), Lopes da Silva FH (Amsterdam)

1. Amzica F (Montreal) Contributions of neurons, glia and blood-brain barrier to slow (delta) and DC EEG potentials
2. Nunez A (Madrid) Network mechanism underlying hippocampus theta oscillations
3. Lopes da Silva FH (Amsterdam)
Brain rhythms in the 7-14 Hz frequency range: generation, dynamics and functional significance
4. Whittington M (Newcastle upon Tyne)
Different cortical laminar origins for gamma and beta rhythms

PW2 (75 min) Neuromuscular ultrasound workshop

Chairperson: Hobson-Webb LD (Durham, NC)

1. Hobson-Webb LD (Durham, NC)
Peripheral nerve ultrasonography in the EMG laboratory
2. Yoon JS (Seoul) Ultrasonography in the diagnosis of upper extremity nerve entrapment syndromes
3. Padua L (Rome) Moving toward morphofunctional measures of the peripheral nerve
4. van Alfen N (Nijmegen) Ultrasound of brachial plexopathies
5. Pillen S (Nijmegen) Advances in skeletal muscle ultrasonography

PW3 (75 min) Contact heat-evoked potentials and motor cortex stimulation in neuropathic pain

Chairpersons: Hsieh S-T (Taipei)

1. Chen A (Beijing) Contact heat-evoked potentials: field mapping and source imaging
2. Hsieh S-T (Taipei) Overview of pain-related evoked potentials on neuropathic pain
3. Anand P (London, UK) Heat evoked potentials for the diagnosis of neuropathic pain and hypersensitivity disorders
4. Tamura Y (Tokyo) Motor cortex stimulation and pain perception

PW4 (75 min) The role of the medial frontal cortex in valuation and social interaction

Chairpersons: Kawashima R (Sendai), Seitz RJ (Dusseldorf)

1. Kennerley S (Berkeley) Medial frontal cortex and decision-making: evidence from primate neuropsychology and neurophysiology
2. Seitz RJ (Dusseldorf) Human medial frontal cortex and value judgment
3. Kawashima R (Sendai) Role of the medial frontal cortex in communication

PW5 (75 min) Neuronal oscillations in multi-scale brain networks

Chairpersons: Tsuru N (Miyazaki), Canolty RT (Berkeley)

1. Canolty RT (Berkeley) The role of neuronal oscillations in local computation and long-range communication
2. Voytek B (Berkeley) Task-dependent modulation of gamma power by anterior theta and posterior alpha phase
3. Kramer M (Boston) The evolution of multi-scale interactions during seizure
4. Tsuru N (Miyazaki) Theta oscillation under working memory task on MEG

PW6 (75 min) Intraoperative neurophysiologic monitoring (IONM) of spinal column surgical procedures

Chairperson: Lopez JR (Stanford),

1. Nuwer M (Los Angeles) IONM techniques useful in assessing spinal cord function in scoliosis surgery
2. Lopez JR (Stanford) Review of spinal column surgical procedures and the possible pathophysiologic mechanisms of neural injury during spinal surgery
3. Regidor I (Madrid) IONM techniques useful in assessing pedicle screw placement
4. Ferreira R (Sao Paulo) IONM of spinal roots and cauda equina

PW7 (75 min) Neonatal seizures: changing vistas in EEG vs. treatment

Chairpersons: Pressler R (London, UK), Vanhatalo S (Helsinki)

1. Vanhatalo S (Helsinki) Neonatal brain monitoring with EEG -solutions and challenges
2. Pressler R (London, UK) Neurophysiologist's role in both diagnosis and treatment of neonatal seizures
3. Deburchgrave W (Leuven) Automated neonatal seizure detectors 1: heuristic approach and experience
4. Stevenson N (Cork) Automated neonatal seizure detectors 2: systematic approach and clinical application

Satellite Symposium

Sat-S1 Nerve excitability testing: translation of basic science

(October 28, 2010)

Chairpersons: Burke D (Sydney), Kaji R (Tokushima)

1. Kaji R (Tokushima) Introduction to conduction block and related physiological backgrounds
2. Bergmans J (Brussels) Discovery of excitability measure in human nerve
3. Koltzenburg M (London, UK) Studying mechanisms of nerve excitability control in vitro
4. Tomlinson S (Sydney) Nerve excitability studies in genetic neuronal ion channel disorders.
5. Moldovan M (Copenhagen) Use of animal models for exploring nerve excitability in peripheral nerves

Luncheon Seminar

LS1 (Sponsored by GlaxoSmithKline)

Mochizuki H (Tokyo) Gene therapy and cell therapy for Parkinson's disease

Chairperson: Mizuno Y (Tokyo)

LS2 (Sponsored by Boehringer Ingelheim)

Trenkwalder C (Kassel) Restless legs syndrome

Chairperson: Ugawa Y (Fukushima)

Hands-on-workshop

1. TMS Monday November 1, 9-11 am

Organizer: Ugawa Y (Fukushima)

Ugawa Y (Fukushima), Mills KR (London, UK), Rothwell JC (London, UK),
Magistris MR (Geneva), Tsuji S (Kitakyushu)

2. EEG Monday November 1, 9-11 am

Organizer: Ikeda A (Kyoto)

Initial remark (15 minutes): How do we read routine EEG in the modern imaging era?:

Luders HO (Cleveland).

Case presentation (20 minutes X 4 sessions):

Epilepsy 1:

Presenter: Terada K (Shizuoka)

Discussants: Lee BI (Seoul), Chauvel P (Marseille)

Epilepsy 2:

Presenter: Sakamoto A (Ribeirao Preto)

Discussants: Ebersole JS (Chicago), Nakasato N (Sendai)

EEG in adults:

Presenter: Akamatsu N (Kitakyushu)

Discussants: Rektor I (Brno), Tobimatsu S (Fukuoka)

EEG in children:

Presenter: Oguni H (Tokyo)

Discussants: Yamada T (Iowa city), Otsubo H (Toronto)

Presentation of interesting cases and general discussion (25 minutes)

3. EMG and nerve conduction study

Monday November 1, 14:00 - 16:30

Organizer: Baba M (Hirosaki), Kuwabara S (Chiba)

Kimura J (Iowa City), Kiernan M (Sydney), Kohara N (Kobe), Baba M (Hirosaki), Fawcett P (Newcastle upon Tyne), Bostock H (London, UK), Kuwabara S (Chiba), Kaji R (Tokushima), Komori T (Saitama)

Joint Seminar with SFEMG/QEMG Group: Single fiber EMG and quantitative EMG

Thursday, October 28, 2010 (4 hours)

10:00-12:00 Part I

Chairpersons: Stalberg EV (Uppsala), Arimura K (Kagoshima)

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|--------------------------|----------------------------------|
| 1. Stalberg EV (Uppsala) | Jitter with concentric electrode |
| 2. Pitt M (London, UK) | Jitter analysis in children |
| 3. Cui LY (Beijing) | Myasthenia gravis |
| 4. Sanders DB (Durham) | Neuromuscular junction: Musk MG |
| 5. Oh SJ (Birmingham) | Lambert-Eaton syndrome |

13:00-15:00 Part II

Chairpersons: Stalberg EV (Uppsala), Arimura K (Kagoshima)

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|---------------------------------|------------------------------|
| 6. Zalewska E (Warsaw) | Modeling |
| 7. Sonoo M (Tokyo) | Quantitative surface EMG |
| 8. Bromberg MB (Salt Lake City) | Motor unit number estimation |
| 9. Lee K-W (Seoul) | Motor neuron disease |
| 10. Komori T (Saitama) | Motor neuron disease |