

ICCN2010 Scientific Program (As of September 24, 2009)

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)

Special Lecture for Opening Ceremony

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

Chairperson: Shibasaki H (Kyoto)

Memorial Lectures for Prof. Toshihiko Tokizane

(Monday, November 1, 2010, before Closing Ceremony)

Yanagisawa N (Tokyo) & Kimura J (Iowa City)

Introduction of Professor Toshihiko Tokizane

Tokizane Lecture I

Hashimoto I (Tokyo) Cortical representation of attention focus:
short-term plasticity in the human somatosensory cortex

Chairperson: Yanagisawa N (Tokyo)

Tokizane Lecture II

Shibasaki H (Kyoto) Cortical activities associated with
voluntary and involuntary movements

Chairperson: Kimura J (Iowa)

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 (Tokyo)
- SL13 (G2) Burke D (Sydney)
Action potentials and impulse conduction in sensory and
motor axons
Chairperson: Kuwabara S (Chiba)
- SL 14 (B3) Deuschl G (Kiel)
Clinical physiology of tremor
Chairperson: Elble RJ (Springfield, Ill.)
- SL15 (C3) Sanders DB (Durham)
Physiology of neuromuscular junction
Chairperson: Oh SJ (Birmingham, Ala.)
- SL16 (D3) Bostock H (London, UK)
Threshold electrotonus and related techniques
Chairperson: Burke D (Sydney)

- SL17 (E3) Kimura J (Iowa City)
Recent advance in F wave
Chairperson: Yanagisawa N (Tokyo)
- SL18 (F3) Lehmann-Horn F (Ulm)
Myotonia as channelopathies
Chairperson: Arimura K (Kagoshima)
- SL19 (G3) Daube JR (Rochester, Minn.)
Pitfalls of needle electromyography: a case based
discussion
Chairperson: Kohara N (Kobe)
- SL20 (B4) Eisen A (Vancouver)
Electrophysiological diagnosis of ALS
Chairperson: Dengler R (Hannover)
- SL21 (C4) Naatanen R (Helsinki)
Clinical use of mismatch negativity
Chairperson: Koga Y (Mitaka)
- SL22 (D4) Stegeman DF (Nijmegen)
New insights into high density surface EMG
Chairperson: Kimura A (Izu)
- SL23 (E4) Hari R (Espoo)
Brains in social interaction
Chairperson: Nagamine T (Sapporo)
- SL24 (F4) Brown P (London, UK)
Significance of oscillations in the basal ganglia circuit
Chairperson: Hashimoto T (Matsumoto)
- SL25 (G4) Romani GL (Chieti)
Multimodal neuroimaging
Chairperson: Sadato N (Okazaki)

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. Kaji R (Tokushima) Conduction block

S4 (D1) (120 min) Intracortical inhibition

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

1. Sohn YH (Seoul) Surround inhibition
2. Hanajima R (Tokyo) Mechanisms of intracortical inhibition.
3. Chen R (Toronto) Intracortical inhibition in movement Disorder
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
(Sponsored by Yokogawa Denki Company)

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) 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

(Sponsored by Jansen Pharma)

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)

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)

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)

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)

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. Miyake Y (Nagoya) Clinical electrophysiology of retina
2. Holder GE (London, UK) Clinical application of ERG
4. 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

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 infraslow 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 Care Fusion 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

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| 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 Glaxosmith Kline Japan)

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

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|----|-------------------------------------|----------------------------------------------------------------------------|
| 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 (E2) (150 min) Sleep disorders

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

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|----|--------------------------------|-----------------------------------------------------|
| 1. | Hirata K (Utsunomiya) | Overview |
| 2. | Bassetti CL (Geneva) | 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 (F2) (150 min) Physiology of polyneuropathies

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

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|----|-------------------------|---------------------------------------------------------------------|
| 1. | Reisin R (Buenos Aires) | Introduction |
| 2. | Goh K-J (Kuala Lumpur) | Guillain-Barré syndrome: clinical and electrophysiological spectrum |

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|----|-------------------------|----------------------------------------------|
| 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) 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 |

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

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

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|----|-----------------------|-------------------------------------------------------------------------------------------------|
| 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)

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|----|----------------------------|--------------------------------------|
| 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
2. 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

(Sponsored by Elekta K.K.)

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)

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) 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

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

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

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 (B4) (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

S42 (C4) (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

S43 (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

S44 (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 and Yoshinaga H (Okayama) Epilepsy in children
4. Guerit J-M (Brussels) EEG standards for ICU monitoring

S45 (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

S46 (A4) (150 min) Epilepsy

(Sponsored by Otsuka/UCB Japan)

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

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

S47 (B4) (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

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. Arendt-Nielsen L (Aalborg) Quantitative mechanism-based assessment of pain with clinical neurophysiology
2. Treede R-D (Mainz) Physiological study of pain

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|----|---------------------------|-------------------------------------------|
| 3. | Kakigi R (Okazaki) | New stimulation method for pain |
| 4. | Garcia-Larrea L (Lyon) | Cortical mechanism of pain perception |
| 5. | Valeriani M (Rome) | Generators of laser-evoked potentials |
| 6. | Schnitzler A (Dusseldorf) | Pain processing and cortical oscillations |
| 7. | Mochizuki H (Mannheim) | Itch perception |

S51 (F4) (150 min) Basal ganglia circuitry

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

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|----|---------------------------|---------------------------------------------------------------------|
| 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 Al (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), Kinoshita T (Osaka)

1. Saletu B, Anderer P, Saletu-Zyhlarz G (Vienna)
Drug effects on EEG topography and

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|----|---------------------|------------------------------------------------------------|
| | | 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)

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|----|--------------------------|---------------------------------------------------------|
| 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)

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|----|----------------------------|----------------------------------------------------------------------------|
| 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)

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|----|------------------------------|---------------------------------------------------|
| 1. | Nogues MA (Buenos Aires) | Respiratory control |
| 2. | Homma I (Tokyo) | Emotional breathing |
| 3. | Podnar S (Ljubljana) | Quantitative EMG of diaphragm and
genioglossus |
| 4. | 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)

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|----|----------------------------------|-----------|
| 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 (Tokyo)

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

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 H.O (Cleveland).

Case presentation (20 minutes X 4 sessions):

Epilepsy 1:

Presenter: Terada K (Shizuoka)

Discussants: Lee B.I. (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

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 (Tokyo)

**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: Kimura J (Iowa), Sanders DB (Durham)

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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 (Tokyo) | Motor neuron disease |