Oral Sessions

An overhead projector, a slide projector for 35-mm slides, and a data projector will be available in all lecture rooms. Speakers wishing to use slides should bring them to the slidereception desk at least ½ hour before the start of the session. Speakers using the data projector should preview their presentation at the slide reception desk, preferably a day before the presentation. The slide reception desk is in lecture hall HS 5 (next to the registration).

"HS 1" and "HS 2" indicate lecture halls HS1 and HS2, respectively.

Friday, August 9, 2002

13.00 - 19.00 ANT workshop

Advanced analysis of high density EEG/ERP: Research and clinical application

Chairs: Zanow F, Knösche TR

13.00 - 18.00 BESA workshop

1.1.1.1.1.1 From raw data to source images and source coherence

Chair: Scherg M

(This workshop is not covered by the conference fee and it requires special registration.)

Saturday, August 10, 2002

8.30 - 12.30 ANT workshop

Advanced analysis of high density EEG/ERP: Research and clinical application

Chairs: Zanow F, Knösche TR

8.30 - 12.00 BESA workshop

1.1.1.1.1.2 From raw data to source images and source coherence

Chair: Scherg M

(This workshop is not covered by the conference fee and it requires special registration.)

9.00 - 11.00 Lab tour to IPHT

Bus departure 9.00 in front of Hotel Esplanade

Saturday, August 10, 2002

13.00 - 13.30 Opening Session

HS 1

13.30 - 14.30 Plenary Lecture:

Role of neural synchrony for cognitive processes

HS 1, Engel AK

1.2 ORAL SESSIONS

14.45 - 16.45 Visual and Auditory Systems

HS 1, Chairs: Kakigi R

14.45 - 15.15 **Synchronisation and Gamma-band Activity in the auditory system**

Pantev C

15.15 - 15.30 **M100 Latency Tracks Perception Through a Continuum of Vowels**

Roberts TPL, Gage N

15.30 - 15.45 **The Influence of Diazepam in Auditory Evoked Magnetic Fields**

Suzuka Y, Higuchi M, Kado H, Tomoda K

15.45 - 16.15 **Feedforward/Feedback Components of MEG Cortical Response Profiles Localized from Visual and Auditory Attention-related Tasks**

Aine CJ, Stephen J

16.15 - 16.30 **Magnetoencephalographic correlates of face familiarity in human occipitotemporal cortex**

Lueschow A, Endl W, Sander TH, Deffke I, Hinze S, Trahms L, Curio G

16.30 - 16.45 **Estimating the Number of Sources in a VEF/MRI Study**

Böcker KBE, Waldorp LJ, Grasman RPPP, de Munck JC, Kenemans JL, Huizenga HM

1.2.1.1.1 14.45 - 16.45 Workshop "Noninvasive measurement of iron"

HS 2, Chairs: Fischer R, Farell DE

14.45 - 15.05 **Clinical need for measurements of tissue iron**

Piga A, Donato G, Monasterolo S, Lupo G, Longo F

15.05 - 15.30 **Clinical Magnetic Susceptibility Instrumentation: History and Outlook**

Farrell DE

15.30 - 15.45 **Non-invasive measurement and imaging of hepatic iron concentrations using nuclear magnetic resonance**

St. Pierre TG, Clark PR, Chua-Anusorn W, Jeffrey G, Olynyk J, Pootrakul P

15.45 - 16.45 **Panel discussion**

17.00 - 19.00 Ischemia and exercise MCG

HS 1, Chairs: Mäkijärvi M, Fenici R

17.00 - 17.30 **Detection of myocardial ischemia with MCG: State of the Art in 2002**

Hänninen H

17.30 - 17.45 **Comparison Of Magnetocardiograms Acquired In Unshielded Clinical Environment At Rest, During And After Exercise And In Conjunction With Myocardial Perfusion Imaging**

Brazdeikis A, Taylor AA, Mahmarian JJ, Xue Y, Chu CW

17.45 - 18.00 **The Normal Magnetocardiogram at Rest and Post-exercise in Healthy Volunteers in an Unshielded Clinical Environment**

Chen J, Thomson PD, Nolan V, Clarke J, Bakharev AA

18.00 - 18.15 **Computerized classification of patients with coronary artery disease but normal or unspecifically changed ECG and healthy volunteers**

Chaikovsky I, Primin M, Nedayvoda I, Vassylyev V, Sosnitsky V, Steinberg F

18.15 - 18.30 **Study of ventricular repolarization in patients with myocardial ischemia, using unshielded multichannel magnetocardiography**

Fenici R, Brisinda D, Nenonen J, Mäkijärvi M, Fenici P

18.30 - 18.45 **Magnetocardiography to assess myocardial viability in patients with coronary heart disease**

Morguet AJ, Koch H, Behrens S, Kosch O, Goedde P, Lange C, Selbig D, Munz DL, Schultheiss H-P

18.45 - 19.00 **Magnetocardiographic changes in the course of coronary intervention**

Hailer B, van Leeuwen P, Klein A, Auth-Eisernitz S, Chaikovsky I, Lange S, Schäfer H, Grönemeyer D, Steinberg F

17.00 - 19.00 Workshop "Developments in Multi-Modality Imaging"

HS 2, Chairs: Belliveau JW, Wood CC

17.00 - 17.30 **NIRS and MEG**

Villringer A

17.30 - 17.45 **Simultaneous DC-MEG and Near-Infrared Spectroscopy (NIRS) allows for non invasive single-trial analysis of neurovascular coupling in human cerebral cortex**

Mackert BM, Wübbeler G, Leistner S, Burghoff M, Uludag K, Obrig H, Kohl M, Villringer A, Trahms L, Curio G

17.45 - 18.00 **Optical measurement of hemodynamic changes in the contralateral motor cortex induced by transcranial magnetic stimulation**

Nissilä I, Kotilahti K, Komssi S, Kähkönen S, Noponen T, Ilmoniemi RJ, Katila T

18.00 - 18.15 **MEG-fMRI: Combined Imaging via the Hemodynamic Response**

Moran JE, Tepley N

18.15 - 18.30 **A Unified Analysis of fMRI and MEG Data**

Schmidt DM, Ranken DM, George JS, Wood CC

18.30 - 18.45 **title ???**

Belliveau JW

18.45 - 19.00 **Panel discussion**

19.00 - 21.00 Welcome Reception

1.4 Sunday, August 11, 2002

8.00 - 9.00 Tutorial 1

HS 1

1.4.1.1.1.1 Noise compensation techniques

Burghoff M

9.00 - 10.30 Sensory-Motor Systems

HS 1, Chairs: Deecke L, Romani GL

9.00 - 9.30 **Neuromagnetic Studies of the Human Mirror-Neuron System**

Hari R

9.30 - 9.45 **Activation of human cerebellum by median nerve stimulation**

Sekihara K, Kimura T, Hashimoto I

9.45 - 10.00 **Morphology of somatosensory evoked fields: a parameter evaluating anatomofunctional neural connectivity**

Tecchio F, Zappasodi F, Pizzella V, Pasqualetti P, Rossini PM

10.00 - 10.15 **Integration of somatomotor input in S2 and surrounding fields**

Disbrow EA, Hinkley L, Koyama S, Roberts TPL

10.15 - 10.30 **Automatic Mapping of Somatosensory Representation by Steady- State Evoked Magnetic Fields**

Preißl H, Wiech K, Weiskopf N, Braun C

9.00 - 10.30 fMCG 1

HS 2, Chairs: Peters MJ, Wakai RT

9.00 - 9.30 **Development of fetal heart and prenatal diagnosis**

Chaoui R

9.30 - 9.45 **The influence of biomagnetometer area-of-coverage in the determination of fetal cardiac time intervals**

van Leeuwen P, Klein A, Geue D, Lange S, Grönemeyer D

9.45 - 10.00 **The fetal magnetocardiogram explained by a magnetic dipole**

Stinstra JG, Peters MJ

10.00 - 10.15 **Analysis of Heart Rate Variability in Fetuses and Pre-term Neonates**

Rassi D, Zhuravlev YE, Mishin A, Matthes J, Emery SJ

10.15 - 10.30 **Relation between fetal weight and QRS duration**

Kähler C, Hopf A, Schleußner E, Grimm B, Schneider U, Haueisen J, Seewald HJ

10.45 - 12.45 Cognition and Language

HS 1, Chairs: Hoke M, Kuriki S

10.45 - 11.30 **Language, Prosody, and Music**

Friederici AD

11.30 - 11.45 **Visual Evoked Magnetic Fields Associated with Physical and Semantic Discrimination**

Huang SF

11.45 - 12.00 **Broad-band Changes in Neuromagnetic Power Reflect Spontaneous Perceptual Switching During Binocular Rivalry**

Holroyd T, Murata T, Tanabe HC, Hayashi S, Miyauchi S, Yanagida T

12.00 - 12.15 **Spatiotemporal patterns of event-related low-frequency brain oscillations in recognition memory**

Meeren HKM, Lopes da Silva FH, de Munck JC, van Dijk BW, Stam CJ

12.15 - 12.30 **Generators of the N200m to Tones indicating Rare Events: Comparison with Dishabituation**

Halgren E, Marinkovic K, Dale AM

12.30 - 12.45 **From auditory event related oscillations to neuropsychological performance: predictability**

Karakas S, Kafadar H, Bekçi B, Erzengin ÖÜ

1.5 10.45 - 12.45 fMCG 2

HS 2, Chairs: van Leeuwen P, Kähler C

10.45 - 11.15 **Tachyarrhythmia - Diagnosis and Therapy**

Strasburger JF, Wakai RT

11.15 - 11.30 **Prenatal diagnoses of fetal arrhythmia using averaged magnetocardiogram and current-arrow maps**

Hosono T, Kandori A, Chiba Y, Tsukada K

11.30 - 11.45 **Assessment of Fetal Heart Rhythm and Rate in Complete Congenital Heart Block by Fetal Magnetocardiography**

Zhao H, Wakai RT, Strasburger J, Gotteiner N, Cuneo B

11.45 - 12.00 **Influence of gestational age, fetal heart frequency and estimated fetal weight on cardiac time intervals in normotrophic and growth retarded fetuses**

Grimm B, Kähler C, Schleußner E, Schneider U, Schneider A, Haueisen J, Seewald HJ

12.00 - 12.15 **Fetal heart rate patterns in normal and ritodrine-treated pregnancies, detected by magnetocardiography**

Kotini A, Anninos P, Koutlaki N, Adamopoulos A, Liberis V, Anastasiadis P

12.15 - 12.30 **Measurement of fetal tachycardia using a fetal magnetocardiogram**

Kandori A, Hosono T, Kanagawa T, Miyashita S, Shinto M, Chiba Y, Murakami M, Miyashita T, Tsukada K

12.30 - 12.45 **Panel discussion**

14.00 - 16.00 Cardiac Modeling

HS 1, Chairs: Sachse F, Ramon C

14.00 - 14.45 **Realistic Bidomain Modeling of the Heart**

Henriquez C

14.45 - 15.00 **Influence of cardiac electrical anisotropy on activation time imaging**

Modre R, Tilg B, Fischer G, Hanser F, Messnarz B

15.00 - 15.15 **Localization of dual accessory pathways using two equivalent dipoles**

Jazbinsek V, Hren R, Stroink G, Horacek BM, Trontelj Z

15.15 - 15.30 **Studying of the heart conductivity anisotropy by the MCG**

Budnyk M, Sosnitsky V, Dmytriyeva T

15.30 - 15.45 **Modeling of Cardiac Excitation Propagation Taking Deformation Into Account**

Sachse FB, Seemann G, Riedel C

15.45 - 16.00 **Error Analysis of Registering Anatomical and Functional Cardiac Data Using External Markers**

Mäkelä TJ, Lötjönen J, Sipilä O, Lauerma K, Nenonen J, Katila T, Magnin IE

1.6 14.00 - 16.00 fMEG

HS 2, Chairs: Lowery C, Schleußner E

14.00 - 14.30 **Neuronal development of the human fetus**

Prechtl HFR

14.30 - 14.45 **Influence of the state of activity and the presented hemisphere on detection and latencies of Auditory Evoked cortical Fields (AEF) in fetal Magnetoencephalography (FMEG)**

Schneider U, Schleußner E, Kähler C, Haueisen J, Seewald HJ

14.45 - 15.00 **Magnetic brain responses to speech sounds in fetuses and newborns**

Kujala A, Huotilainen M, Hotakainen M, Lennes M, Fellman V, Näätänen R

15.00 - 15.15 **First report on the magnetoencephalographic recordings of visual evoked brain activity from the human fetus**

Eswaran H, Wilson JD, Preißl H, Robinson SE, Vrba J , Murphy P, Rose D, Lowery CL

15.15 - 15.30 **Extraction of Spontaneous Fetal MEG via Spatial Filtering**

Chen ML, Wakai RT

15.30 - 15.45 **Coregistration of anatomical and physiological recordings for fMEG investigations in the SARA system**

Preißl H, Robinson SE, Vrba J, Eswaran H, Wilson JD, Murphy P, Lowery CL

15.45 - 16.00 **Panel discussion**

16.15 - 18.00 Poster 1

1.7

1.8 Monday, August 12, 2002

8.00 - 9.00 Tutorial 2

Phase synchronization

HS 1, Schack B

9.00 - 10.30 Pain

HS 1, Chairs: Schaible HG, Pizzella V

9.00 - 9.45 **Pain modulation by transcutaneous electric acupoint stimulation: An EEG and evoked potential study**

Zhang WT, Qi YW, Wang Y, Luo F, Han JS

9.45 - 10.15 **Simultaneous activation of primary and secondary somatosensory cortices following CO_2 laser stimulation of C-fibers in humans**

Tran TD, Inui K, Hoshiyama M, Lam K, Qiu Y, Kakigi R

10.15 - 10.30 **Human somatosensory response to non-painful and painful electrical median nerve stimulation**

Torquati K, Pizzella V, Della Penna S, Franciotti R, Babiloni C, Rossini PM, Romani GL

9.00 - 10.30 Special Session of the IEEE Joint Chapter BME (Germany Section)

1.9 Part 1: Advanced Methods in Signal Analysis

HS 2, Chairs: Voss A, Witte H

9.00 - 9.15 **Improved Multiplication-free Adaptive Digital Filter for ANC of Biomedical Signals**

Min SG, Huh Y, Lee HG, Yoon DH

9.15 - 9.30 **Trends in Event-Related Fields analysed by the Hilbert transform**

Link A, Elster C, Sander TH, Lueschow A, Curio G, Trahms L

9.30 - 9.45 **Detection of Phase Synchronization in the Brain, Using Coherence Preserving Surrogates**

Dolan K, Dammers J, Fieseler T, Tass PA

9.45 - 10.00 **Mapping brain activation by means of focal gamma activity**

Wienbruch C, Pihama N, Elbert T, Rockstroh B

10.00 - 10.15 **Estimation of baroreflex mediated interactions in chronic hypertensive pregnancy using joint symbolic dynamics**

Baumert M, Baier V, Walther T, Stephan H, Faber R, Voss A

10.15 - 10.30 **Magnetocardiographic Signal Analysis**

Demelis M, Müller, Pasquarelli A, Erné SN

10.45 - 12.45 Special Session of the IEEE Joint Chapter BME

Part 2: Independent Component Analysis (ICA) in MEG/EEG signal processing

HS 2, Chairs: Witte H, Voss A

10.45 - 11.15 **Possibilities and limitations of ICA in EEG signal analysis**

Celka P

11.15 - 11.30 **Unsupervised identification of spontaneous magnetoencephalographic alpha activity by Independent Component Analysis**

Sander TH, Burghoff M, Lueschow A, Curio G, Trahms L

11.30 - 11.45 **Nonlinear time series analysis of human alpha rhythm**

Nolte G, Sander TH, Lueschow A, Pearlmutter B

11.45 - 12.00 **Language-related brain activity revealed by multi-taper and independent component analysis**

Salustri C, Kronberg E

12.00 - 12.15 **Studying interictal epileptic activity propagation with ICA and MFT**

Bamidis PD, Zisis A, Maglaveras N, Kostopoulos G, Ioannides AA

12.15 - 12.30 **Statistical Independence of Different Brain Sources in Evoked MEG Signals**

Huang M, Weisend M, Paulson K, Thoma R, Hanlon F, Moses S, Lee RR

12.30 - 12.45 **Identifying cortical sources of corticomuscle coherence during bimanual muscle contraction by ICA**

Vigário R, Jensen O, Hari R

10.45 - 12.45 Epilepsy

HS 1, Chairs: Weiller C, Brandl UW

10.45 - 11.15 **MEG and Epilepsy**

Stefan H

11.15 - 11.45 **Clinical Significance of MEG Confirmed by Pre- and Post-Operative Spike Localization and Seizure Outcome**

Nakasato N

11.45 - 12.00 **MEG-Guided Identification of Structural Brain Lesions in Patients with Neocortical Epilepsy**

Funke M, Lewine J, Chong B, Moore K, Tsuruda J, Orrison W, Matsuo F, Constantino T

12.00 - 12.15 **Epileptic Source Localization from MEG data: Local maxima of 2DII current density solutions compared to ECD locations of spike events**

Aquino P, Moran JE, Nagesh V, Mason KM, Bowyer SM, Tepley N, Barkley GL

12.15 - 12.30 **Clustering of interictal epileptiform MEG spikes**

van 't Ent D, de Munck JC, Manshanden I, Verbunt JPA, Lopes da Silva FH, Velis DN, Ossenblok P

12.30 - 12.45 **Finding Epileptic Loci by Nonlinear Parameterization of Source Waveforms**

Robinson SE, Vrba J, Otsubo H, Ishii R

14.00 - 16.00 Instrumentation

HS 1, Chairs: Cohen D, Maniewski R

14.00 - 14.15 **Design and Performance of the LANL 158-channel Magnetoencephalography System**

Matlashov AN, Kraus RH, Espy MA, Best ED, Briles MC, Raby EY, Flynn ER

14.15 - 14.30 **Integrated SQUID-Gradiometer System for Magneto-Cardiography without Magnetic Shielding**

Zakosarenko V, Stolz R, Bondarenko N, Schulz M, Meyer HG

14.30 - 14.45 **Performance of a room temperature optical cardio-magnetometer**

Bison G, Schwarzer S, Wynands R, Weis A

14.45 - 15.00 **A high-Tc SQUID based system for neurophysiology studies in-vitro**

Magnelind PE, Tzalenchuk AY, Ivanov ZG, Tarte EJ

15.00 - 15.15 **A 275 channel Whole-cortex MEG System**

Fife AA, Vrba J, Haid G, Hoang T, Kubik PR, Lee S, Loewen R, McKay J, McKenzie D, Robinson SE, Spear P, Tillotson M, Coppola R

15.15 - 15.30 **SQUID Based Sensor with Additional Compensation Module for Operation in an Applied Magnetic Field**

Della Penna S, Cianflone F, Del Gratta C, Erné SN, Granata C, Pentiricci A, Pizzella V, Russo M, Romani GL

15.30 - 15.45 **Real-time Noise Reduction: 4D Neuroimaging 2500WH System**

Moran JE, Tepley N

15.45 - 16.00 **New Six-Layer Magnetically-Shielded Room for MEG**

Cohen D, Schläpfer U, Ahlfors S, Hämäläinen MS, Halgren E

1.10 14.00 - 16.00 Workshop "Transcranial Magnetic Stimulation"

HS 2, Chairs: Ilmoniemi R, Ueno S

14.00 - 14.15 **Introduction and overview of TMS**

Ilmoniemi R

14.15 - 14.55 **Induction of excitability after-effects by repetitive transcranial magnetic stimulation compared to transcranial direct current stimulation**

Paulus W

14.55 - 15.10 **Effects of transcranial magnetic stimulation on spontaneous and evoked EEG activities**

Iramina K, Maeno T, Ueno S

15.10 - 15.25 **Reactivity of the prefrontal cortex as a function of TMS stimulus intensity. An EEG study**

Kähkönen S, Komssi S, Wilenius J, Ilmoniemi RJ

15.25 - 15.40 **Low-frequency rTMS of the Cerebellum Suppresses the Motor Cortex Excitability**

Satow T, Mima T, Oga T, Hara H, Chen WH, Hashimoto N, Siebner HR, Shibasaki H

15.40 - 15.55 **Effects of topiramate on human motor cortex excitability as measured by transcranial magnetic stimulation**

Reis J, Tergau F, Hamer HM, Müller HH, Knake S, Fritsch B, Oertel WH, Rosenow F

15.55 - 16.00 **Concluding remarks**

Ilmoniemi R

16.15 - 18.00 Poster 2

18.00 - 19.00 General assembly of the Biomag community

HS 1

19.15 - 21.00 Unternehmensgründung und Eigenkapital

HS 2, Gründertreffen DEWB, lecture hall 2 (in German)

19.30 - 21.00 Baroque Concert (admission fee 12,- Euro)

1.12 Tuesday, August 13, 2002

8.00 - 9.00 Tutorial 3

Inverse methods

HS 1, Maess B

9.00 - 10.30 Neurology

HS 1, Chairs: Freund HJ, Weinberg H

9.00 - 9.20 **Cerebral Physiology and MEG study**

Sasaki K

9.20 - 9.40 **Oscillatory coupling in the human motor system**

Schnitzler A

9.40 - 10.00 **Modulation of cortex-muscle oscillatory interaction - functional implications**

Salenius S

10.00 - 10.15 **Presurgical determination of language dominance with Magnetic Source Imaging: Agreement with the Wada procedure**

Sarkari S, Simos P, Castillo EM, Breier J, Papanicolaou A

10.15 - 10.30 **Topographic Distribution of Sleep Spindles Using 2DII**

Drake CL, Moran JE, Mason KM, Bowyer SM, Roth T, Barkley GL, Tepley N

1.13 9.00 - 10.30 Workshop "Forward and Inverse Modeling"

1.14 Part 1: Forward modeling

HS 2, Chairs: Knösche TR, Maess B

9.00 - 9.30 **Mapping cortical connectivity with diffusion MRI**

Tuch DS

9.30 - 9.45 **Fast anisotropic high resolution finite element head modeling in EEG/MEG source localization**

Wolters C, Anwander A, Kuhn M, Reitzinger S

9.45 - 10.00 **A unified theoretical account of the evoked magnetic fields and extra- and intracellular potentials of the hippocampus**

Murakami S, Zhang T, Hirose A, Okada YC

10.00 - 10.15 **MEG forward problem solution avoiding the electric potential**

von Ellenrieder N, Muravchik C, Nehorai A

10.15 - 10.30 **Panel discussion**

10.45 - 12.45 Clinical MCG

HS 1, Chairs: Erné SN, Hailer B

10.45 - 11.15 **Clinical MCG**

Hombach V

11.15 - 11.45 **General solution for the application of magnetocardiography**

Malmivuo J, Nousiainen J, Oja SJ, Uusitalo A

11.45 - 12.00 **ST-T-Variability Detected by Multichannel Magnetocardiography**

Schless BG, Müller HP, Pasquarelli A, Demelis M, Hombach V, Erné SN

12.00 - 12.15 **Hypertension: comparison between magnetocardiographic and ultra- sonographic findings**

Comani S, Gallina S, Orlandi M, Morana G, Di Luzio S, De Caterina R, Romani GL

12.15 - 12.30 **Noninvasive Stratification of Micro-Reentrant Arrhythmia by Using Magnetocardiograms**

Yamada S, Tsukada K, Miyashita T, Wan K, Yamaguchi I

12.30 - 12.45 **QT interval distribution in coronary artery disease determined in a large array biomagnetometer**

Klein A, van Leeuwen P, Hailer B, Lange S, Lukat M, Geue D, Grönemeyer D

1.15 10.45 - 12.45 Workshop "Forward and Inverse Modeling"

1.16 Part 2: Inverse modeling

HS 2, Chairs: Maess B, Knösche TR

10.45 - 11.15 **Comparisons of Models in Experimental Somatosensory Data**

Mosher JC, Baillet S, Leahy RM

11.15 - 11.30 **From Dipoles to Multipoles: Parametric Solutions to the Inverse Problem in MEG**

Jerbi K, Mosher JC, Nolte G, Baillet S, Garnero L, Leahy RM

11.30 - 11.45 **On the Detection of Hippocampus Activity with MEG**

Chupin M, Baillet S, Okada YC, Hasboun D, Garnero L

11.45 - 12.00 **Automated reverse iterative source estimation (ARISE): a new method to obtain convergence from distributed to discrete spatio temporal source models**

Bornfleth H, Weckesser D, Ille N, Mueller M, Berg P, Scherg M

12.00 - 12.15 **MEG Source Localization via Partially Adaptive LCMV**

Van Veen BD, Rodríguez-Rivera A, Wakai RT

12.15 - 12.30 **An inverse algorithm to detect neural activity at up to four locations using MEG**

Li QX, Gandhi OP

12.30 - 12.45 **Panel discussion**

14.00 - 16.00 Cortical Oscillations

HS 1, Chairs: Hashimoto I, Curio G

14.00 - 14.25 **Fast-spike interneurons and feed-forward inhibition in awake sensory neocortex**

Swadlow HA

14.25 - 14.50 **Origins of the high-frequency oscillations in the somatosensory cortex**

Ikeda H, Wang Y, Okada YC

14.50 - 15.04 **Movement interference attenuates somatosensory high-frequency oscillations**

Tanosaki M, Hoshi Y, Hashimoto I

15.04 - 15.18 **Spike bursts of single units in primary somatosensory cortex of awake non human primates contribute to macroscopic 600 Hz burst responses**

Baker SN, Lemon RN, Curio G

15.18 - 15.32 **Tomographic phase resetting analysis (TPRA): 3D-localization of stimulus-locked transient phase responses, synchronization and desynchronization using magnetoencephalography**

Tass PA, Morosan P, Fieseler T, Dammers J, Boers F, Muren A, Fink GR, Niedeggen M, Zilles K

15.32 - 15.46 **Phase Shifts in Thalamo-Cortical Oscillations in Response to 40-Hz Tones**

Pearson-Bish J, Martin T, Houck J, Ilmoniemi RJ, Tesche CD

15.46 - 16.00 **On the physiological basis of the 15-30 Hz motor-cortex rhythm**

Jensen O, Pohja M, Goel P, Ermentrout B, Kopell N, Hari R

16.00 - 16.14 **Pathological oscillatory activity in patients with ischemic brain lesions**

Butz M, Gross J, Timmermann L, Moll M, Salmelin R, Freund HJ, Witte OW, Schnitzler A

1.17 14.00 - 16.00 Workshop "Magnetic Methods for Understanding of Oral Drug delivery"

HS 2, Chairs: Weitschies W, Görnert P

14.00 - 14.30 **The impact of drug formulation on drug action**

Blume H

14.30 - 15.00 **Imaging techniques for understanding the behaviour of dosage forms in the GI tract**

Wilson C

15.00 - 15.15 **The application of biomagnetic instrumentation and methods for monitoring the gastrointestinal behaviour of drug dosage forms**

Kosch O

15.15 - 15.30 **Detection of the Gastrocolic Reflex Using a Three Axis Fluxgate**

Ferreira A, Carneiro AAO, Moraes ER, Baffa O, Oliveira RO

15.30 -16.00 **Magnetic marker monitoring**

Weitschies W

16.15 - 18.00 Poster 3

20.00 - 01.00 Conference Banquet Party at the Mensa

1.19 Wednesday, August 14, 2002

9.00 - 10.30 Psychiatry

HS 1, Chairs: Rosburg T, Sauer H

9.00 - 9.25 **Preattentive auditory processing in aging and in Alzheimer's disease**

Pekkonen E

9.25 - 9.45 **Attention and brain monoamine function**

Kähkönen S

9.45 - 10.10 **Normal and dysrhythmic thalamo-cortical networks in the auditory, somatosensory and visual modality and their relation to Neuro Psychiatric Syndromes**

Ribary U, Llinás R, Jeanmonod D, Kronberg E, Sauvé K, Ramirez PR, Schulman JJ, Horenstein C, van Marle HJF

10.10 - 10.30 **Sensory gating in schizophenic patients**

Weisbrod M, Roehrig M, Schroeder J, Scherg M, Rupp A

1.20

1.21

1.22 9.00 - 12.15 Workshop "Statistical issues in the EEG/MEG inverse problem"

HS 2, Chairs: de Munck JC, Bijma F

9.00 - 9.05 **Introduction**

de Munck JC

9.05 - 9.35 **Performance Comparison of MUSIC and Maximum Likelihood Estimation**

Nehorai A

9.35 - 10.05 **Advantages and problems with covariance-based source reconstruction methods**

Sekihara K

10.05 - 10.30 **Analysis of event-related potentials using Statistical Parametric Mapping**

Kiebel SJ, Friston KJ

10.45 - 11.15 **Spatial and temporal correlations in MEG/EEG background noise**

de Munck JC, Bijma F, Huizenga HM, Waldorp LJ, Heethaar RM

11.15 - 11.45 **Use of surrogate data in the distributed MEG/EEG inverse problem : application to the estimation of dynamic properties of neural networks**

David O, Garnero L, Cosmelli D, Varela F

11.45 - 12.10 **Analysis of EEG/MEG sources and their lagged covariances**

Huizenga HM, Grasman RPPP, Waldorp LJ, de Munck JC, Böcker KBE, Molenaar PCM

12.10 - 12.15 **Closing remarks**

de Munck JC

10.45 - 12.45 New frontiers in Biomagnetism

HS 1, Chairs: Katila T, Hoenig HE

10.45 - 11.30 **Evolution of Magnetotactic Bacteria on Mars?**

Weiss B

11.30 - 12.00 **Electrophysiologic Research of Plant Cells by SQUID Systems** Trontelj Z, Baudenbacher F, Fong L, Jazbinsek V, Mueller W, Thiel G, Wikswo J, Zorec R

12.00 - 12.15 **Differential interaction of magnetic nanoparticles with tumor cells and peripheral blood cells**

Schwalbe M, Gansau C, Röder M, Buske N, Bahr M, Wagner K, Görnert P, Schnabelrauch M, Pachmann K, Kliche KO, Goetze T, Weitschies W, Höffken K, Clement JH

12.15 - 12.30 **MEG and other functional brain topography methods in parkinsonian akinesia**

Deecke L

12.30 - 13.00 **High-Tc SQUIDs for MCG systems in unshielded environment**

Seidel P

13.00 - 13.30 Closing Session

HS 1

1. Bus departure to Berlin, in front of the Hotel Esplanade

17.30 - 21.00 Laboratory tour at PTB Berlin

Thursday, August 15, 2002

8:45 - 17.30 Satellite Symposium

MEG - a Tool for Research on Language and Music Perception

at the Max-Planck Institute of Cognitive Neuroscience in Leipzig

8:45 - 12:15 Language Perception

8:45 - 9:00 **Welcome speech and introduction to lectures**
Knösche TR (Leipzig)

9:00 - 9:40 **Contributions of MEG to Neurolinguistics**
Papanicolaou A (Houston)

9:40 - 10:20 **Early MEG effects in processing of language and music structure**
Friederici AD (Leipzig)

10:20 - 10:50 **Coffee Break**

10:50 - 11:05 **Within-subject reproducibility of the cortical representation of phonological features in vowels**
Eulitz C (Konstanz)

11:05 - 11:20 **Quantitation of the late field for language lateralization: influence of paradigm and analysis thresholds on sensitivity and error rate**
Smitka M (San Francisco)

11:20 - 11:35 **Neuromagnetic evidence that differences in noun and verb processing are modulated by the presence of a syntactic context**
Fiebach CJ (Leipzig)

11:35 - 11:45 **Brief summary**
Maess B (Leipzig)

11:45 - 12:15 **Podium discussion**

12:15 - 13:15 **Lunch Break (buffet at conference venue)**

13:15 - 17:30 Music Perception

13:15 - 13:30 **Introduction to lectures**
Maess B (Leipzig)

13:30 - 14:10 **Music and Brain: The competition for cortical space**
Pantev C (Toronto)

14:10 - 14:50 **About neurocognition of music and speech sounds-evidence from electric and magnetic recordings**
Tervaniemi M (Helsinki)

14:50 - 15:30 **Processing of complex rule-based auditory information in the music domain**
Kölsch S (Boston)

15:30 - 16:00 **Coffee Break**

16:00 - 16:15 **Enhanced gray matter volume of antero-medial Heschl's gyrus correlates**

with increased primary source activity in musicians

Schneider P (Heidelberg)

16:15 - 16:30 **MEG responses from the superior temporal cortex processing unknown melodies**

Kuriki S (Sapporo)

16:30 - 16:45 **Auditory Attention in Relation to Signal Detection and Musical Aptitude: a MEG and EEG Study**

Sieroka N (Heidelberg)

16:45 - 16:55 **Brief summary**

Knösche TR (Leipzig)

16:55 - 17:25 **Podium discussion**

17:25 - 17:30 **Closing remarks and farewell**

Maess B (Leipzig)

Poster Sessions

1.22.1.1

	Sunday	Monday	Tuesday
MEG: epilepsy			
MEG: cognition			
MEG: language & music perception			
MEG: motor systems			
MEG: somatosensory systems			
fetal MCG			
fetal MEG			
Cardiac modeling			
Multimodal imaging			
Noninvasive measurements of iron			
MEG: pain			
MEG: auditory systems			
MCG: basic research			
Modeling: forward problem			
Instrumentation			
Signal analysis			
Transcranial magnetic stimulation			
MEG: neurology			
MEG: psychiatry			
MEG: cortical oscillations			
MEG: visual systems			
MCG: clinical applications			
Modeling: inverse problem			
Magnetic methods for understanding of oral drug delivery			
Other biomagnetic applications			

1.22.1.2

The poster presenters are requested to present their posters during the respective one and ¾ hour poster session. Poster are ought to be set up on Saturday, Aug. 10 and to be removed on Wednesday, Aug. 14.

The poster areas are indicated in the floor plan on page 61. The poster number will also identify each presentation on the poster boards.

1.23

|Sunday, August 11, 2002 | |

1.24 MEG: epilepsy

1.25 1 Combined MEG and EEG Source Imaging of Interictal Activity in Partial Epilepsy
Baillet S, Adam C, Schwartz D, Leahy RM, Mosher JC, Renault B, Baulac M, Garnero L

1.26 2 Localizing Value of Ictal MEG in Neocortical Epilepsy
Barkley GL, Smith BJ, Passaro EA, Minecan DN, Elisevich KV, Mason K, Bowyer SM, Tepley N

1.27 3 Non-invasive estimation of the cortical networks involved during interictal spikes
David O, Chavez M, Adam C, Garnero L

4 Dissociation of MEG and EEG epileptiform activity in a patient with language regression - A case study
Funke M, Lewine J, Matsuo F

1.28 5 Differentiated focus localization: gain of information by means of MEG
Genow A, Hummel C, Hopfengärtner R, Scheler G, Maess B, Stefan H

1.29 6 Differences between source localizations from MEG and EEG
Hummel C, Genow A, Scheler G, Hopfengärtner R, Stefan H

7 Magnetoencephalographic statistical parametric mapping of interictal spikes in epileptic patients
Imai K, Yanagihara K, Mano T, Kamio N, Sakakibara R, Shimono K, Okinaga T, Hirabuki N, Yoshimine T, Ozono K

1.30 8 MEG analysis of bioccipital positive waves during sleep
Imai K, Yanagihara K, Mano T, Kamio N, Sakakibara R, Shimono K, Okinaga T, Hirabuki N, Yoshimine T, Ozono K

9 Synthetic aperture magnetometry (SAM) compared with electrocorticography (ECoG) in children with focal cortical dysplasia
Ishii R, Otsubo H, Ochi A, Kitayama M, Xiang J, Snead OC, Pantev C

1.31 10 Comparative analysis of MEG and scalp EEG for interictal spike detection
Iwasaki M, Pestana E, Burgess RC, Nakasato N, Shamoto H, Lüders HO

11 Propagation analysis of epileptic discharge in temporal epilepsy patients using a magnetoencephalogram
Kandori A, Oe H, Miyashita K, Date H, Yamada N, Naritomi H, Chiba Y, Murakami M, Miyashita T, Tsukada K

12 Application of SAM virtual sensor method for localization of origins and propagation of epileptic discharges in refractory frontal lobe epilepsy Kato A, Ninomiya H, Hirata M, Taniguchi M, Saitoh Y, Imai K, Nii Y, Yoshimine Y

13 Synthetic aperture magnetometry virtual sensor (SAM-VS) analysis of epileptic gamma-activity of MEG
Ninomiya H, Kato A, Imai K, Taniguchi M, Nii Y, Hirata M, Yanagihara K, Kishima H, Yoshimine T

1.32 14 Detectability of Convexity Spikes by Conventional EEG and Helmet MEG
Park H, Nakasato N, Iwasaki M, Shamoto H, Yoshimoto T

1.33 15 Magnetoencephalography in Lafora body disease - a case report
Pizzella V, Verrotti A, Franciotti R, Salusti B, Trotta D, Chiarelli F, Romani GL

1.34 16 Presurgical MEG investigation of a patient with epilepsy and extensive cortical malformation
Scheler G, Hummel C, Genow A, Stefan H

1.35 17 A simulation study of frontal lobe epileptic spike localization using real background noise
Stephen JM, Shih J, Ranken DM, Hudson D, Aine CJ

1.36 18 MEG Evaluation After Neurosurgical Treatment
Tilz C, Kaltenhäuser M, Genow A, Scheler G, Hummel C, Ganslandt O, Stefan H

19 Three-dimensional Integration of Brain Anatomy and Epileptogenic Zones using Magnetic Source

Imaging

Xiang J, Chuang N, Otsubo H, Chuang S, Chitoku S, Holowka S, Sharma R, Hunjan A, Babyn P, Snead OC

20 Unique localization information of MEG in neocortical epilepsy and tumors in four neurosurgical patients

Akhtari M, Mamelak A, Lopez N, Padilla R, Merrifield W, Sutherling WS

1.37 21 Comparison of epileptic region between intracranial EEG recording and MEG using 3D MRI

Chitoku S, Otsubo H, Xiang YJ, Rutka T, Weiss S, Sharma R,Holowka S, Snead OC

22 MEG and EEG Identification of Epileptiform Transients in Patients with Mesial Temporal Sclerosis

Funke M, Matsuo F, Lewine J, Davis J, Constantino T

23 Characterization of the ictal onset zone: a multimodal approach including EEG, MEG and high-resolution MRI

Knake S, Shiraishi H, Stufflebeam S, Wang CM, Ulbert I, Ahlfors SP, Schomer D, Bromfield E, Madsen J, Carr V, Hämäläinen MS, Blume H, Marinkovic K, Schomer D, Halgren E

24 Localisation of Interictal EEG and MEG of Frontal Origin with Electrocortical Validation

Ossenblok P, de Munck JC, Arends J, Leijten FSS, van 't Ent D, Huiskamp GJ, Boon P

1.38 25 Application of whole-head MEG in clinical epileptology

Pataraia E, Lindinger G, Deecke L, Baumgartner C

1.39 26 Localization of epileptic spikes: realistic volume conductor vs. Homogeneous sphere

Paul I, Amo C, Fernandez A, Maestu F, Ortiz T, Wienbruch C

1.40 27 The clinical usability of magnetoencephalography (MEG) in recent epilepsy studies

Putkonen P, Ylinen A, Katila T

28 A whole-head magnetoencephalography (MEG) study of children with benign partial epilepsy: location of focal epileptiform discharges correlates with selective cognitive deficits

Weiskopf N, Wolff M, Serra E, Birbaumer N, Krägeloh-Mann I, Preißl H

1.41

|MEG: Cognition | |

29 Neural correlates of "theory of mind" in emotional vignettes comprehension studied with spatially filtered magnetoencephalography

Ishii R, Gojmerac C, Gallup G, Alexander MP, Stuss DT, Pantev C

1.42 30 Analysis of MEG responses during a visual-word memory task

Takeuchi F, Kuriki S

1.43 31 Effects of unpleasant smell revealed by event-related potentials and neuromagnetic fields

Tonoike M, Yamaguchi M, Koizuka I, Seo R

32 Insights into memory function using Magnetic Source Imaging.

Castillo EM, Simos PG, Breier J, Fitzgerald ME, Sarkari S, Papanicolaou AC

1.44 33 Spatiotemporal Brain Mapping of Word Retrieval from Episodic Memory

Dhond RP, Wagner AD, Dale AM, Witzel T, Halgren E

34 Hippocampal Activation during Performance of Transverse Patterning Using Magnetoencephalography

Hanlon FM, Weisend MP, Huang MX, Moses SN, Thoma RJ, Paulson KM, Miller GA, Canive JM, Lee RR

1.45 35 The estimation of sources related to visually and somatosensory evoked P300m magnetic field

Maeno T, Kamiya S, Sekino M, Iramina K, Ueno S

36 Anatomically- and functionally-constrained MEG activity to normal, inverted and distorted faces

Marinkovic K, Glessner M, Dale AM, Halgren E

|MEG: language & music perception | |

37 Enhancement of Multiple Components of the Auditory Evoked Potential in Nonmusicians by Training for Pitch Discrimination with 40-Hz Amplitude Modulated Tones

Bosnyak DJ, Eaton RA, Roberts LE

1.46 38 MEG Fields from Normal Readers and Individuals with Dyslexia During Language Tasks

Bowyer SM, Moran JE, Barkley GL, Tepley N

39 Cortical representation for second language phonemes spoken by multi-speakers: A MEG study

Funatsu S, Imaizumi S, Hashizume A, Kurisu K

40 Determination of language dominance using synthetic aperture magnetometry: comparison with Wada test

Hirata M, Kato A, Saitoh Y, Ninomiya H, Taniguchi M, Kishima H, Yoshimine T

1.47 41 MEG responses from the superior temporal cortex processing unknown melodies

Kuriki S, Hashimoto T, Isahai N

42 The Auditory N1m Reveals Vowel Identity Representation in the Left Hemisphere of Human Auditory Cortex

Mäkelä AM, Alku P, May P, Tiitinen H

1.48 43 Extraction of phonological features from spoken vowels is mirrored by the MEG response

Obleser J, Eulitz C

1.49 44 Enhancement of Neuroplastic Late Auditory Evoked Potentials in Skilled Musicians

Shahin A, Bosnyak D, Kucharski E, Trainor LJ, Pantev C, Roberts LE

45 Insights into the brain mechanism for reading using MSI and electrocortical stimulation mapping

Simos P, Sarkari S, Castillo EM, Fletcher J, Papanicolaou A

1.50 46 Distinct spatiotemporal activation profiles in dyslexic children

Simos P, Sarkari S, Castillo EM, Fletcher J, Papanicolaou A

1.51 47 Task difficulty influences the magnetic N400m response

Sivonen P, Maess B, Pilz K, Friederici AD

1.52 48 Neuromagnetic measurement during music listening with the changes of playing tempo

Sutani K, Kaetsu I, Iwaki S, Tonoike M, Yamaguchi M, Uchida K

1.53 49 Neuromagnetic signals associated with sentence recognition task

Sutani K, Kaetsu I, Iwaki S, Tonoike M, Yamaguchi M, Uchida K

1.54 50 Distinct Profiles of Brain Activation in Reading Different Types of Japanese Scripts

Valaki CE, Maestú F, Fernández A, Amo C, Papanicolaou AC, Ortiz T

1.55 51 Cortical processing of speech and non-speech stimuli in the irrelevant sound effect

Valtonen J, May P, Mäkinen V, Alku P, Tiitinen H

52 Neuronal activation during reading English and Japanese-Kana pseudohomophones by a bilingual with monolingual dyslexia: a MEG study

Wydell TN, Kondo T, Mashiko T

1.56 53 Lexical Judgments Analyzed Using an fMRI-constrained MEG-dipole Method

Fujimaki N, Hayakawa T, Okabe Y, Miyauchi S

1.57 54 Magnetic brain activity evoked by word and non-word stimuli - a study in young adults

Gloser Ch, Huonker R, Rosburg T, Emmerich E

1.58 55 Lateralized networks for speech perception

Härle M, Keil A, Wienbruch C, Elbert T, Rockstroh B

56 Magnetic Mismatch Fields elicited by Duration and Pitch Changes in tonal analogs of Japanese words: an investigation of native speakers and non-speakers

Inouchi M, Kubota M, Ferrari P, Roberts TPL

1.59 57 Neuronal Syntactic Error Gravity: Comparison between L1 and L2 speakers

Kubota M, Ferrari P, Roberts TPL

58 Improvement of Discriminative Perception of Mora-timing as reflected by MEG measurements

Menning H, Schwarz O, Pantev C

59 Visual attention to words in different languages in early bilinguals: a magnetoencephalographic study

Pihko E, Nikulin VV, Ilmoniemi RJ

|MEG: motor systems | |

60 Measurement of movement related magnetic fields in preparing parameters for motor programming process

Kotani K, Horii K, Tonoike M

61 Electromyography and motion onset facilitates the determination of movement related fields in MEG

Schauer M, Waldmann G, Woldag H

1.60 62 Activation of Human Primary Motor Cortex during Observation of Jaw Movements

Shibukawa Y, Shintani M, Kumai T, Kato Y, Kato M, Suzuki T, Nakamura Y

63 Single-trial DC-MEG analysis of slow pericentral neuronal activations during simple and complex finger movements

Leistner S, Wübbeler G, Mackert BM, Trahms L, Curio G

64 Synchronization tomography: 3D-localization of phase synchronized neuronal activity in the human brain using magnetoencephalography

Tass PA, Fieseler T, Dammers J, Morosan P, Majtanik M, Boers F, Muren A, Zilles K, Fink GR

|MEG: somatosensory systems | |

65 Magnetencephalographic representation of the periodontal sensation from bilateral maxillary permanent canine teeth in human primary somatosensory cortex

Mochizuki K, Sekine H, Shibukawa Y, Shintani M, Yakushiji M, Suzuki T, Ishikawa T

1.61 66 The activities of area 3a following periodontal mechanical stimulation

1.67 85 Neonatal magnetoencephalography and spectral analysis
Kotini A, Anninos P, Koutlaki N, Adamopoulos A, Galazios G, Anastasiadis P

1.68 86 Observation of the Unaveraged Fetal MEG using the SARA Instrument
Lowery CL, Robinson SE, Vrba J, Rose D, Preißl H, Eswaran H, Wilson JD, Murphy P

1.69 87 Separating Fetal MEG Signals from the Noise
Robinson SE, Vrba J, McCubbin J

88 Influence of Intrauterine Growth Retardation on Auditory Evoked cortical Fields (AEF) in fetal Magnetoencephalography (FMEG)
Schleußner E, Kentner A, Haueisen J, Kähler C, Schneider U, Seewald HJ

89 Determinants of fetal neurological maturation assessed in fetal magnetoencephalography (fMEG)
Schneider U, Schleussner E, Kähler C, Haueisen J, Seewald HJ

Cardiac modeling		

90 Model of current distribution generated by extended electrical sources and ist using for current maps classification
Vasetsky Y, Chaikovsky I

Multimodal imaging		

91 Presurgical mapping of the central region in patients with brain tumors: is BOLD contrast fMRI always discriminating?
Caulo M, Ferretti A, Del Gratta C, Colosimo C, Tartaro A, Bonomo L, Romani GL

92 Design and Analysis of Nonliner filter for Magnetic Resonance images on Wavelet-Based Method
Cheol KS

1.70 93 Spatiotemporal Patterns of Human Navigation Investigated by MEG and fMRI
De Araujo DB, Salles A, Tedeschi W, Santos AC, Araujo D, Baryshnikov B, Wakai RT, Baffa O

94 Brain Activation during a Visuo-Motor Working Memory Task studied by means of Event-Related fMRI
Del Gratta C, Babiloni C, Carducci F, Ferretti A, Tartaro A, Bonomo L, Romani GL, Rossini PM

1.71 95 Brain Activation during Sensory Image Generation studied by means of fMRI
Del Gratta C, Di Matteo R, De Nicola A, Ferretti A, Tartaro A, Bonomo L, Romani GL, Belardinelli MO

1.72 96 MEG-fMRI Multimodal Imaging in One Single Software Environment
Erné SN, Demelis M, Pasquarelli A, Ludolph A, Müller HP, Kassubek J

97 An fMRI study of activation of SII and adjacent cortices elicited by median nerve stimulation at different stimulus intensities
Ferretti A, Del Gratta C, Caulo M, Babiloni C, Tartaro A, Bonomo L, Rossini PM, Romani GL

1.73 98 Combining Brain Recording Technologies: Using of Brain Surfaces
Fuchs A

99 A New Brain Function Mapping Method Using the Dynamic Susceptometry - A Feasibility Study
Lee SY, Cho MH, Yang JS, Park TS, Han SW, Byun HS, Huh Y

1.74 100 The OMEGA Software - Application in fMRI Studies of Bimanual Coordination
Müller HP, Scharpf S, Loichinger W, Ludolph A, Kraft E, Erné SN

1.75 101 Optically Coregistered MEG/MRI Markers
Pasquarelli A, Lindenthal H, Müller HP, Erné SN

1.76 102 Comparative MEG-fMRI study of the human somatosensory cortex
Schulz M, Chau W, Graham S, Ishii R, Ross B, Pantev C

103 Functional Neuroanatomy of Simple Mental Arithmetic and Multiplication Tables Repetition: A Functional Magnetic Resonance Imaging Study
Wang L, Saito M

1.76.1.1.1.1 104 EEG and radiothermographic mapping during cognitive performance in Chernobyl patients

Zhavoronkova L, Kuznetsova G, Gabova A, Passechnik V, Selsky A, Kholodova N, Yanovich A, Lavrova T

1.77 105 The Role of the Left Angular/Supramarginal Gyrus in Japanese Kanji Reading

Hara H, Wydell T, Oga T, Aso T, Mima T, Nagamine T, Fukuyama H, Shibasaki H

1.78 106 Mapping brain activity with respect to brain anatomy: a MEG/cytoarchitectonic study

Morosan P, Dammers J, Mohlberg H, Niedeggen M, Hesselmann G, Boers F, Muren A, Amunts K, Zilles K, Tass PA

| Noninvasive measurements of iron |

1.79

1.80 107 Liver iron assessment in rats by using NMR: a simple statistical analysis on T2 maps

Bortolazzi M, Fenzi A

1.81 108 Preliminary Liver Iron Evaluation Using an AC Supercondicting Magnetic Susceptometer

Carneiro AAO, Baffa O, Angulo IL, Covas DT

109 The influence of thorax tissue in Biomagnetic Liver Susceptometry (BLS)

Fischer R, Engelhardt R, Nielsen P

110 A Room-Temperature Susceptometer to Measure Liver Iron: Susceptometer Design and Performance

Kumar S, Avrin WF, Hecht D, Trammel HS, Perry AR, Freeman WN, McManus T

111 Three phase magnetization method: An improved way of magnetopneumographic measurement

Nakadate T, Yagami T, Zheng Y, Kotani M

1.82 112 An AC Magnetising Field Susceptometer for Liver Iron Concentration Assessment

Penna DS, Del Gratta C, Cianflone F, Erné SN, Granata C, Pentiricci A, Pizzella V, Russo M, Romani GL

113 Relationship Between Magnetic Susceptibility and Proton Transverse Relaxation Rates in Packed Human Red Blood Cells

Pontre B, Chua-Anusorn W, Robins E, StPierre T

114 Biomagnetic liver susceptometry in children with transfusional iron overload, younger than 4 years

Engelhardt R, Dürken M, Fischer R, Kordes U, Janka-Schaub G, Longo F, Piga A, Nielsen P

115 Applications of biomagnetic liver susceptometry in hematological disorders.

Fischer R, Batzella MG, Borgna-Pignatti C, Capra M, Caruso V, De Sanctis V, Di Gregorio F, Duerken M, Engelhardt R, Eber S, Forni GL, Fragatou S, Galanello R, Gamberini MR, Graubner UB, Janka GE, etc.

1.83 MEG: auditory systems

1.84 116 Change of N1m Latency by Simultaneous Visual - Auditory Stimulation
Adachi S, Kobayashi A, Shiroto T, Ono Y, Ishiyama A, Kasai N, Tonoike M

1.85 117 Frequency specificity of auditory SSR to simultaneously presented AM tones
Draganova R, Ross B, Pantev C

1.86 118 Cortical representation of pitch and timbre of the missing fundamental of complex sounds
Fujioka T, Okamoto H, Takeshima Y, Kakigi R, Ross B, Pantev C

1.87 119 Cortical representation of pitch contour and interval changes of melodies
Fujioka T, Trainor LJ, Ross B, Kakigi R, Pantev C

1.88 120 The voice-specific process revealed by neuromagnetic responses
Gunji A, Levy D, Ishii R, Kakigi R, Pantev C

121 The Effect of Tone Pulses with Fluctuating Inter-Stimulus Intervals on The Elicitation of a GO/NO-GO Response
Harada N, Nakagawa S, Iwaki S, Holroyd T, Yamaguchi M, Tonoike M, Moriya T

122 Auditory mechanisms detecting sound-stream and categorical violations:A MEG mismatch study
Imaizumi S, Funatsu S, Seki H, Mori K, Hishizume A, Kurisu K

123 Selective attention to pitch or laterality induces short-term plasticity in human auditory cortex
Jin YC, Ozaki I, Suzuki Y, Baba M, Matsunaga M, Hashimoto I

1.89 124 Object Representation of Sequential and Simultaneous Binaural Sounds
Knief A, Schulte M, Lamprecht-Dinnesen A, Pantev C

125 Entrainment decreases peak amplitude, but increases autocorrelation, in the auditory evoked response to target tones.
Martin T, Pearson-Bish P, Houck J, Ilmoniemi RJ, Tesche CD

1.90 126 Auditory MEG Responses Predict Behavioral Sound Detection in Humans
Mäkinen V, May P, Tiitinen H

1.91 127 Effects of tone frequency on brain cortical activities evoked by bone-conducted sounds
Nakagawa S, Yamaguchi M, Tonoike M, Hosoi H, Imaizumi S, Watanabe Y

1.92 128 Specific evaluating method and therapeutic approach for chronic dizzy sensation
Oe H, Kandori A, Ohira S, Miyashita K, Date H, Murakami M, Miyashita T, Tsukada K, Naritomi H

129 Auditory Evoked N100m as a Possible Landmark of Posterior Language Area in Patients with Temporal Lobe Gliomas
Ohtomo S, Nakasato N, Kumabe T, Kanno A, Hatanaka K, Yoshimoto T

1.93 130 A new stimulation paradigm for the investigation of auditory habituation effects
Okamoto H, Ishii R, Ross B, Curlia-Guy E, Nedzelski JM, Kubo T, Kakigi R, Pantev C

131 Differences in equivalent current dipole parameters between two magnetoencephalograph(MEG) systems - N100m study
Osaki Y, Noda K, Nishimura H, Nakagawa S, Tonoike M, Doi K, Kubo T

132 Dynamic anterolateral movement of auditory N100m dipoles reflects activation of isofrequency bands through horizontal fibers
Ozaki I, Jin YC, Suzuki Y, Baba M, Matsunaga M, Hashimoto I

1.93.1.1.1.1 133 MEG sees deep sources: Measuring and modelling brainstem auditory evoked fields
Parkkonen L, Mäkelä J

134 Auditory evoked steady-state magnetic fields reveal temporal processing in human primary auditory cortex
Ross B, Pantev C

135 Magnetic mismatch negativity study reveals alcohol-induced deterioration of pre attentive auditory processing

Rossi ME, Yamashita H, Kähkönen S

1.94 136 Sources of MEG vs EEG auditory steady-state responses

Schoonhoven R, Boden CJR, Verbunt JPA, de Munck JC

1.95 137 Virtual pitch of non-simultaneous successive harmonics

Schulte M, Knief A, Ross B, Makeig S, Pantev C

1.96 138 MEG correlates of pitch and spectrum in the auditory cortex

Seither-Preisler A, Krumbholz K, Lütkenhöner B

139 Interindividual and interhemispheric differences of brain function: An MEG study of auditory short-term adaptation

Sörös P, Teismann I, Manemann E, Michael N, Pfleiderer B, Ross B, Pantev C

140 Representation of auditory space in human auditory cortex: Effects of ILD, ITD and 3D stimulation techniques

Tiitinen H, Palomäki K, Mäkinen V, May P, Alku P

1.97 141 Auditory Evoked Magnetic Field for the Backward Masking Stimulus

Watanabe K, Kawakatsu M, Uchikawa Y, Adachi M, Kotani M

1.98 142 Off-response to pure tone is affected by the same-side previous tone

Watanabe M, Imada T

1.99 143 Dynamics of Sound Motion Processing in Human Brain: A Magnetoencephalographic Study

Xiang J, Daniel SJ, Ishii R, Chitoku S, Otsubo H, Chuang S, Deng Y, Harrison RV, Babyn P

1.100 144 Asymmetrical Enhancement of Middle-latency Auditory Evoked Fields with Aging

Yamada T, Nakamura A, Bundo M, Horibe K, Washimi Y, Kato T, Ito K, Kachi T

1.101 145 A magnetic correlate of pre-attentive periodicity analysis

Berti S, Schröger E, Mecklinger A, Herrmann C, Maess B

146 Increased event-related activity in the anterior cingulate cortex in normals by high attention in EEG and MEG recordings

Burghoff M, Soppa K, Knappe-Grüneberg S, Gallinat J, Trahms L

147 Auditory tonotopic mapping using synthetic aperture magnetometry(SAM)

Daniel SJ, Xiang J, Harrison RV

1.102 148 The MEG response to the onset of pitch in a continuous sound

Krumbholz K, Patterson RD, Seither-Preisler A, Lammertman C, Lütkenhöner B

149 Current density reconstruction of uni- and multi-sensory responses using high resolution EEG

Lee BR, Halm JH, Kang KH, Kang DH, Kwon JS, Park KS

1.103 150 A magnetoencephalographic window onto primary auditory cortex

Lütkenhöner B, Krumbholz K, Lammertmann C, Seither-Preisler A, Steinsträter O, Patterson RD

151 The Dipole Location Shift within the Auditory Evoked Neuromagnetic Field Components N100m and Mismatch Negativity (MMNm)

Rosburg T, Haueisen J, Kreitschmann-Andermahr I

1.104 152 Dependence of the N100m amplitude on spectral bandwidth

Seither-Preisler A, Krumbholz K, Lütkenhöner B

1.105 153 How and Where is Multi-Component Amplitude Modulation Processed in the Brain?

Simpson MIG, Johnson SR, Barnes GR, Hillebrand A, Holliday IE, Green GGR

1.106 154 Hemispheric difference of response curve of auditory N100m

Terasaki O

155 Stability of Long-Term Magnetic DC-Field Recordings: The Model of Acoustically Evoked Temporal Lobe Activity

Wübbeler G, Mackert BM, Burghoff M, Curio G, Trahms L

|MEG: pain | |

1.107 156 Cortical responses to intra-epidermal electrical stimulation in humans

Inui K, Tran TD, Qiu Y, Wang X, Hoshiyama M, Kakigi R

1.108 157 Multiple-source analysis of pain-related somatosensory evoked magnetic fields in humans

Wang X, Inui K, Qiu Y, Hoshiyama M, Tran TD, Kakigi R

1.109 158 MEG and EEG evoked by painful stimuli: differences and similarities

Zimmermann R, Saager C, Bromm B

|MCG: Basic research | |

1.110 159 Analysis of a Secondary Activity during Reentry Propagation in Rabbit Atrial Tissue

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