# Poster Program

**Poster Sessions Sponsored by:**


**Poster Session 1**
**Monday, 25 February 2019 - 12:45-13:45**
**Room - Exhibitor Hall B**

**[P1.001]** **Long term follow-up study with non-invasive brain stimulation (NBS) (rTMS and tDCS) in parkinson's disease (PD). Strong age dependency in the effect of NBS**
J Málly*[1], N. Geisz[1], T. Stone[2], E. Dina[3],
*[1]Inst of Neurorehabilitation, Hungary, [2]University of Glasgow, United Kingdom, [3]Semmelweis University, Hungary*

**[P1.002]** **Non electrical and non pharmacological ways of vagus nerve stimulation: Overview, pathways and clinical implications**
M Tieck*[1], I. Rojas[1], M. Jarczok[2],
*[1]Universidad CES, Colombia, [2]Ulm University, Germany*

**[P1.003]** **Which heuristic to use? Plotting the position of the left dorsolateral prefrontal cortex: A comparison of clinical methods**
J. Bryant[1], L. Valencia LCSW[2], C. Cochran[1], M Cochran Md*[3,2],
*[1]Centre College, USA, [2]NeuroScience & TMS Treatment Center, USA, [3]Vanderbilt University Medical Center, USA*

**[P1.004]** **Cognitive profiles in major depressive disorder: Comparing remitters and non-remitters to rTMS treatment.**
M Abo Aoun*, B. Meek, M. Modirrousta,
*Saint Boniface General Hospital, Canada*

**[P1.005]** **A systematic review and meta-analysis on excitability and inhibitory imbalance of the motor cortex as indexed with TMS in autism spectrum disorder**
F Masuda*[1], T. Miyazaki[1], S. Nakajima[1], S. Tsugawa[1], M. Wada[1], R. Tarumi[1], K. Ogyu[1], P. Croarkin[2], D. Blumberger[3], Z. Daskalakis[3], M. Mimura[1], Y. Noda[1],
*[1]Keio University, Japan, [2]Mayo Clinic, USA, [3]University of Toronto, Canada*

**[P1.006]** **Resting motor threshold's asymmetry correlates with the cognitive level in alzheimer's**
M. Uehara[1], G. Rutherford[1], C. Aldaba[1], B. Lithgow[1], B. Mansouri[1], L. Koski[2], C. Millikin[1], P. Fitzgerald[3], Z Moussavi*[1],
*[1]University of Manitoba, Canada, [2]McGill University, Canada, [3]Monash University, Australia*

**[P1.007]** **Neural correlates of transcranial direct-current stimulation enhanced surgical skill learning**
P Ciechanski*[1], K. Hecker[2], B. Wilson[3], C. Williams[4], S. Lopushinsky[2], S. Anderson[2], A. Cheng[2], A. Kirton[2],
*[1]University of Alberta, Canada, [2]University of Calgary, Canada, [3]Carleton University, Canada, [4]University of Victoria, Canada*

**[P1.008]** **Effect of vagus nerve stimulation in the treatment of pediatric intractable epilepsy: A preliminary analysis**
F. Tie, C Feng*,
*Beijing Children's Hospital, China*

**[P1.009]** **Modulating emotional empathy using individualized tACS protocol**
J Kang*[1,2,3], Y. Park[1], H. Lim[1], C. Wallraven[1],
*[1]Korea University, Republic of Korea, [2]Empathy Research Institute, Republic of Korea, [3]DSTC, Republic of Korea,*

**[P1.010]** **Improvement in sleep disturbances with high frequency repetitive transcranial magnetic stimulation in depressed adolescents**
A Sonmez*, C. Lewis, D. Doruk Camsari, J. Vande Voort, K. Schak, P. Croarkin,
*Mayo Clinic, USA*

**[P1.011]** **Safety of transcranial direct current stimulation across three brain regions in fasting**
A. Almousa [1], R. Alajaji [1], M. Alaboudi [1], F. Al-sultan [1], S Bashir*[2],
*[1]King Saud University, Saudi Arabia, [2]King Fahad Specialist Hospital, Saudi Arabia*

**[P1.012]** **One session of transcranial direct current stimulation (tDCS) does not modulate mu suppression when learning a novel motor task in healthy adults**
E Gregory*[1], N. Hodges[1], F. Vila-Rodriguez[2], A. Muller[1], N. Virji-Babul[1],
*[1]University of British Columbia, Canada, [2]University of British Columbia, Canada*

**[P1.013]** **Evaluating the effect of simultaneous transcranial direct current stimulation and repetitive transcranial magnetic stimulation on minimally conscious state by using EEG and functional MRI**
Y Lin*[1], Q. Huang[1], T. Han[1], Y. Su[1], D. Gao[1], W. Chen[1], H. Ye[1], T. Liu[2], X. Tian[2], Z. Zhen[3], Y. Wang[1],
*[1]Capital Medical University, China, [2]Tianjin Medical University, China, [3]Beijing Normal University, China*

**[P1.014]** **Inter-regional priming of m1: Preliminary insights from tms-eeg**
M Do*[1], M. Kirkovski[1], N. Rogasch[2], S. Bekkali[1], J. He[1], L. Byrne[1], P. Enticott[1],
*[1]Deakin University, Australia, [2]Monash University, Australia*

**[P1.015]** **Cortical plasticity induced by intermittent theta burst stimulation in NF1 patients and unaffected controls**
J Castricum*, J. Tulen, M. Ottenhoff, W. Taal, S. Kushner, Y. Elgersma,
*Erasmus MC, Netherlands*

**[P1.016]** **Cortical functional reorganization of language function in glioma patients as measured by nrTMS**
S Ille*, L. Engel, B. Meyer, S. Krieg,
*Technical University of Munich, Germany*

**[P1.017]** **Robust clinical benefit of multi-lead deep brain stimulation for treatment of gilles de la tourette syndrome and its comorbidities**
B Kakusa*, S. Saluja, W. Tate, F. Espil, C. Halpern, N. Williams,
*Stanford University School of Medicine, USA*

**[P1.018]** **Efficacy of cathodal transcranial direct current stimulation on brain networks in patients with focal epilepsy**
W. Luo[1], H. liu[2], P. Zhang[2], J Ding*[1],
*[1]Fudan University, China, [2]Shanghai Jiao Tong University, China*

**[P1.019]** **Asymmetric connectivity in the human temporal lobe assessed by cortico-cortical evoked potentials**
Y Novitskaya*, M. Dümpelmann, A. Schulze-Bonhage,
*University of Freiburg, Germany*

**[P1.020]** **Spatiotemporal characteristics of single-pulse TMS-evoked potentials from M1 and DLPFC in healthy participants and patients with schizophrenia**
Y Noda*[1,2], M. Barr[2], R. Zomorrodi[2], R. Cash[3], T. Rajji[2], P. Lioumis[2], R. Chen[4], Z. Daskalakis[2], D. Blumberger[2],
*[1]Keio University School of Medicine, Japan, [2]Centre for Addiction and Mental Health, Canada, [3]Monash Alfred Psychiatry Research Centre, Australia, [4]University Health Network, Canada*

**[P1.021]** **Quantifying epileptic connectivity using cortico-cortical evoked potentials and similarity metrics**
D Prime*[1,2], M. Woolfe[1,2], A. Koenig[2], L. Gillinder[2], J. Papacostas[2], S. O'Keefe[1], D. Rowlands[1], S. Dionisio[2],
*[1]Griffith University, Australia, [2]Mater Hospital, Australia*

**[P1.022]** **Modulation of SSVEPs using frequency matched tACS**
J Dowsett*[1], C. Herrmann [2], P. Taylor[1],
*[1]LMU, Germany, [2]University of Oldenburg, Germany*

**[P1.023]** **Learning to expect: Predicting sounds during movement is related to sensorimotor associations during listening**
J Burgess*, B. Major, C. McNeel, G. Clarke, G. Youssef, J. Lum, P. Enticott,
*Deakin University, Australia*

**[P1.024]** **Phase-specific aftereffects of transcranial alternating current stimulation on visual processing**
M Fiene*[1], B. Schwab[1], J. Misselhorn[1], C. Herrmann[2,2], T. Schneider[1], A. Engel[1],
*[1]University Medical Center, Germany, [2]Carl von Ossietzky University, Germany*

**[P1.025]** **Modulation of interhemispheric alpha-band connectivity by transcranial alternating current stimulation**
B Schwab*, J. Misselhorn, A. Engel,
*University Medical Center, Germany*

**[P1.026]** **Monitoring ECT-related anxiety: The ECT-related anxiety questionnaire (ERAQ)**
J. Obbels [1], K. Vanbrabant[1], E Verwijk*[2], F. Bouckaert[1], P. Sienaert[1],
*[1]University of Leuven, Belgium, [2]Universitiy of Amsterdam, Netherlands*

**[P1.027]** **Individualizing brainstimulation through concurrent TMS/fMRI**
M Tik*, M. Woletz, M. Princic, A. Schuler, N. Geissberger, A. Hummer, C. Windischberger,
*Medical University of Vienna, Austria*

**[P1.028]** **Functional localizers for improved DLPFC targeting: A comparison against standard rTMS targets**
M. Princic, M Tik*, M. Woletz, N. Geissberger, C. Windischberger,
*Medical University of Vienna, Austria*

**[P1.029]** **Recent advance in the treatment of patients with disorders of consciousness: A review of transcranial direct current stimulation efficacy**
G Martens*[1], A. Barra[1], S. Laureys[1], A. Thibaut[1,2],
*[1]University Hospital of Liege, Belgium, [2]Harvard Medical School, USA*

**[P1.030]** **Basolateral amygdala deep brain stimulation for treatment refractory combat PTSD: data from the first two cases**
R Koek Md*[1,2], J. Langevin, MD[3,2], S. Krahl, PhD[4,2], J. Chen, MD, PhD[5,2], D. Sultzer, MD[6,2], M. Mandelkern, MD, PhD[7,2], A. Kulick, PhD[8],
*[1]Psychiatry VA Greater Los Angeles, USA, [2]UCLA, USA, [3]Neurosurgery, VA Greater Los Angeles, USA, [4]Neurophysiology, VA Greater Los Angeles, USA, [5]Neurology, VA Greater Los Angeles, USA, [6]Gero/Neuropsychiatry, VA Greater Los Angeles, USA, [7]Neuroradiology, VA Greater Los Angeles, USA, [8]Neuropsychology, VA Greater Los Angeles, USA*

**[P1.031]** **Ultrasound evoke ion channels in caenorhabditis elegans by mechanical effects**
W. Zhou[1], X. Wang[1,2], L. Niu[1], L Meng*[1], H. Zheng[1],
*[1]Chinese Academy of Sciences, China, [2]Northeastern University, China*

**[P1.032]** **If you prepare to move, so do I... sort of: motor resonance from action-preparation to action-execution**
C Mc Neel*, C. Davies, J. Lum, M. Fuller-Tyszkiewicz, N. Albein-Urios, P. Enticott,
*Deakin University, Australia*

**[P1.033]** **The posterior parietal cortex has a greater role than the supplementary motor area in novel motor behaviour: A TMS-based virtual disruption study**
P Shojaii*, D. Turner,
*University of East London, United Kingdom*

**[P1.034]** **Changes of multisegmental responses of the calf muscles during transcranial magnetic stimulation and electrical stimulation of peripheral nerve**
A Militskova*[1], G. Yafarova[1], T. Baltina[1], I. Lavrov[1,2],
*[1]Kazan Federal University, Russian Federation, [2]Mayo Clinic, USA*

**[P1.035]** **Molecular and elemental contrast microscopy for biochemical fingerprinting of the cellular action mechanisms underlying tDCS in appetite control**
A Surowka*[1,2], A. Ziomber[3], M. Czyzycki[1,2], A. Gianoncelli[1], D. Bedolla[1], G. Birarda[1], K. Kasper[4], M. Szczerbowska-Boruchowska[2], L. Vaccari[1],
*[1]Elettra-Sincrotrone Trieste, Italy, [2]AGH University of Science and Technology, Poland, [3]Jagiellonian University Medical College, Poland, [4]AGH University of Science and Technology, Faculty of Physics and Applied Computer Science, al. Mickiewicza 30, 30-059 Kraków, Poland, Poland*

**[P1.036]** **A two-site, open-label, non-randomized update, suggests focal electrically administered seizure therapy (FEAST) may have a reduced time to re-orientation compared to right unilateral ultra-brief pulse electroconvulsive therapy (UBP-RUL ECT).**
G Sahlem*[1], E. Short[1], W. McCall[2], P. Rosenquist[2], J. Fox[1], A. Manett[1], Z. Nahas[3], C. Mazingue[1], M. George[1,4], H. Sackeim[5],
*[1]Medical University of South Carolina, USA, [2]Medical College of Georgia, USA, [3]University of Minnesota, USA, [4]Ralph H. Johnson VA Medical Center, USA, [5]Columbia University, USA*

**[P1.037]** **Abnormal functional frontal asymmetry and behavioral correlates in adult ADHD: A TMS-EEG study**
A Avnit*, U. Alyagon, S. Zibman, A. Zangen,
*Ben-Gurion University of the Negev, Israel*

**[P1.038]** **Persistent changes in cortical, subcortical and network-level dynamics induced by 10-Hz tACS applied over bilateral parietal cortex: a MEG study**
C Tesche*[1], J. Houck[2],
*[1]University of New Mexico, USA, [2]The Mind Research Network, USA*

**[P1.039]** **Persistent physiological changes in female AFL players following sports related concussions**
B Major*,
*Deakin University, Australia*

**[P1.040]** **Inter-individual variability in cortical plasticity assessment in healthy subjects by application of theta burst stimulation on primary motor cortex**
A Hamza*[1], S. Bashir[2],
*[1]National University of Computer and Emerging Sciences, Pakistan, [2]King Fahad Specialist Hospital, Saudi Arabia*

**[P1.041]** **The relationship between short interval intra-cortical inhibition and stopping ability**
N Chowdhury*, E. Livesey, J. Harris,
*University of Sydney, Australia*

**[P1.042]** **A systematic review on the effects of non-invasive neuromodulation on executive and other cognitive functions in addictive disorders**
R Schluter*[1], J. Daams[1], R. van Holst[1], A. Goudriaan[1,2],
*[1]Amsterdam UMC, Netherlands, [2]Arkin, department of care, research and quality of care, Netherlands*

**[P1.043]** **Assessing the validity and reliability of rapid transcranial magnetic stimulation mapping**
R Cavaleri*[1], S. Schabrun[1,2], L. Chipchase[1,3],
*[1]Western Sydney University, Australia, [2]Neuroscience Research Australia, Australia, [3]University of Canberra, Australia*

**[P1.044]** **Assessing cTBS virtual lesioning effects on parietal cortices and its ability to shift spatial attention**
A Thomas*[1], M. Bellgrove[2], M. Rogers[1],
*[1]Deakin University, Australia, [2]Monash University, Australia*

**[P1.045]** **EEG functional connectivity predicts causal brain interactions**
J. Vink[1], M. Westover[2], A. Pascual-Leone[3,4,5], M Shafi*[6,5],
*[1]University Medical Center Utrecht, Netherlands, [2]Massachusetts General Hospital, USA, [3]Hardvard Medical School, USA, [4]Universitat Autonoma de Barcelona, Spain, [5]Beth Israel Deaconess Medical Center, USA, [6]Harvard Medical School, USA*

**[P1.046]** **Effects of intermittent theta burst stimulation combined with mirror visual feedback in healthy adults**
J Zhang*, K. Fong,
*The Hong Kong Polytechnic University, Hong Kong*

**[P1.047]** **The association between transcranial magnetic stimulation evoked potential response and resting electroencephalography**
L. Mulsant[1], A. Daskalakis[1], R Zomorrodi*[1], T. Rajji[1], D. Blumberger[1,2], Z. Daskalakis[1,2],
*[1]Centre for Addiction and Mental Health, Canada, [2]University of Toronto, Canada*

**[P1.048]** **Modifying the brain's resting-state network connectivity with near infrared transcranial photobiomodulation**
R Zomorrodi*[1], G. Loheswaran[2], A. Pushparaj[3], I. Lim[2],
*[1]Centre for Addiction and Mental Health, Temerty Centre for Therapeutic Brain Intervention, Canada, [2]Vielight Inc., Canada, [3]Ironstone Product Development Inc, Canada*

**[P1.049]** **Exposure to an alternating magnetic field generated by a rotating permanent magnet decreases the motor cortex excitability**
M Christova*[1,2], D. Rafolt[3], S. Fresnoza[4], E. Gallasch[2],
*[1]University for Applied Sciences, FH-Joanneum Graz, Austria, [2]Medical University Graz, Austria, [3]Medical University of Vienna, Austria, [4]University of Graz, Austria*

**[P1.050]** **Exploratory study of optimal conditions of repetitive transcranial magnetic stimulation of the primary motor cortex for chronic pain**
K Hosomi*, N. Mori, T. Mano, H. Kishima, Y. Saitoh,
*Osaka University Graduate School of Medicine, Japan*

**[P1.051]** **Investigating the neurophysiological mechanisms of transcranial alternating current stimulation**
B. Asamoah, A. Khatoun, M Mc Laughlin*,
*KU Leuven, Belgium*

**[P1.052]** **Dopamine depletion effects on cognitive flexibility as modulated by tDCS of the dlPFC**
C. Borwick[1], R. Lal[1], C. Stagg[2], L Aquili*[1],
*[1]Sheffield Hallam University, United Kingdom, [2]Oxford University, United Kingdom*

**[P1.053]** **TMS-EEG and TMS-EMG to assess the pharmacodynamic profile of a novel potassium channel opener (XEN1101) on human cortical excitability**
I Premoli*[1], G. Beatch[2], P. Rossini[1], E. Abela[1], K. Posadas[3], L. Green[3], N. Yogo[3], P. Goldberg[2], M. Richardson[1],
*[1]King's College London, United Kingdom, [2]Xenon Pharmaceuticals Inc., Canada, [3]National Institute for Health Research (NIHR), United Kingdom*

**[P1.054]** **The role of the DLPFC in conflict resolution: Investigating the functional architecture of cognitive control using cTBS and combined NIRS/EEG**

A Ehlis*[1], M. Maier[1], L. Zarantonello[2], F. Haeussinger[1], T. Rohe[1], A. Fallgatter[1],
*[1]University Hospital Tuebingen, Germany, [2]University of Padova, Italy*

**[P1.055] Relationship of active to resting motor threshold influences the aftereffects of theta-burst stimulation**

P Fried*[1], A. Jannati[1], T. Morris[1], S. Buss[1], E. Santarnecchi[1], M. Shafi[1], A. Pascual-Leone[2,1],
*[1]Harvard Medical School, USA, [2]Institut Guttman, Spain*

**[P1.056] Activity breaks during prolonged sitting enhance responses to paired associative stimulation**

E Bojsen Møller*, M. Ekblom, O. Tarassova, Ö. Ekblom,
*GIH, Sweden*

**[P1.057] EEG network-specificity of response to fMRI-guided TMS perturbation of the default mode and dorsal attention networks is correlated with cognition**

R. Ozdemir, E. Tadayon, P. Boucher, D. Moni, K. Karakhanyan, A. Pascual-Leone, M Shafi*, E. Santarnecchi,
*Harvard Medical School, USA*

**[P1.058] Repetitive rranscranial magnetic stimulation effects on the cognitive function of the patients with depressive disorders: A retrospective study**

R Rostami*, R. Kazemi, S. Geshani, Z. Kazerounian,
*University of Tehran, Iran, Islamic Republic of*

**[P1.059] Transcranial magnetic stimulation for the treatment of nicotine addiction: A systematic review**

P. Vázquez-Beceiro, M. Bort, E. M. Marrón, R Viejo Sobera*,
*Universitat Oberta de Catalunya, Spain*

**[P1.060] Long-term effects of rTMS on the functional brain networks in treatment-resistant depression**

R Ge*[1], J. Downar[2], D. Blumberger[2], Z. Daskalakis[2], R. Lam[1], F. Vila-Rodriguez[1],
*[1]University of British Columbia, Canada, [2]University of Toronto, Canada*

**[P1.061] Relationship of cognitive reserve and cortical excitability in healthy cognitive agers and amyloid positive mild cognitive impairment**

S Buss*[1], D. Bartres-Faz[2,1], P. Davila Perez[1,3], E. Santarnecchi[1], A. Pascual-Leone[1,4], P. Fried[1],
*[1]Beth Israel Deaconess Medical Center, USA, [2]University of Barcelona, Spain, [3]Universidade da Coruña, Spain, [4]Universitat Autònoma, Spain*

**[P1.062] Behavioral and hemodynamic effects of prefrontal anodal stimulation in healthy older adults: A simultaneous tDCS-fNIRS study**

E Di Rosa*[1,2,3], S. Brigadoi*[2], D. Mapelli[2], S. Cutini[2], V. Tarantino[2,4], R. Dell'Acqua[2], T. Braver[1], A. Vallesi[2,5],
*[1]Washington University in St. Louis, USA, [2]University of Padova, Italy, [3]Keele University, United Kingdom, [4]University of Palermo, Italy, [5]San Camillo Hospital IRCCS, Italy*

**[P1.063] Sensory contamination in TMS-EEG recordings: Can we isolate TMS-evoked neural activity?**

M Biabani*[1], A. Fornito[1], T. Mutanen [2,3], J. Morrow[1], N. Rogasch[1],
*[1]Monash University, Australia, [2]Aalto University, Finland, [3]Helsinki University Hospital, Finland*

**[P1.064] Interventional psychiatry, a new competency for 21st century psychiatry residents**

R Ostroff*, B. Kitay, S. Wilkinson, J. Taylor,
*Yale University, USA*

**[P1.065] Translational non-invasive brain stimulation from mouse to monkey to human**

I Alekseichuk*, K. Mantell, S. Shirinpour, A. Opitz,
*University of Minnesota, USA*

**[P1.066] Two-week repetitive transcranial magnetic stimulation of the dorsal lateral prefrontal cortex does not affect cortical excitability in chronic smokers**

R. Bonalontal[1,2], K. Caulfield[1], S. Henderson[1], K. Hartwell[1], K. Brady[1], M. George[1], X Li*[1],
*[1]Medical University of South Carolina, USA, [2]University of South Carolina, USA*

**[P1.067] Mapping interhemispheric interactions with paired-pulse TMS**

D Cooke*[1], D. Corp[1,2], J. Hsu[1], R. Perellón Alfonso[3], A. Pascual-Leone[1], M. Fox[1,4],
*[1]Beth Israel Deaconess Medical Center, USA, [2]Deakin University, Australia, [3]Department of Neurology, University Medical Centre Ljubljana, Slovenia, [4]Harvard Medical School, USA*

**[P1.068] The Non-invasive Neurostimulation Network (N3): Shared institutional infrastructure to accelerate brain stimulation research**

A Kirton*, E. Zewdie, L. Gan, B. Selby, F. MacMaster, O. Monchi,
*University of Calgary, Canada*

**[P1.069] EEG Oscillations Response To Dual-Target rTMS Therapy of Parkinson Disease and Co-Occuring Depression.**

L Aftanas*[1,2], K. Kulikova[3], I. Brack[3], S. Dzemidovich[3], E. Filimonova[3], B. Doronin[4],
*[1]Department of Experimental & Clinical Neuroscience, Lab. of Affective, Cognitive & Translational Neuroscience, FSBSI Scientific Research Institute of Physiology & Basic Medicine, Russian Federation, [2]Department of Neuroscience, Novosibirsk State University, Russian*

*Federation, [3]FSBSI Scientific Research Institute of Physiology & Basic Medicine, Russian Federation, [4]Novosibirsk State Medical University, Russian Federation*

**[P1.070] Intracranial network stimulation as a method to suppress epileptic activity**

D Van Blooijs*, G. Huiskamp, E. Aarnoutse, M. Zijlmans, N. Ramsey, F. Leijten,
*University Medical Center Utrecht, Netherlands*

**[P1.071] Adverse events associated with repeated sessions of tDCS: A systematic review and meta-analysis**

S Nikolin*[1], C. Huggins[2], D. Martin[1], A. Alonzo[1], C. Loo[1],
*[1]University of New South Wales, Australia, [2]Harrogate and District NHS Foundation Trust, United Kingdom*

**[P1.072] Forgiveness and cognitive control – Provoking revenge via theta-burst-stimulation of the DLPFC**

M Maier*[1,1], D. Rosenbaum[1], F. Haeussinger[1], M. Brüne[2], B. Enzi[2], C. Plewnia[1,1], A. Fallgatter[1,1,3], A. Ehlis[1,1],
*[1]University of Tuebingen, Germany, [2]Ruhr-University Bochum, Germany, [3]Werner Reichardt Centre for Integrative Neuroscience (CIN), Germany*

**[P1.073] Investigating the causal role of frontal and parietal cortices in intention understanding: a cTBS study**

A Koul*[1], M. Soriano[2,1], A. Avenanti[3,4], A. Cavallo[2,1], C. Becchio[1,2],
*[1]Fondazione Istituto Italiano di Tecnologia, Italy, [2]University of Torino, Italy, [3]University of Bologna, Italy, [4]IRCCS Fondazione Santa Lucia, Italy*

**[P1.074] EPI-based target tracking in concurrent TMS-fMRI**

M Woletz*, M. Tik, M. Prinčič, A. Schuler, C. Windischberger,
*Medical University of Vienna, Austria*

**[P1.075] Neural correlates of the effect of add-on transcranial direct current stimulation on persistent auditory verbal hallucinations in schizophrenia: A functional MRI study**

A Bose*, G. Bhalerao, S. Agarwal, V. Shivakumar, S. Kalmady, S. Shenoy, V. Sreeraj, J. Narayanaswamy, G. Venkatasubramanian,
*National Institute of Mental Health and Neuro Sciences, India*

**[P1.076] A manipulative approach to the phase response function of EEG oscillations by transcranial magnetic stimulation**

T Onojima*[1], Y. Okazaki[1], K. Kitajo[1,2],
*[1]RIKEN Center for Brain Science, Japan, [2]National Institute for Physiological Sciences, Japan*

**[P1.077] Trans-spinal direct current stimulation in primary orthostatic tremor: A randomized, double-blind, sham-controlled, crossover trial**

J Lamy*[1], P. VARRIALE[1], S. MEHDI[1], E. APARTIS[1,2], E. ROZE[1,3], M. VIDAILHET[1,3],
*[1]ICM, France, [2]APHP - Saint Antoine Hospital, France, [3]APHP - Pitié Salpêtrière Hospital, France*

**[P1.078] Effect of rTMS therapy on pain descriptors and corticomotor excitability in fibromyalgia: A randomized control trial**

V Tiwari*, S. Nanda, B. Mattoo, U. Kumar, S. Kumaran, R. Bhatia,
*All India Institute of Medical Sciences, India*

**[P1.079] Variability of tDCS effects on visual detection: Relating performance to individual electric field models**

S Esterer*[1], L. Rountree[1,2], H. Johnston[1], L. Breakwell[1], T. Redmond[1], D. McGonigle[1,1],
*[1]Cardiff University, United Kingdom, [2]Aston University, United Kingdom*

**[P1.080] Inter-postural changes in TDCS and TMS electric fields**

M Mikkonen*, I. Laakso,
*Aalto University, Finland*

**[P1.081] High frequency Deep TMS over the bilateral insula is associated with increased degree centrality in the prefrontal cortex of obese subjects: Preliminary evidence**

F. Devoto[1,2], A Ferrulli*[3], L. Zapparoli[4], S. Massarini[3], C. Verga[4], G. Banfi[4,5], E. Paulesu[4,2], L. Luzi[3],
*[1]IRCCS Istituto Ortopedico Galeazzii, Italy, [2]University of Milano-Bicocca, Italy, [3]IRCCS Policlinico San Donato, Italy, [4]IRCCS Istituto Ortopedico Galeazzi, Italy, [5]University Vita e Salute San Raffaele, Italy*

**[P1.082] The impact of deep brain stimulation on personality, identity, and relationships in neurological and psychiatric conditions**

C Thomson*[1], R. Segrave[1], E. Racine[2], A. Carter[1],
*[1]Monash Institute of Cognitive and Clinical Neuro, Australia, [2]Pragmatic Health Ethics - Institut de recherches cliniques de Montréal, Canada*

**[P1.083] Using rtms to modulate neural networks involved in freezing of gait in Parkinson's disease**

D Lench*, T. Kearney-Ramos, G. Carmen Lopez, W. DeVries, A. Hydar, C. Hanlon, G. Revuelta,
*Medical University of South Carolina, USA*

**[P1.084]** **Accelerated theta burst stimulation for Bipolar I and II: Assessing clinical changes pre- and post-treatment**
C Tischler*, M. Gulser, K. Stimpson, E. Cole, N. Williams,
*Stanford University, USA*

**[P1.085]** **Withdrawn**

**[P1.086]** **Photobiomodulation for cognitive enhancement in healthy adults**
M. Heinrich[1], J. Sanguinetti [1,2], G. Hicks[1], B Gibson*[3], T. Mullins[3], D. Aragon[3], J. Spinks[3], M. Lamphere[3], A. Yu[4], V. Clark[3,5],
*[1]Psychology Clinical Neuroscience Center, Department of Psychology, University of New Mexico, USA, [2]Army Research Laboratory, Aberdeen Proving Ground, MD, USA, [3]University of New Mexico, USA, [4]Army Research Laboratory, USA, [5]The Mind Research Network, USA*

**[P1.087]** **Coil design considerations affecting energy efficiency of modern rTMS systems**
G Rutherford*, B. Lithgow, Z. Moussavi,
*University of Manitoba, Canada*

**[P1.088]** **Using brain stimulation to modify a brain network and support abstinence during alcohol use disorder recovery**
Y Camchong*[1], A. Roy[1], C. Gilmore[2], M. Thao[1], M. Kazynski[1], M. Fiecas[1], B. Mueller[1], A. MacDonald III[1], M. Kushner[1], K. Lim[1],
*[1]University of Minnesota, USA, [2]Defense and Veterans Brain Injury Center Minneapolis VA Medical Center, USA*

**[P1.089]** **Decoding corticospinal excitability changes during a force tracking task**
V Van Polanen*, I. Meeusen, M. Davare,
*KU Leuven, Belgium*

**[P1.090]** **Pre-TMS phase and power of ongoing EEG oscillations modulates cortical activity response at the dorsolateral prefrontal cortex**
A Bansal*,
*CAMH, Canada, University of Toronto, Canada*

**[P1.091]** **Predicting transcranial magnetic stimulation response with machine learning in a treatment resistant depression population**
A Janjua*[1], L. Hack[2], S. Dover[1], G. Job[1], W. McDonald[1], P. Riva-Posse[1],
*[1]Emory University School of Medicine, USA, [2]Stanford University School of Medicine, USA*

**[P1.092]** **Improving working memory in older adults by synchronizing cortical interactions with alternating current**
R Reinhart*, S. Grover, C. Wang, J. Nguyen,
*Boston University, USA*

**[P1.093]** **Response to rTMS in patients with medication-resistant depression is linked with the functional brain network affiliation of the stimulation site**
C Lynch*, M. Dubin, F. Gunning, C. Liston,
*Weill Cornell Medicine, USA*

**[P1.094]** **Low-frequency rTMS to ventral medial frontal cortex induces depression-like behavioral and physiological state in monkeys**
S Nakamura*, K. Tsutsui,
*Tohoku University, Japan*

**[P1.095]** **Transcranial direct current stimulation (tdcs) induces acute changes in brain metabolism**
M Shaw*[1], N. Pawlak[2], C. Choi[1], N. Khan[1], A. Datta[3], M. Bikson[4],
*[1]New York University Langone Health, USA, [2]Tufts University School of Medicine, USA, [3]Soterix Medical, USA, [4]The City College of New York CCNY CUNY, USA*

**[P1.096]** **Neuromodulation by itbs and 10hz rtms compared in healthy and depressed adults**
A Phillips*[1,2], A. Jannati[3], C. Hinchamn[3], A. Stern[3], P. Fried[3],
*[1]University of Washington, USA, [2]Berenson-Harvard Medical School, USA, [3]Harvard Medical School, USA*

**[P1.097]** **A novel neurotherapy of transcranial direct current stimulation (tDCS) combined with cognitive training in ADHD children**
S Westwood*[1], P. Asherson[1], R. Cohen Kadosh[2], B. Wexler[3], K. Rubia[1],
*[1]King's College London, United Kingdom, [2]University of Oxford, United Kingdom, [3]Yale University, USA*

**[P1.098]** **The effect of bilateral transcutaneous vagus nerve stimulation on heart rate variability and impulsivity**
C Levin*, J. Wai, A. Perricone, D. Martinez,
*Columbia University Medical Center, USA*

**[P1.099]** **The large Type 1 error associated with responder analyses**
M. van de Ruit[1,2], M Grey*[3],
*[1]Delft University of Technology, Netherlands, [2]Leiden University Medical Centre, Netherlands, [3]University of East Anglia, United Kingdom*

**[P1.100]** **Pediatric transcranial static magnetic field stimulation to improve motor learning: The PSTIM trial**
A. Hollis*[1], E. Zewdie[1,2], H. Kuo[1,3], A. Hilderley[1,3], A. Kirton[1,3],
*[1]University of Calgary, Canada, [2]Alberta Children's Hospital, Canada, [3]Alberta Children's Hospital, Canada*

**[P1.101]** **Effect of transcranial magnetic stimulation as an enhancer of a cognitive stimulation maneuver in mild cognitive impairment patients. Case studies preliminary results**
G Roque Roque*[1,2], J. Reyes-López[1,2], J. Ricardo-Garcell[3], M. López-Hidalgo[1], N. Arias-García[4], L. Aguilar-Fabré[1,2], H. Hernández-Montiel[1,2], G. Trejo-Cruz[1,2], A. Brunner-Mendoza[3], A. Calderón-Moctezuma[1,2], S. Cañizares-Gómez[5,2],
*[1]Autonomous University of Queretaro, Mexico, [2]Nervous System Clinic, Mexico, [3]National Autonomus University of México, Mexico, [4]Universidad del Valle de México, Mexico, [5] Autonomous University of Queretaro, Mexico*

**[P1.102]** **Patient-specific changes in motor network functional connectivity after brain stimulation in perinatal stroke**
H Carlson*[1,2], A. Kirton[1,2],
*[1]University of Calgary, Canada, [2]Calgary Pediatric Stroke Program, Canada*

**[P1.103]** **Withdrawn**

**[P1.104]** **Mapping contralesional motor cortex plasticity using robotic transcranial magnetic stimulation in children with perinatal stroke**
H Kuo*[1,2,3], E. Zewdie[1,2,3], A. Giuffre[1,2,3], A. Kirton[1,2,3],
*[1]University of Calgary, Canada, [2]Alberta Children's Hospital Research Institute, Canada, [3]Alberta Children's Hospital, Canada*

**[P1.105]** **Alpha-synchronized stimulation of the left DLPFC in depression using real-time EEG-triggered TMS**
B. Zrenner[1], P. Gordon[1,2], A. Kempf[1], P. Belardinelli[1], E. McDermott[1], S. Soekadar[3,1], A. Fallgatter[1], C. Zrenner[1], U. Ziemann[1], F Müller Dahlhaus*[1,4],
*[1]Eberhard-Karls-University Tübingen, Germany, [2]Universidade de São Paulo, Brazil, [3]Charité – University Medicine Berlin, Germany, [4]Johannes Gutenberg University Medical Center Mainz, Germany*

**[P1.106]** **Right sided (RDLPFC) low frequency (1Hz) rTMS in the third trimester of pregnancy; A case report**
J Ebbing*, D. van de Lindt
*Northwest Permanente, USA*

**[P1.107]** **Individual differences and test-retest reliability in neural and mood effects of tACS**
K Clancy*, N. Kartvelishvili, W. Li,
*Florida State University, USA*

**[P1.108]** **Augmentation of intermittent theta-burst transcranial magnetic stimulation with the partial NMDA receptor agonist cycloserine: A pilot trial in the motor system of healthy individuals**
J. Cole[1,2,3,4], B. Selby[1,2,3,4], F. MacMaster[1,2,3,4,5], A. Kirton[1,2,5,4], A Mc Girr*[1,2,3,4],
*[1]University of Calgary, Canada, [2]Hotchkiss Brain Institute, Canada, [3]Mathison Centre for Mental Health Research and Education, Canada, [4]N3 Non-Invasive Neurostimulation Network, Canada, [5]Alberta Children's Hospital Research Institute, Canada*

**[P1.109]** **Motor cortical excitability: A clinical marker for memory dysfunction in type 2 diabetes mellitus**
S Zadey*[1,2], A. Pascual-Leone[2,3], P. Fried[2], S. Buss[2],
*[1]Indian Institute of Science Education and Research, India, [2]Harvard Medical School, USA, [3]Institut Guttman, Spain*

**[P1.110]** **Differential effects of trancranial magnetic stimulation and electroconvulsive stimulation on adult hippocampal neurogenesis in mice**
T Zhang*, E. Guilherme, A. Kesici, F. Vila-Rodriguez, J. Snyder,
*University of British Columbia, Canada*

**[P1.111]** **Withdrawn**

**[P1.112]** **Electroconvulsive stimulation increases astrocyte marker GFAP in multiple brain regions after chronic social defeat stress**
M Kritzer*[1], W. Rosario[1], J. Tharayil[1], C. Lai[1], P. Botros[1], A. Lowell[1], D. Cruz[1,2], R. Rodriguiz[1], W. Wetsel[1], A. Peterchev[1], D. Williamson[1,2],
*[1]Duke University, USA, [2]Durham VA Medical Center, USA*

**[P1.113]** **Youth treatment resistant depression and TMS-EEG: Insight into neurophysiological alterations of inhibition, excitability, and connectivity in depressed youth prior to rTMS therapy.**

P Dhami*[1,2], S. Atluri[1,2], J. Lee[1], Y. Knyahntska[1,2], D. Courtney[1,2], S. Shim[1], A. Voineskos[1,2], P. Croarkin[3], D. Blumberger[1,2], Z. Daskalakis[1,2], F. Farzan[4,1,2],
*[1]Centre for Addiction and Mental Health, Canada, [2]University of Toronto, Canada, [3]Mayo Clinic, USA, [4]Simon Fraser University, Canada*

**[P1.114]** **Case study: Cognitive and mood improvement in a patient with Parkinson's disease and treatment-resistant depression following accelerated intermittent theta burst transcranial magnetic stimulation to the left dorsolateral prefrontal cortex**
K Cherian*, K. Stimpson, M. Gulser, E. Cole, K. Sudheimer, J. Keller, N. Williams,
*Stanford University, USA*

**[P1.115]** **The role of gamma oscillations for working memory development in the adolescent brain**
C Walker*[1], N. Murphy[2], N. Ramakrishnan[2], D. Fraher[2], R. Cho[2],
*[1]University of Texas Health Science Center at Houston, USA, [2]Baylor College of Medicine, USA*

**[P1.116]** **Dose response relationship between Near Infrared (NIR) light stimulation and functional brain activity in healthy older adults**
P Sinha*[1], J. P John[1], A. J Woods[2,2], D. Bowers[2,2],
*[1]National Institute of Mental Health and Neurosciences, India, [2]University of Florida, USA*

**[P1.117]** **Galvanic Vestibular Stimulation (GVS) normalises subnetwork interactions in Parkinson's disease**
A Liu*[1,2], S. Lee[2], L. Kim[1], S. Garg[1], Z. Wang[2], M. McKeown[1,2],
*[1]Pacific Parkinson's Research Centre, Canada, [2]University of British Columbia, Canada*

**[P1.118]** **Safety and tolerability of non-invasive neurostimulation in children**
E Zewdie*, P. Ciechanski, H. Kuo, A. Giuffre, C. Kahl, R. King, L. Cole, H. Grant, T. Seeger, O. Damji, J. Hodge, B. Selby, L. Gan, K. Barlow, F. MacMaster, A. Kirton,
*University of Calgary, Canada*

**[P1.119]** **Generating Custom Time Series Signals Using Recurrent Neural Network Based EEG Patterns for Transcranial Current Brain Stimulation**
L Zhang*,
*University of Regina, Canada*

**[P1.120]** **A Hebbian framework for predicting modulation of synaptic plasticity with tDCS**
G Kronberg*, A. Rahman, M. Bikson, L. Parra,
*The City College of New York, USA*

**[P1.121]** **Transcranial direct current stimulation allows to early detect synaptic dysfunction and memory impairment in a mouse model of Alzheimer's disease**
S. Cocco, M. Rinaudo, K. Gironi, S. Barbati, C. Ripoli, M Podda*, C. Grassi,
*Università Cattolica del Sacro Cuore, Italy*

**[P1.122]** **Transcutaneous auricular vagus nerve stimulation modulates locus coeruleus activity in migraine: a preliminary fMRI study**
Y. Zhang [1], J. Liu[2], H. Li[1], Z. Yan[1], X. Liu[1], G. Wilson[2], B. Liu[1], J Kong*[2],
*[1]Guangdong Provincial Hospital of Chinese Medicine, China, [2]Massachusetts General Hospital, USA*

**[P1.123]** **Efficacy of transcranial direct-current stimulation on chronic insomnia**
K Jung*[1], J. Jun[2],
*[1]Seoul National Universtiy, Republic of Korea, [2]Kyungpook National University Chilgok Hospital, Republic of Korea,*

**[P1.124]** **Repetitive transcranial magnetic stimulation (rTMS) for simultaneous treatment of comorbid somatic and psychiatric disorders**
S Jääskeläinen*[1], T. Taiminen[2], M. Tram[1],
*[1]University of Turku, Finland, [2]Turku University Hospital, Finland*

**[P1.125]** **Effective factors of repetitive transcranial magnetic stimulation in major depression: Meta-(Regression) analysis.**
S Ikeda*[1], Y. Morishima[2], K. Nishida[1], M. Yoshimura[1], K. Katsura[1], S. Minami[1], T. Kinoshita [1],
*[1]Kansai medical university, Japan, [2]University of Bern, Switzerland*

**[P1.126]** **Family Attendance at ECT**
A Elias*[1], A. Ang[2], A. Schneider[2], K. George[2],
*[1]The University of Melbourne, Australia, [2]Peter James Centre, Australia*

**[P1.127]** **Does corticospinal excitability depend on the oscillatory phase of the pericentral m-rhythm?**
A Karabanov*[1], K. Madsen[1,2], L. Krohne[1,2], M. Safeldt[1], L. Tomasevic[1], H. Siebner[1,3],
*[1]Copenhagen University Hospital, Denmark, [2]Technical University of Denmark, Denmark, [3]Copenhagen University Hospital Bispebjerg, Denmark*

**[P1.128]** **A feasibility study with a novel, subcutaneous extracranial brain stimulator in a beagle model for non-invasive human neuromodulation**
J. Lee[1], Y. Chung[2], S. Kim[3], H. Lee[3], J. Kang[3], Y Shon*[4], D. Na[4],
*[1]Kyung Hee University Hospital, Republic of Korea, [2]Kangbook Samsung Medical Center,*

*Republic of Korea, [3]Samsung Advanced Institute of Technology (SAIT), Republic of Korea, [4]Samsung Medical Center School of Medicine, Republic of Korea,*

**[P1.129] Functional connectivity analysis of the cerebello-thalamo-cortical network in 1000 human connectome project subjects using resting state fMRI**

J Bergman*[1], L. Zrinzo[1,2], H. Akram[1,2],
*[1]UCL Queen Square Institute of Neurology, United Kingdom, [2]The National Hospital for Neurology and Neurosurgery, United Kingdom*

**[P1.130] Magnetothermal deep brain stimulation in freely moving mice**

S Hescham*[1], P. Chiang[2], J. Moon[2], M. Christiansen[2,3], Y. Temel[1], P. Anikeeva[2],
*[1]Maastricht University, Netherlands, [2]Massachussetts Institute of Technology, USA, [3]ETH Zürich, Switzerland*

**[P1.131] Magnetic seizure therapy in bipolar depression: Clinical efficacy and cognitive safety**

V Tang*[1], D. Blumberger[1], J. Dimitrova[2], S. McClintock[3], T. Rajji[1], J. Downar[4], B. Mulsant[1], P. Fitzgerald[5], Z. Daskalakis[1],
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**[P1.132] Withdrawn**

**[P1.133] Efficacy of rTMS as an outpatient procedure for major depressive disorder: A description of clinical outcomes in a real-world, decentralised, multi-clinic Australian TMS service**

T Cassidy*[1], P. Fitzgerald[2,3,1],
*[1]TMS Australia, Australia, [2]The Epworth Clinic, Australia, [3]Monash Alfred Psychiatry Research Centre, Australia*

**[P1.134] Portable wireless transcranial ultrasound brain stimulation for freely behaving small animals**

E. Kim[1,2], E. Anguluan[1], H. Kim[2], J Kim*[1],
*[1]Gwangju Institute of Science and Technology, Republic of Korea, [2]Korea Institute of Science and Technology, Republic of Korea,*

**[P1.135] InVesalius navigator, a free and open-source software for navigated transcranial magnetic stimulation**

V Souza*[1,2], R. Matsuda[1], A. Peres[1,3], P. Amorim[4], T. Moraes[4], J. Silva[4], O. Baffa[1],
*[1]University of São Paulo, Brazil, [2]Aalto University School of Science, Finland, [3]International Institute for Neurosciences of Natal – Edmond and Lily Safra, Brazil, [4]Renato Archer's Information Technology Center, Brazil*

**[P1.136] Fear modulation by transcranial direct current stimulation**

A Van Schuerbeek*[1], A. Pierre[1], M. Vanderhasselt[2], S. Pedron[3], V. Van Waes[3], D. De Bundel[1],
*[1]Vrije Universiteit Brussel, Belgium, [2]Universiteit Gent, Belgium, [3]Université de Franche-Comté, France*

**[P1.137] Preliminary evidence for accelerated intermittent theta-burst stimulation as a treatment for cocaine use disorder**

V Steele*, A. Maxwell, T. Ross, B. Salmeron, E. Stein,
*NIDA-IRP, USA*

**[P1.138] Transcutaneous auricular vagus nerve stimulation (taVNS) have stimulus waveform specific effects on brain responses: fMRI evidence in humans**

J Sun*, X. Yang, N. Li, L. Meng, Q. Tian, W. Qin,
*Xidian University, China*

**[P1.139] Transcranial direct current stimulation (tDCS) of dorsolateral versus ventromedial prefrontal cortex: Impact on gambling task performance**

E Gomis Vicent*[1], V. Thoma[1], J. Turner[1], D. Rivolta[1], H. Bowden-Jones[2],
*[1]University of East London, United Kingdom, [2]UK National Problem Gambling Clinic, United Kingdom*

**[P1.140] The use of transcranial magnetic stimulation in autistic spectrum disorders with predominance of speech impairment**

M Marachev*, A. Grigorieva,
*Centre for Medico-Psychological Correction and Rehabilitation "Neurocentre", Russian Federation*

**[P1.141] Spatial sensitivity of the optimal dose in transcranial electrical stimulation to the skull and scalp conductivity specifications**

M. Fernandez-Corazza[1], S Turovets*[2,3], C. Muravchik[1,4],
*[1]Universidad Nacional de La Plata (UNLP), Argentina, [2]Philips Neuro, USA, [3]University of Oregon, USA, [4]Comisión de Investigaciones Científicas de la Prov. de Buenos Aires (CIC-PBA), Argentina*

**[P1.142]** **Effects of paired associative stimulation asynchrony on modulating cortico-cortical connectivity**
J Hernandez Pavon*[1,2], N. Schneider-Garces[2], J. Begnoche [2], T. Raij[1,2],
[1]*Northwestern University, USA,* [2]*Shirley Ryan AbilityLab, USA*

**[P1.143]** **Targeting rumination with combined mindful breathing and tDCS in adolescents with suicidal thoughts**
K Cullen*, M. Thai, K. Lim, B. Klimes-Dougan,
*University of Minnesota, USA*

**[P1.144]** **Rapid measurement of electromagnetic fields induced from transcranial electric stimulation using magnetic resonance imaging**
D Shereen*, L. Parra,
*City University of New York, USA*

**[P1.145]** **Brain activity and clinical outcomes in adults with depression treated with synchronized transcranial magnetic stimulation (sTMS): An exploratory study**
I Cook*[1,2], A. Wilson[1], J. Corlier[1], A. Leuchter[1],
[1]*UCLA, USA,* [2]*Los Angeles TMS Institute, USA*

**[P1.146]** **Effects of acute and subacute stimulation of ventral subthalamic nucleus on cognition and perceptual decision-making in patients with parkinson's disease**
F Girgis*[1], A. Prabhu[1], I. Saez[1], K. Scangos[2], G. Gurkoff[1], K. O'Connor[1], J. Ditterich[1], C. Carter[1], J. Smucny[1], K. Shahlaie[1],
[1]*UC Davis, USA,* [2]*UCSF, USA*

**[P1.147]** **Defining the dorsal STN border using 7.0-Tesla MRI: A comparison to microelectrode recordings and lower field strength MRI**
M Bot*[1], O. Verhagen[2], M. Caan[2], W. Potters[2], J. Dilai[2], V. Odekerken[2], J. Dijk[2], R. de Bie[2], R. Schuurman[2], P. van den Munckhof[2],
[1]*Academic Medical Center Amsterdam, Netherlands,* [2]*Academic Medical Center, Netherlands*

**[P1.148]** **Unmet need for electroconvulsive therapy in a county-based outpatient population**
M Maguire*, R. Ruppert, D. Whisenhunt, I. Lagomasino,
*University of Southern California, USA*

**[P1.149]** **Localize target regions for excitatory stimulation in psychiatric disorders: Contributions from mathematical modeling**
B Iravani*[1,2], N. Kaboodvand[1,2], A. Arshamian[1],
[1]*Karolinska Institutet, Sweden,* [2]*National Graduate School on Ageing and Health, Sweden*

**[P1.150]** **Brain morphometric correlates of iTBS clinical responses in PTSD**
O Roy*[1], J. Levasseur-Moreau [1], E. Renauld[1], M. Bilodeau[1], S. Fecteau[2],
[1]*Université Laval, Canada,* [2]*CERVO Brain Research Center, Centre intégré universitaire de santé et services sociaux de la Capitale-Nationale; Faculté de médecine, Université Laval, Quebec City, QC, Canada, Canada*

**[P1.151]** **Effectiveness of twice-daily theta burst stimulation at prefrontal cortex on methamphetamine dependents**
D Zhao*[1], T. Yuan[1,2],
[1]*Shanghai Jiao Tong University School of Medicine, China,* [2]*Nantong University, China*

**[P1.152]** **Temporal dynamics of memory formation in the ventrolateral prefrontal cortex investigated through rTMS.**
A. Medvedeva[1], R. Saw[2], G. Fuggetta[2], G Galli*[1],
[1]*Kingston University, United Kingdom,* [2]*University of Roehampton, United Kingdom*

**[P1.153]** **Acute accelerated high frequency rTMS causes an immediate local and remote increase in the serotonin transporter binding index, measured with [11C]DASB**
R Dockx*[1], K. Peremans[1], D. De Bundel[2], A. Van eeckhaut[2], L. Vlerick[1], I. Polis[1], N. Van Laeken [1], G. Pauwelyn[1], F. De Vos[1], I. Goethals[3], A. Dobbeleir[3], J. Saunders[1], C. Baeken[1],
[1]*Ghent University, Belgium,* [2]*Vrije Universiteit Brussel, Belgium,* [3]*Ghent University Hospital, Belgium*

**[P1.154]** **Effect of kHz electrical stimulation on hippocampal brain slice excitability and network dynamics**
Z. Esmaeilpour[1], M. Jackson[1], G. Kronberg[1], T. Zhang[2], R. Esteller[2], B. Hershey[2], M Bikson*[1], [1]*The City College of New York of CUNY, USA,* [2]*Boston Scientific Neuromodulation, USA*

**[P1.155]** **From Deep Brain Stimulation in Parkinson´s Disease and treatment-resistant Depression to a new perspective to understand depression**
A Silva Dos Santos*[1,2], M. Sales[1],
[1]*Psychiatry Department, Hospital Vila Franca de Xira, Portugal,* [2]*Neuroscience and Pharmacology Institute, Institute of Molecular Medicine, University of Lisbon, Portugal*

**[P1.156]** **Transcranial direct current stimulation in cocaine use disorders: preliminary findings**
G Martinotti*[1,2,3], A. Miuli[1], G. Sepede[1], C. Di Natale[1], M. Spano[1], M. Lorusso[1], G. Stigliano[1], V. Mancini[1], F. Di Carlo[1], A. Tambelli[1], L. Di Caprio[1], E. Chillemi[3], M. Pettorruso[1], M. Lupi[1], M. di

Giannantonio[1], [1] *"G. d'Annunzio" University, Chieti, Italy, Italy,* [2] *University of Hertfordshire, United Kingdom,* [3]*SRP Villa Maria Pia, Italy*

**[P1.157] Prefrontal alpha Asymmetry index predicts response to repetitive transcranial magnetic stimulation**

A. Yadollahpour[1], R Rostami*[2,3], R. Kazemi[2], A. Shakeri[1],
[1]*Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of,* [2]*Atieh Clinical Neuroscience Center, Iran, Islamic Republic of,* [3]*University of Tehran, Iran, Islamic Republic of*

**[P1.158] Single session anodal transcranial direct current stimulation alters the prefrontal and temporal alpha asymmetrical indexes in healthy individual performing a visual attention task**

A. Yadollahpour[1], M. Jalilifar[1], R Rostami*[2],
[1]*Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of,* [2]*Tehran University, Iran, Islamic Republic of*

**[P1.159] The effects of chronic tDCS on functional brain activity and sustained attention performance**

R. McKinley[1], M. Sherwood[2], C. Mullenger[2], L Mc Intire*[2],
[1]*Air Force Research Laboratory, USA,* [2]*Infoscitex, Inc, USA*

**[P1.160] Magnitude of Reduction & Speed of Remission of Suicidality for Low AmPlitude Seizure Therapy (LAP-ST) Compared to Standard Right Unilateral ECT**

N Youssef*, D. Ravilla, W. McCall, C. Patel, L. McCloud, M. Yassa, P. Rosenquist,
*Medical College of Georgia at Augusta University, USA*

**[P1.161] Short-term transcutaneous non-invasive vagus nerve stimulation reduces disease activity and pro-inflammatory cytokines in rheumatoid arthritis**

A. Drewes[1], C Brock*[2], S. Rasmussen[1], H. Møller[3], B. Deleuran[3], A. Farmer[4], M. Pfeiffer-Jensen[2],
[1]*Aarhus university, Denmark,* [2]*Aalborg University Hospital, Denmark,* [3]*Aarhus University Hospital, Denmark,* [4]*Staffordshire University Stoke on Trend, United Kingdom*

**[P3.037] Assessing the role of prefrontal and parietal cortex in working memory using combined transcranial magnetic stimulation and electroencephalography**

N Rogasch*[1], J. Morrow[1], N. Bailey[1], P. Fitzgerald[1,2], A. Fornito[1],
[1]*Monash University, Australia,* [2]*Epworth Hospital, Australia*

**[P1.162] Improvement of neurological function with chronic subthreshold cortical stimulation**

K Starnes*, D. Burkholder, C. Shin, J. Van Gompel, M. Stead, B. Lundstrom,
*Mayo Clinic, USA*

**[P1.163] How Valuable is Electroconvulsive Therapy in Bipolar Patients During Inpatient Stay? Analysis of the National Inpatient Sample of the USA.**

R. Patel[1,2], A Elmaadawi*[1,3], N. Youssef[4],
[1]*Beacon Health System, USA,* [2]*Griffin Memorial Hospital (ODMHAS), USA,* [3]*Indiana University School of Medicine, USA,* [4]*Medical College of Georgia at Augusta University, USA*

**Poster Session 2**
**Tuesday, 26 February 2019 - 12:00-13:30**
**Room - Exhibitor Hall B**

**[P2.001] Settingthe parameters to evaluate the Repetitive Transcranial Magnetic Stimulation (rTMS) studies**

A Marei*,
*Brains' Clinic, Egypt*

**[P2.002] High-frequency rTMS for treatment of myalgic encephalitis: a case series study**

W Kakuda*,
*University of Health and Welfare, Japan*

**[P2.003] Twice-daily 2mA 20-Minutes tDCS helps in the remission of suicidal ideation in adult patients with major depression**

H Da Silva Júnior*[1], S. Ferreira[2],
[1]*Neuronus Institute for Trans-disciplinary Brain Studies, Brazil,* [2]*Federal University of Goiás, Brazil*

**[P2.004] New approach for brain stimulation**

E Vaschillo*, B. Vaschillo, J. Buckman, M. Bates,
*Rutgers University, USA*

**[P2.005] Transcranial Direct Current Stimulation (tDCS): Molecular and behavioral evoked alterations**

E De Souza Nicolau*, H. Tenza-Ferrer, F. Donizete Rezende, N. Ferreira Nicolau, M. Falcão Barros, K. Augusto Farias de Alvarenga, L. Viana Magno, M. Romano-Silva,
*Faculdade de Medicina da Universidade Federal de Minas Gerais, Brazil*

**[P2.006] Once daily versus twice daily theta-burst stimulation in the treatment of major depression disorder**

C Mielacher*[1,2], M. Kiebs[1,1], T. Dellert[3], A. Metzner[1,1], H. Högenauer[1], J. Schultz[1,1], C. Lamm[4], R. Hurlemann[1,1],
*[1]University of Bonn, Germany, [2]Division of Medical Psychology, University of Bonn, Germany, [3]University of Muenster, Germany, [4]University of Vienna, Austria*

**[P2.007] TMS can detect abnormal synaptic plasticity associated with amyloid-beta and tau pathology in early staged dementia**

T Murakami*[1], M. Abe[1], A. Tiksnadi[1], N. Kobayashi[2], Y. Hashimoto[1], Y. Ugawa[1,1],
*[1]Fukushima Medical University, Japan, [2]Azuma Street Clinic, Japan*

**[P2.008] Neuronal tuning: Optimizing rTMS aftereffects by selectively targeting neuronal populations via manipulation of pulse width and phase**

I. Halawa, Y. Shirot, M. Sommer, W Paulus*, *UMG, Germany*

**[P2.009] Robotized stereotactic assistant system for pediatric dystonia patients**

Z Xie*, F. Tie,
*Beijing children's Hospital, China*

**[P2.010] Accelerated intermittent theta-burst stimulation suppresses suicidal ideation in patients with treatment-resistant depression**

B Bentzley*, E. Cole, M. Gulser, K. Stimpson, J. Hawkins, X. Xiao, A. Schatzberg, K. Sudheimer, N. Williams,
*Stanford University, USA*

**[P2.011] The positive effects of tDCS on sustained attention performance under sleep deprivation conditions are consistent and repeatable**

L Mc Intire*[1], A. McKinley[2], C. Goodyear[1],
*[1]Infoscitex, USA, [2]Air Force Research Laboratory, USA*

**[P2.012] Therapeutic implications of rTMS in bipolar disorder I: A naturalistic study**

N Monira*, J. Kriske, N. Donachie, D. Steinfink,
*TMS Neuro Solutions & Smart Neuro Health and Wellness Center, USA*

**[P2.013] Deep brain stimulation of the ventral midbrain facilitates the output to forelimb muscles via the primary motor cortex in monkeys**

M Suzuki*[1,2,3], K. Inoue[4], H. Nakagawa[4], T. Isa[4,2,3], M. Takada[4], Y. Nishimura[1,2,3],
*[1]Tokyo Metropolitan Institute of Medical Science, Japan, [2]National Institute for Physiological Sciences, Japan, [3]School of Life Science, Japan, [4]Kyoto University, Japan*

**[P2.014] Cathodal transcranial direct current stimulation over the primary motor cortex induces nonlinear neuroplasticity with modulations of intensity and duration**

M Mosayebi Samani*[1,2], D. Agboada[3,2], A. Jamil[2], M. Kuo[2], M. Nitsche[4,2],
*[1]Ilmenau University of Technology, Germany, [2]Leibniz Research Centre for Working Environment and Human Factors, Germany, [3]Ruhr University Bochum, Germany, [4]University Hospital Bergmannsheil, Germany*

**[P2.015] Cortical language function in glioma patients as measured by nrTMS**

S Ille*, A. Fendel, B. Meyer, S. Krieg,
*Technical University of Munich, Germany*

**[P2.016] Patient-based feature optimization of a seizure detector for closed-loop stimulation**

F Manzouri*[1,2], M. Duempelmann[1], S. Heller[2], P. Woias[2], A. Schulze-Bonhage[1],
*[1]University Medical Center Freiburg, Germany, [2]Department of Microsystems Engineering, Germany*

**[P2.017] Clinical and electrophysiological effects of two dTMS protocols in ADHD**

L Bokovza*[1,2], U. Alyagon[1,2], H. Shalev[3,2], A. Zangen[1,2],
*[1]Ben Gurion University of the Negev, Israel, [2]Ben-Gurion University of the Negev, Israel, [3]Soroka University Medical Center, Israel*

**[P2.018] Dorsomedial prefrontal rTMS as a treatment for treatment-resistant depression: A 3-arm, sham-controlled trial**

K Dunlop*[1], J. Shen[2], B. Woodside[2,3], K. Feffer[4,5], D. Blumberger[6,2], Z. Daskalakis[6,2], P. Giacobbe[2,7], J. Downar[2,3],
*[1]Weill Cornell Medical College, USA, [2]University of Toronto, Canada, [3]University Health Network, Canada, [4]Shalvata Mental Health Centre, Israel, [5]Tel Aviv University, Israel, [6]Centre for Addiction and Mental Health, Canada, [7]Sunnybrook Health Sciences Centre, Canada*

**[P2.019] Effects of transcranial direct current stimulation (tDCS) on resting state connectivity in mesial temporal lobe epilepsy associated with hippocampal sclerosis**

Z Küçük*[1,2], Ç. Ulaşoğlu Yıldız[2], E. Kurt[2,2], K. Eryürek[2,2], E. Şahin[2], N. Bebek[2], B. Baykan[2], T. Demiralp[2,2], S. Karamürsel[1,1],
*[1]Istinye University, Turkey, [2]Istanbul University, Turkey*

**[P2.020]** **The effect of repeated iTBS on brain activities during hand movements**
C Chang*[1], C. Chen[1,1], Y. Huang[1,2],
*[1]National Central University, Taiwan, [2]Chang Gung University, Taiwan*

**[P2.021]** **Simplified method of left DLPFC locating for depression treatment with TMS**
M. Gabitova[1], E. Grasin[1], A Masliukova*[2,1], N. Smirnov[1],
*[1]Neurosoft, Russian Federation, [2]Ivanovo State Medical Academy, Russian Federation*

**[P2.022]** **Can bihemispheric anodal transcranial current stimulation improve bimanual performance in persons with spinal cord injury? A feasibility study.**
J Iddings*[1], A. Zarkou[1], E. Field-Fote[1,2,3],
*[1]Shepherd Center, USA, [2]Emory University, USA, [3]Georgia Institute of Technology, USA*

**[P2.023]** **Comparison of conventional and deep transcranial magnetic stimulation in treatment of major depressive disorder: a retrospective analysis**
S. Johansen[1], J. Monterrey[2], M. Pimentel[1], N. Williams[2], K Raj*[2],
*[1]Stanford University School of Medicine, USA, [2]Stanford University, Department of Psychiatry and Behavioral Sciences, USA*

**[P2.024]** **Recovering postural control with rTMS. Case report.**
G Castillo*[1,2,3], L. Tuso[4], J. Rodriguez[5,1], M. Arcos Burgos[6], S. Ramirez[2,3],
*[1]Hospital Universitario de Mederi, Colombia, [2]Hospital Infantil Universitario de San Jose, Colombia, [3]Fundación Universitaria de Ciencias de la Salud, Colombia, [4]Therapy & Technology at Home, Colombia, [5]Fundación Cardio Infantil, Colombia, [6]Universidad del Rosario, Colombia*

**[P2.025]** **How to collect genuine TEPs: A Graphical User Interface to control data quality in real-time**
S. Parmigiani, S. Casarotto, M Fecchio*, M. Rosanova,
*University of Milan, Italy*

**[P2.026]** **MMSE during ECT in late-life depression: Useful or useless?**
J. Obbels[1], K. Vansteelandt[1], E Verwijk*[2], F. Bouckaert[1], P. Sienaert[1],
*[1]University of Leuven, Belgium, [2]University of Leuven, Netherlands*

**[P2.027]** **The application of transcranial direct current stimulation (tDCS) combined with traditional physical therapy to address upper limb function in chronic stroke: A case study**
N. Hoseini[1], M. Eikenberry [1], H Block*[2],
*[1]Midwestern University, USA, [2]Indiana University, USA*

**[P2.028]** **Changes in somatosensory-motor connectivity associated with a visuo-proprioceptive perception task**
J Mirdamadi*, C. Seigel, H. Block,
*Indiana University Bloomington, USA*

**[P2.029]** **Gigantocellular neurons awaken the brain from deep pharmacologically-induced coma**
S. Gao [1], A. Proekt[2,3], N. Renier[4], D Calderon*[1,3], D. Pfaff[3],
*[1]Weill Cornell Medical College, USA, [2]University of Pennsylvania, USA, [3]The Rockefeller University, USA, [4]Sorbonne Universite, France*

**[P2.030]** **Methods for paired-pulse cerebellar-M1 TMS with neuronavigation**
M Dale*, W. DeVries, M. George,
*Medical University of South Carolina, USA*

**[P2.031]** **Individualized fuctional targets optimize the effectiveness of TMS in modulation of brain activity**
Y Shen*[1], Q. Ge[1], Z. Zhu[2], C. Wang[1], Y. Cai[1], W. chen[2],
*[1]Hangzhou Normal University, China, [2]Zhejiang Medical University, China*

**[P2.032]** **Transcranial direct current stimulation (tDCS) of the right inferior frontal cortex (rIFC) attenuates sustained fear**
M Herrmann*[1], B. Simons[1], A. Horst[1], S. Boehme[2], T. Straube[3], T. Polak[1],
*[1]University Clinics of Wuerzburg, Germany, [2]University of Regensburg, Germany, [3]University of Muenster, Germany*

**[P2.033]** **Electromagnetic computation and neural modelling to determine effective activation site in brain cortex**
J Gomez Tames*, A. Hirata,
*Nagoya Institute of Technology, Japan*

**[P2.034]** **Volumetric increases in reward circuit correlated with improvement of anticipatory anhedonia in depressive patients after electroconvulsive therapy**
M Cano*[1,2,3,4], E. Lee[1], C. Soriano-Mas[5,2,6], J. Camprodon[1],
*[1]Harvard Medical School, USA, [2]Carlos III Health Institute, Spain, [3]University of Barcelona, Spain, [4]Bellvitge University Hospital-IDIBELL, Spain, [5]Universitat Autònoma de Barcelona, Spain, [6]Bellvitge University Hospital, Spain*

**[P2.035]** **Transspinal direct current stimulation for pain treatment in humans. Objective proof of concept and initial clinical findings**

M Thordstein*, H. Rahin,
*Div. Clin. Neurophysiol., Dep Clinical and Experimental Medicine, Sweden*

**[P2.036] Four cases of procedural consolidation with electroconvulsive therapy**
R. Katz [1], E. Bukanova[2], M. Blessing[2], C. Zou[3], R Ostroff*[1],
*[1]Yale Department of Psychiatry, USA, [2]Yale Department of Anesthesiology, USA, [3]Yale School of Medicine, USA*

**[P2.037] The effect of transcranial direct current stimulation on motor cortex activity in parkinson's disease: A proof-of-principle fNIRS study.**
M Simpson*, M. Mak,
*The Hong Kong Polytechnic University, Hong Kong*

**[P2.038] Motor Cortex Facilitation: An inattention marker in ADHD co-occurrence in autism spectrum disorder**
E Pedapati*[1], L. Mooney[2], S. Wu[1], J. Sweeney[1], C. Erickson[1], D. Gilbert[1],
*[1]Cincinnati Children's Hospital Medical Center, USA, [2]UC Davis, USA*

**[P2.039] Transcranial direct current stimulation of motor cortex over multiple days enhances motor learning in a complex overhand throwing task**
L Albuquerque*[1], I. Munoz[1], D. Lidstone[1], S. Kreamer-Hope[1], A. Pomerantz[1], M. Pantovic[1], M. Zurowski[1], M. Petitt[2], M. Guadagnoli[1], Z. Riley[3], B. Poston[1],
*[1]University of Nevada Las Vegas, USA, [2]Brigham Young University, USA, [3]Indiana University-Purdue University Indianapolis, USA*

**[P2.040] Effect of low-intensity pulsed ultrasound on epileptiform discharges in a penicillin-induced epilepsy model in non-human primates**
J Zou*[1,2], Y. Guo[2], L. Niu[1], L. Meng[1], N. Pang[1], H. Zheng[1],
*[1]Chinese Academy of Sciences, China, [2]Southern Medical University, China*

**[P2.041] Bifocal high-definition tACS over early sensory regions modulates crossmodal matching: Combined evidence from EEG and tACS/behavioral studies**
J Misselhorn*, B. Schwab, T. Schneider, A. Engel,
*University Medical Center, Germany*

**[P2.042] Inhibitory effect of 20 Hz-tACS on intermittent theta burst stimulation over the primary motor cortex**
K Ogata*, H. Nakazono, R. Hayashi, S. Tobimatsu,
*Kyushu University, Japan*

**[P2.043] Comparison of effect of a single-session of high- or low-frequency rTMS on cortical excitability in people with Parkinson's disease – a randomised placebo controlled trial**
C Chung*[1,2], M. Mak[1],
*[1]The Hong Kong Polytechnic University, Hong Kong, [2]Tan Tock Seng Hopsital, Singapore*

**[P2.044] Precisely patterned optogenetic stimulation with mini-LED array and lens optics in rodent visual cortex**
A Masuda*[1,2], S. Takahashi[1],
*[1]Doshisha University, Japan, [2]RIKEN, Japan*

**[P2.045] Is transcranial direct current stimulation (tDCS) an effective adjunct to cognitive training for older adults presenting with mild cognitive impairment (MCI)?**
P Cruz Gonzalez*[1], K. Fong[1], T. Brown[2],
*[1]The Hong Kong Polytechnic University, Hong Kong, [2]Monash University, Australia*

**[P2.046] cTBS increases the frequency of narrow-band gamma bursts in the contralateral pre-frontal cortex in a primate model of rTMS**
S Lehmann*[1], T. Womelsdorf[2], B. Corneil[1],
*[1]Western University, Canada, [2]Vanderbilt University, USA*

**[P2.047] Effect of different frequencies in repetitive transcranial magnetic stimulation for the patients with post-stroke motor aphasia**
R Awa*[1], H. Tokimura[2], H. Yamanaka[3], Y. Tokimura[3], S. Etoh[4], K. Todoroki[3], K. Takasaki[1], M. Atsuchi[1], M. Atsuchi[1],
*[1]Atsuchi Neurosurgical Hospital, Japan, [2]Kagoshima City Hospital, Japan, [3]Atsuchi Rehabilitation Hospital, Japan, [4]Kagoshima University Hospital, Japan*

**[P2.048] Primary motor cortex plasticity is enhanced by transcranial direct current stimulation in mice: Underlying molecular mechanisms and impact on motor performance**
M Podda*, V. Longo, S. Barbati, S. Cocco, K. Gironi, A. Mattera, M. Spinelli, C. Grassi,
*Università Cattolica del Sacro Cuore, Italy*

**[P2.049] Probing plasticity in the dorsolateral prefrontal cortex of patients with treatment-resistant depression**
E. Ensafi[1,2], J. Lissemore[1], R Zomorrodi*[1], F. Rodriguez[3], J. Downer[4,5], A. Atadokht[2], Z. Daskalakis[1,5], D. Blumberger[1,5],

[1]Temerty Centre for Therapeutic Brain Intervention, Canada, [2]University of Mohaghegh Ardabili, Iran, Islamic Republic of, [3]University of British Columbia, Canada, [4]University Health Network, Canada, [5]University of Toronto, Canada

**[P2.050] The association between cross-frequency coupling and neuroplasticity via paired associative stimulation: TMS-EEG study**

R Zomorrodi*[1], T. Rajji[2,3], D. Blumberger[4,3], Z. Daskalakis[4,3],
[1]Centre for Addiction and Mental Health, Temerty Centre for Therapeutic Brain Intervention, Toronto, Canada, [2]Centre for Addiction and Mental Health, Canada, [3]University of Toronto, Canada, [4]Centre for Addiction and Mental Health, Temerty Centre for Therapeutic Brain Intervention, Canada

**[P2.051] The role of movement kinematics in neural chain selection during action observation**

M Soriano*[1,2], A. Cavallo[1,2], A. D'Ausilio[3,2], C. Becchio[2,1], L. Fadiga[3,2],
[1]University of Torino, Italy, [2]Fondazione Istituto Italiano di Tecnologia, Italy, [3]Università di Ferrara, Italy

**[P2.052] Feeling stressed: Are emotional reactions to stress affected by transcranial brain stimulation over the prefrontal cortex? A meta-analysis**

F Smits*[1,2], D. Schutter[3], J. van Honk[4,5], E. Geuze[1,2],
[1]University Medical Center of Utrecht, Netherlands, [2]Ministry of Defence, Utrecht, Netherlands, [3]Radboud University, Netherlands, [4]Utrecht University, Netherlands, [5]University of Cape Town, South Africa

**[P2.053] Intracortical inhibition of the parietal cortex is associated with cognitive function in older adults: A TMS-EEG study**

T Morris*[1,2], M. Shafi[1], D. Bartres-Faz[3,2], S. Delgado-Gallén[2], M. Redondo Camós[2], V. Alviárez[2], G. Cattaneo[2,4], J. Solana Sanchez[2], S. Albu[2], D. Macia[2], J. Tormos Muñoz[2], A. Pascual-Leone[1,2],
[1]Harvard Medical School, USA, [2]Universitat Autonoma de Barcelona, Spain, [3]Universitat de Barcelona, Spain, [4]Institut d'Investigacions Biomediques August Pi i Sunyer (IDIBAPS), Spain

**[P2.054] Effects of electrode angle-orientation on the impact of transcranial direct current stimulation on motor cortex excitability**

L Farnad*[1,2], Á. Foerster[3,1], F. Yavari[1], A. Jamil[1], W. Paulus[3], M. A. Nitsche[1,4], M. Kuo[1],
[1]Leibniz Research Center for Working Environment and Human Factors, Germany, [2]Institute of Cognitive Neuroscience, Germany, [3]Universitätsmedizin göttingen georg-august-universität, Germany, [4]University Medical Hospital Bergmannsheil, Germany

**[P2.055] Effects of deep transcranial magnetic stimulation of the medial PFC and ACC on relapse to alcohol use and related brain activity**

M Harel*[1], N. Barnea-ygael[1], H. Shalev[2,1], I. Besser[2,1], M. Salti[1], R. Kampe[3], M. Heilig[3], A. Zangen[1],
[1]Ben-Gurion University of the Negev, Israel, [2]Soroka Medical Center, Israel, [3]Linköping University Center for Social and Affective Neuroscience, Sweden

**[P2.056] TMS-induced oscillations to evaluate pharmacodynamics properties of a newly developed anti-epileptic drug (XEN1101)**

P Rossini*[1], I. Premoli[1], G. Beatch[2], E. Abela[1], K. Posadas[3], L. Green[4], N. Yogo[3], M. Richardson[1],
[1]King's College London, United Kingdom, [2]Xenon Pharmaceuticals Inc., Canada, [3]National Institute for Health Research (NIHR), United Kingdom, [4]National Institute for Health Research (NIHR), United Kingdom

**[P2.057] Polysomnography as a biomarker to predict response to vagus nerve stimulation in depression**

C Longpré Poirier*[1], V. Desbeaumes Jodoin[2], J. Miron[3,4], M. Fournier-Gosselin[2], R. Godbout[5], P. Mayer[2], P. Lespérance[2],
[1]Université de Montréal, Canada, [2]Centre Hospitalier Universitaire de Montréal, Canada, [3] Centre Hospitalier Universitaire de Montréal, Canada, [4]University of Toronto, Canada, [5]Institut universitaire en santé mentale de Montréal, Canada

**[P2.058] QTc as a biomarker for vagus nerve stimulation (VNS) response in treatment resistant depression (TRD)**

C. Longpré-Poirier[1], V Desbeaumes Jodoin*[1], J. Miron[1,2], M. Fournier-Gosselin[1], P. Lespérance[1],
[1]Centre Hospitalier Universitaire de Montréal, Canada, [2]University of Toronto, Canada

**[P2.059] Acute accelerated high frequency TMS augments homovanillic acid and 3,4-dihydroxyphenylacetic acid in the cerebrospinal fluid of healthy dogs**

R Dockx*[1], K. Peremans[1], D. De Bundel[2], A. Van Eeckhaut[2], L. Vlerick[1], I. Polis[1], I. Goethals[1], A. Dobbeleir[1], J. Saunders[1], C. Baeken[1],
[1]Ghent University, Belgium, [2]Vrije Universiteit, Belgium

**[P2.060] Application of navigated transcranial magnetic stimulation to map the supplementary motor area in healthy subjects**

N. Sollmann[1], S. Schramm[2], S Ille*[2], B. Meyer[2], S. Krieg[2],
[1]Department of Diagnostic and Interventional Neuroradiology, Klinikum rechts der Isar,

*Technische Universität München, Germany, [2]Department of Neurosurgery, Klinikum rechts der Isar, Technische Universität München, Germany*

**[P2.061] Multi-locus TMS transducer for probing orientation dependency of mechanisms in the primary motor cortex**

V Souza*[1,2,3], J. Nieminen[4,2], S. Tugin[4,2], L. Koponen[4,2], O. Baffa[3], R. Ilmoniemi[4,2],
*[1]Aalto University, Finland, [2]University of Helsinki, Finland, [3]University of São Paulo, Brazil, [4]Aalto University School of Science, Finland*

**[P2.062] Is there evidence that electric parameters and electrode placement affect the cognitive side effects of ECT in patients with schizophrenia and schizoaffective disorder? A systematic review**

M Cicek*[1], W. McCall[2], H. Sackeim[3,3], P. Rosenquist[2], N. Youssef [2],
*[1]University Hospital of Zurich, Switzerland, [2]Augusta University, USA, [3]Columbia University, USA*

**[P2.063] Comparison between the threshold of new and conventional electrodes of artificial vision by direct optic nerve electrical stimulation (AV-DONE)**

K Nishida*[1,2], H. Sakaguchi[2], M. Kamei[3], C. Cecilia-Gonzalez[4], Y. Terasawa[5], R. Velez-Montoya[1], T. Fujikado[2], R. Sanchez-Fontan[1], M. Ozawa[5], H. Quiroz-Mercado[1], K. Nishida[2],
*[1]Asociacion Para Evitar la Ceguera, Mexico, [2]Osaka University Graduate School of Medicine, Japan, [3]Aichi Medical University, Japan, [4]Instituto Mexicano del Seguro Social, Mexico, [5]Nidek Co., Ltd., Japan*

**[P2.064] Anodal HD- tDCS of left dlPFC together with positive emotion induction can modulate tinnitus loudness**

I Ghodratitoostani*, Z. Vazirikangolya, D. Nascimento, M. Colacique, F. Louzada, A. Delbem, C. Barros, A. Oliveira, M. Hyppolito, J. Leite,
*University of São Paulo, Brazil*

**[P2.065] Modulating cortical plasticity using transcranial direct current stimulation an event related potential study**

E Boroda*, V. Roy, K. Lim,
*University of Minnesota, USA*

**[P2.066] Effect of cathodal transcranial direct current stimulation to the left ventrolateral prefrontal cortex on resting state default mode connectivity**

H Chase*, S. Graur, M. Bertocci, M. Phillips,
*University of Pittsburgh, USA*

**[P2.067] Mapping of acute Deep Brain Stimulation (DBS) effects in two patients with refractory post-traumatic stress disorder**

G. Lai[1,2], J. Langevin[1,2], R. Koek[3,2], S. Krahl[3,2], A. Bari[3,2], J Chen*[3,2],
*[1]University of California Los Angeles, USA, [2]VA Greater Los Angeles Healthcare System, USA, [3]University of California Los Angeles, David Geffen School of Medicine, USA*

**[P2.068] Imaging brain plasticity in stroke patients with simultaneous paired associative stimulation PAS /fMRI**

X Li*, M. George, W. Feng, T. Brown, M. Woodbury, S. Kautz,
*Medical University of South Carolina, USA*

**[P2.069] Supplementary motor area low frequency repetitive transcranial magnetic stimulation in addition to left dorsolateral prefrontal cortex theta burst stimulation to enhance effectiveness of refractory depression treatment**

J Davila*[1,2], F. Cruz[2],
*[1]Fundación Santa Fe de Bogotá, Colombia, [2]Centro de Estimulación Cerebral de Bogotá, Colombia*

**[P2.070] Transcranial direct current stimulation of the human cerebellum during associative learning**

L Burroughs*[1], J. Mitroi[1], A. Bolbecker[1], A. Moussa-Tooks[1], N. Lundin[1], B. O'Donnell[1,2,1], W. Hetrick[1,3,1],
*[1]Indiana University, USA, [2]Larue D. Carter Memorial Hospital, USA, [3]Larue D. Carter Memorial Hospital, Indianapolis, IN, USA*

**[P2.071] Deep transcranial magnetic stimulation for smoking cessation study: Partial results**

B. Boura Bellini[1,2], J. Ribeiro Scholz[1], D. Arnaut[1,1], R. Lancelote Alberto[1], T. Ogawa[1], M. Jacobsen Teixeira.[1], M Marcolin*[3],
*[1]Universidade de São Paulo, Brazil, [2]Universidade de São Paul, Brazil, [3]Neurology Department of Clinical Hospital, Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo, SP, Brazil*

**[P2.072] Depressive symptoms improved by accelerated intermittent theta-burst stimulation**

H Deng*, E. Cole, M. Gulser, K. Stimpson, C. Tischler, K. Sudheimer, N. Williams,
*Stanford University, USA*

**[P2.073] Changes in dopamine release in the putamen after a single session of continuous but not intermittent theta burst stimulation**

L Aceves Serrano*[1], J. Neva[1], S. Feldman[1], K. Brown[2], L. Boyd[1,1], D. Doudet[1],
*[1]University of British Columbia, Canada, [2]Faculty of Medicine, Graduate program of Rehabilitation Sciences, University of British Columbia, Canada*

**[P2.074] Increase of 11C-PBR28 binding after a clinical course of theta burst stimulation in non-human primates: a preliminary assessment**

L Aceves Serrano*, J. Neva, S. Feldman, K. Brown, L. Boyd, D. Doudet,
*University of British Columbia, Canada*

**[P2.075] Network correlates of rTMS on freezing of gait in parkinson's disease**

W Chang*[1], J. Lee[1], J. Cho[1], J. Youn[1], Y. Kim[2,2],
*[1]University School of Medicine, Republic of Korea, [2]Sungkyunkwan University, Republic of Korea,*

**[P2.076] Brain activity changes induced by tDCS**

S Jang*[1], J. Choi[1], K. Kim[2,3], S. Jun[1],
*[1]Gwangju Institute of Science and Technology, Republic of Korea, [2]Korea Research Institute of Standards and Science, Republic of Korea, [3]University of Science and Technology, Republic of Korea,*

**[P2.077] Multifocal transcranial direct current stimulation over prefrontal cortex diminishes risk decision making: A preliminary study.**

O. Martin de la Torre[1], D. Gallardo-Pujol[1], E. Marron[2], R. Viejo-Sobera[2], A. Cuevas-Gonzalez[3], D Redolar Ripoll*[2],
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**[P2.078] Effects of deep transcranial magnetic stimulation on satiety and body weight control in obesity: Results of a randomized controlled study**

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**[P2.079] The transcranial static magnetic stimulation, a new non-invasive brain neuromodulatory technique: Using TMS-EEG to understand its mechanisms**

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**[P2.080] Engineering mechanosensitive neural networks in the brain**

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**[P2.081] Seizure control by deep brain stimulation: A role for white matter?**

F Schaper*[1], B. Plantinga[1], A. Colon[2], L. Wagner[2], P. Boon[2], N. Blom[1], E. Gommer[1], G. Hoogland[1], L. Ackermans[1], R. Rouhl[1], Y. Temel[1],
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**[P2.082] 10 Hz tACS over the prefrontal cortex facilitates phonological word decisions**

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**[P2.083] Social and clinical variables that influence longitudinal depression outcomes after brain stimulation**

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**[P2.084] Depressive symptoms reduction following intermittent theta burst stimulation over dorsomedial prefrontal cortex is related to resting-state connectivity modulation: Preliminary findings from a double blinded sham controlled trial**

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**[P2.085] Audiovisual production therapy associated with transcranial direct current stimulation (tDCS) improves naming in patients with non-fluent aphasia: A randomized, double-blind, placebo-controlled study**

C Aparecida Pietrobon*, R. Marcio Garcia Rocha, M. Felipe Rodrigues de Lima, J. da Silva de

Deus, B. Araújo Cavendish, L. Grüdtner Buratto,
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**[P2.086] Non-invasive brain stimulation as an alternative treatment for ADHD: A systematic review and meta-analysis**
S Westwood*[1], J. Radua[1,2], K. Rubia[1],
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**[P2.087] Assessing the focality of transcranial magnetic stimulation (tms)**
J Meincke*, M. Hewitt, D. Liebetanz,
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**[P2.088] Individual baseline performance and montage have inflcuence when stimulating lDLPFC: A tDCS study**
M Splittgerber*[1,2], H. Brauer[3], C. Breitling[4], A. Prehn-Kristensen[3], K. Krauel[4], R. Salvador[5], R. Nowak[5], M. Siniatchkin[1,6], V. Moliadze[1,6],
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**[P2.089] The effects of transcranial alternating current stimulation on the auditory steady-state response and its association with Schizotypy**
V Knott*[1,2], M. Payumo[3], M. Hyde[1], R. Nelson[1], B. Duncan[1], M. Devlin[1], C. Noel[1], A. Abozmal[1], S. de la Salle[1],
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**[P2.090] Effect of sequential bilateral (iTBS + 1 Hz) transcranial magnetic stimulation (TMS) in patients with unipolar major refractory depression and comorbid anxiety**
M Kabar*[1], J. Tovar[2], H. Diaz[2], A. Veliz[2], J. Leiva[2], C. Delki[2],
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**[P2.091] Novel tools for the rapid online data acquisition of TMS corticospinal excitability**
M Grey*[1], M. van de Ruit[2,3],
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**[P2.092] Multimodal hippocampal imaging in patients with depression undergoing repetitive transcranial magnetic stimulation**
D Long*[1,2], F. Ghaseminejad[2], E. Gregory[1], L. Sporn[1], J. Downar[3,4], D. Blumberger[5,3], Z. Daskalakis[5,3], F. Vila-Rodriguez[1,1],
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**[P2.093] Cortical thickness changes following sound paired 20 Hz theta burst TMS therapy for tinnitus**
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**[P2.094] Effects of iTBS on TMS-evoked potentials and spectral perturbations over dorsolateral prefrontal cortex, posterior parietal cortex, and primary motor cortex**
A Jannati*[1], P. Fried[1], R. Özdemir[1], A. Menardi[1], A. Pascual-Leone[2,1], M. Shafi[1],
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**[P2.095] Metacognitive changes after tDCS stimulation during Iowa Gambling Task (IGT) are dissociated of test performance: A randomized double-blind sham-controlled study**
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**[P2.096] Effects of rTMS at 5 Hz over lDLPFC on inhibitory control and craving in cocaine-dependent patients**
E Morelos Santana*[1,2], E. Garza-Villarreal[2,3], R. Alcalá-Lozano[2], N. Torres-Marcial [2], V. Villicaña-Muñoz[4,2], S. Fernández-Lozano[1,2], A. Dávaloz-Guzmán[5,2], B. Martínez-García[4,2], H. González-Cantú[6], E. Reyes-Zamorano[4], J. González-Olvera[2],
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**[P2.097] Emotional arousal and neurocircuit integrity: A concurrent TMS-fMRI investigation of state dependence**
L Mc Teague*[1], J. Lopez[1], L. Dowdle[1], O. Mithoefer[1], B. Badran[2], P. Summers[1], A. Etkin[3,4], M.

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**[P2.098] 5 Hz: The frequency of repetitive transcranial magnetic stimulation applied in two protocols, simple vs multi-sites, showing a similar clinical improvement and maintenance in Alzheimer's disease**
R Alcala Lozano*[1], E. Morelos-Santana[1], E. Garza-Villarreal[1,2], J. Gonzalez-Olvera[1],
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**[P2.099] Development of closed-loop transcutaneous auricular vagus nerve stimulation (taVNS) as a neurorehabilitation tool**
B Badran*[1], D. Jenkins[2], W. DeVries[2], M. Dancy[2], D. Cook[2], G. Mappin[2], M. George[2],
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**[P2.100] Influence of theta phase on EEG synchronized TMS to the dorsolateral prefrontal cortex**
P Gordon*, B. Zrenner, S. Dörre, P. Belardinelli, C. Zrenner, U. Ziemann,
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**[P2.101] Clinical effectiveness of 5hz transcranial magnetic stimulation applied on left dorsolateral prefrontal cortex and dorsomedial prefrontal cortex on clinical depressed patients**
G Trejo Cruz*[1], J. Reyes López[1], J. Ricardo Garcell[2], R. Rodríguez Valdés[1], S. Alcauter Solórzano[3], A. Rodríguez Méndez [1], N. Camacho Calderón[1], J. González Olvera[4], G. Roque Roque[1], Á. Calderón Moctezuma[1], H. Hernández Montiel [1],
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**[P2.102] Effect of Theta-Burst Stimulation Dose on Motor Cortex Excitability: A parametric evaluation of 600, 1200, 1800 pulses per session**
D Mc Calley*, D. Lench, J. Doolittle, S. Hamilton, W. DeVries, C. Hanlon,
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**[P2.103] Functional connectivity as a tool to individualize DLPFC targeting in TMS**
R Duprat*, K. Linn, T. Satterthwaite, R. Ciric, Y. Sheline, M. Platt, J. Gold, J. Kable, G. Adams, S. Kalamveetil-Meethal, A. Dallstream, H. Long, M. Scully, R. Shinohara, D. Oathes,
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**[P2.104] Microscopic magnetic stimulation of the cervical vagus nerve**
I Ay*[1,2], S. Downs[1], E. Milligan[3,1], G. Bonmassar[1,2],
*[1]Massachusetts General Hospital, USA, [2]Harvard Medical School, USA, [3]Harvard University, USA*

**[P2.105] Cross-species characterization of transcranial focused ultrasound**
C Rojas Cifuentes*[1], R. Rajendran[1], L. Emming[1], C. Keysers[1], W. Legon [2], V. Gazzola[1],
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**[P2.106] Safety and efficacy of rTMS for MDD in HIV+ patients; A series of 10 consecutive patients**
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**[P2.107] Developmental trajectory of scalp to cortex distance: Implications for transcranial magnetic stimulation in adolescents with major depressive disorder**
J. Izquierdo, Q. McLellan, A. Kirton, E. Zewdie, R. Swansburg, F Mac Master*,
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**[P2.108] Enhancing perception of speech in noise using electrical brain stimulation**
B. Khalighinejad[1], J. Herrero[2], A. Mehta[2], N Mesgarani*[1],
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**[P2.109] Prefrontal tDCS effects on appetite may depend on dopamine status: Preliminary analysis of a clinical trial**
P Giacomo Fassini*[1], S. Das[2], V. Suen[3], G. Magerowski[1], W. da Silva Junior[3], J. Marchini[4], M. Alonso-Alonso[1],
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**[P2.110] Repetitive transcranial magnetic stimulation as a treatment for Tourette's syndrome in children: A pilot study**
C Kahl*[1], A. Kirton[1], T. Pringsheim[1], P. Croarkin[2], E. Zewdie[1], R. Swansburg[1], F. MacMaster[1],
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**[P2.111] TMS in treatment of cocaine use disorder**
M. Rao[1], S Nomura*[2],
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**[P2.112]** **Duration of response is associated with treatment resistance in accelerated iTBS protocol for treatment-resistant depression**
M Gulser*, E. Cole, K. Stimpson, K. Sudheimer, N. Williams,
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**[P2.113]** **Separability of logic and language: A TMS study**
J Coetzee*, M. Monti, M. Iacoboni, A. Wu, M. Johnson,
*University of California, USA*

**[P2.114]** **Case study: Longer response to treatment with more days of aiTBS, and with the addition of levodopa**
J Coetzee*, N. Williams, E. Cole,
*Stanford, USA*

**[P2.115]** **Focused ultrasound as a potential means of facilitated exosome delivery to brodmann area 25 in the treatment of refractory depression**
K Mahdavi*[1,2], H. Packham[3], N. Nicodemus[4], S. Jordan[5,2,1], J. Iovine[1], J. Duncan[5,1], S. Becerra[5,1], N. Spivak[1,2,2], T. Kuhn[2,2,6], M. Whitney[7], M. Mamoun[8,9,2],
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**[P2.116]** **Non-invasive galvanic vestibular stimulation augments beta desynchronization and improves motor performance in Parkinson's disease**
S Lee*[1,2], J. Wang[2], M. McKeown[1,2],
*[1]Pacific Parkinson's Research Centre, Canada, [2]University of British Columbia, Canada*

**[P2.117]** **Multi-session rTMS increases the standing postural sway complexity in spinocerebellar ataxia patients.**
J Zhou*[1,2], B. Manor[1,2], A. Pascual-Leone[3,2],
*[1]Hebrew SeniorLife Institute for Aging Research, USA, [2]Harvard Meidcal School, USA, [3]Berenson-Allen Center for Noninvasive Brain Stimulation, USA*

**[P2.118]** **Adverse childhood experiences and deep brain stimulation outcomes for treatment resistant depression**
E. Ng[1], N. Lipsman[1,2,3], C. Hamani[1,2,3], A. Lozano[1,4], S. Kennedy[1,4], P Giacobbe*[1,2,3],
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**[P2.119]** **Transcranial magnetic stimulation of the midline cerebellum in a theta-burst pattern induces changes in EEG gamma frequency compared to sham**
N Trapp*, A. Singh, L. Garrett, B. Uitermarkt, K. Parker, A. Boes,
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**[P2.120]** **Ultrasonic neuromodulation of pharmacologically isolated cultured neurons using a single extremely short pulse**
E Weinreb*, R. Paz, E. Moses,
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**[P2.121]** **Towards a mechanistic understanding of brain stimulation**
C Keller*[1], D. Huang[1], B. Hajnal[2], A. Mehta[3],
*[1]Stanford University, USA, [2]National Institute of Clinical Neuroscience, Hungary, [3]North Shore LIJ-Hofstra Medical Center, USA*

**[P2.122]** **Focal transcranial magnetic stimulation (TMS) of the rat brain: Coil design, c-fos mapping and electrophysiology**
H Lu*[1], Q. Meng[2], K. Peng[1], S. Cermak[1], E. Stein[1], Y. Yang[1], F. Choa[2],
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**[P2.123]** **Past, present and future perspective of electroconvulsive treatment in Slovakia**
J Dragasek*,
*University of P.J. Safarik, Slovakia*

**[P2.124]** **Inhibition of tropomyosin-related kinase B (TrkB) reduces the benefit of cortical stimulation combined with motor rehabilitation in experimental stroke**
S Kinley Cooper*[1], D. Adkins[1], A. Rizzo[2], K. Kinley-Howard[3],
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**[P2.125]** **Deep brain stimulation of the bed nucleus of the stria terminalis improves cardiac-autonomic control in a woman with severe obsessive compulsive disorder**
M Hilz*[1,2], G. Nikkah[3], R. WANG[1], K. Hösl[4],
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**[P2.126]** **Repeated sessions of transcranial direct current stimulation (tDCS) with vertical jump training improves vertical jump performance in elite athletes**
A Cates*[1,2], R. Lin[2], A. Mayberry[3], R. Clark[2], D. Chao[2], T. Taylor[3], J. Stray-Gundersen[3], B. Wingeier[2],
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**[P2.127]** **The dynamic modulation of inter-hemispheric inhibition during bimanual grip force control**
A Karabanov*[1], . Grønlund[1,2], J. Mogensen[2], H. Lundell[1], H. Siebner[1,3],
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**[P2.128]** **Behavioral and neural assessment of high-frequency stimulation of the bed nucleus of the stria terminalis in a rat model of anxiety**
K Luyck*, B. Nuttin, L. Arckens, L. Luyten,
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**[P2.129]** **Age-dependent effect of transcranial alternating current stimulation (tACS) on motor skill consolidation**
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*University of Graz, Austria*

**[P2.130]** **Stereotactic ablative surgery versus deep brain stimulation for treatment-resistant depression: A review of clinical efficacy**
J Bergman*[1], H. Akram[1,2], L. Zrinzo[1,2],
*[1]UCL Queen Square Institute of Neurology, United Kingdom, [2]The National Hospital for Neurology and Neurosurgery, United Kingdom*

**[P2.131]** **The influence of ongoing μ-oscillation phase on the induction of LTD-like plasticity with 1 Hz rTMS**
D Baur*[1], S. Hussain[2], L. Cohen[3], U. Ziemann[4], C. Zrenner[4],
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**[P2.132]** **Generation 2 kilohertz spinal cord stimulation (kHz-SCS) bioheat multi-physics model**
N Khadka*[1], A. Zannou[1], D. Truong[1], T. Zhang[2], R. Esteller[2], B. Hersey[2], M. Bikson[2],
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**[P2.133]** **Fully closed-loop neuromodulation approach in real-time**
J An*, S. Lee, S. Jin,
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**[P2.134]** **Could tDCS modulate bilingual reading?**
S Bhattacharjee*[1], A. Chew[1], R. Kashyap[2], C. Wu[3], M. Yeo[4], B. O'Brien[5], B. Rapp[6], M. McCloskey[6], K. Oishi[6], J. Desmond[6], S. Chen[1,3,1],
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**[P2.135]** **Long-term potentiation like effects induced by quadripulse magnetic stimulation in Parkinson's disease patients "off" and "on" medication states**
S Takahashi*[1], T. Shimizu[1], M. Honda[1], Y. Ugawa[2], R. Hanajima[1],
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**[P2.136]** **Paired-pulse TMS mapping based on individual sulci shape, reveals corticomotor representations underpinning I-wave facilitation**
M Madsen*[1], C. Chung[1,2], M. Jønsson[1], H. Siebner[1,3],
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**[P2.137]** **Do inter-individual variations in electric fields affect motor cortical excitability changes following anodal tDCS?**
I Laakso*[1], M. Mikkonen[1], S. Koyama[2], A. Hirata[3], S. Tanaka[4],
*[1]Aalto University, Finland, [2]Fujita Health University, Japan, [3]Nagoya Institute of Technology, Japan, [4]Hamamatsu University School of Medicine, Japan*

**[P2.138]** **Resting-state fMRI biomarkers and effects of transcranial magnetic stimulation in treatment-refractory depression**
H Hopman*[1], S. Chan[1], W. Chu[1], H. Lu[1], L. Lam[1], A. Mak[1], R. Kahn[2,3], S. Neggers[4],
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**[P2.139]** **Efficacy and safety of repetitive transcranial magnetic stimulation for weight loss in obesity**
J. Chung[1], S Kim*[1], S. Yoon[2], S. Son[3],
*[1]The Catholic University of Korea, Republic of Korea, [2]REMED, Republic of Korea, [3]St.Vincent Hospital, Republic of Korea,*

**[P2.140]** **The effects of repetitive transcranial magnetic stimulation on functional brain connectivity in obesity**
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*[1]The Catholic University of Korea, Republic of Korea, [2]St. Vincent's Hospital, Republic of Korea,*

**[P2.141]** **Preliminary work toward creating a desktop-portable device for quickly measuring brain level of consciousness**
K Caulfield*[1], P. Summers[1], X. Li[1], M. Savoca[1], M. Fecchio[2], S. Casarotto[2], M. Massimini[2], M. George[1,3],
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**[P2.142]** **Should cardiac pace-makers be an exclusion criteria for tDCS?**
C Roncero*[1], V. Mardigyan[2], H. Chertkow[1],
*[1]McGill University, Canada, [2]Jewish General Hospital, Canada*

**[P2.143]** **Effects of transcranial direct current stimulation over the right posterior parietal cortex on visual attention in young healthy adults**
P Šimko*[1], M. Pupíková[1], I. Rektorová[1,2],
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**[P2.144]** **Theta stimulation to treat cognitive dysfunction in rodent models of neurologic disorders**
K Ondek*, A. Izadi, F. Girgis, I. Saez, K. Shahlaie, G. Gurkoff,
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**[P2.145]** **Towards modeling the influence of transcranial direct current stimulation on neuronal response**
C. Thomas[1], A Datta*[1,2], M. Kaiser[3], F. Hutchings[3],
*[1]Soterix Medical, USA, [2]City College of New York, USA, [3]Newcastle University, United Kingdom*

**[P2.146]** **ECS-induced neurogenesis and congitive side effects**
F Vila*, J. Snyder, T. Zhang,
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**[P2.147]** **Dimensional biotype-based TMS personalization**
D Jovellar*[1], A. Marei[2],
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**[P2.148]** **Using tDCS and tACS to understand the role of dorsal processing and theta signals in word recognition and natural reading**
K Pammer*[1], K. Archer[2], J. Bairnsfather[3],
*[1]The University of Newcastle, Australia, [2]The Australian National University, Australia, [3]Melbourne University, Australia*

**[P2.149]** **Elimination of peripheral auditory pathway activation does not affect motor responses from ultrasound neuromodulation**
M Mohammadjavadi*, P. Ye, A. Xia, J. Brown, G. Popelka, K. Butts Pauly,
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**[P2.150]** **Optical inactivation of the anterior cingulate cortex modulate descending pain pathway in a rat model of trigeminal neuropathic pain created via chronic constriction injury of the infraorbital nerve**
H Moon*[1,2], Y. Park[1,2], E. KC[1], K. So[1],
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**[P2.151]** **Transcranial direct current stimulation fails to affect criterion shifting during recognition memory**
E Layher*, T. Santander, M. Miller,
*University of California, USA*

**[P2.152]** **Subcortical grey matter changes may be not essential for the antipsychotic effect of electronic or magnetic seizure therapy**
J Jiang*[1], B. Zhang[1], J. Li[1], Y. Xu[1], J. Sheng[1], D. Liu[1], X. Guo[1], Y. Jia[1], T. Zhang[1], Q. Li[2], J. Wang[1], C. Li[1],
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**[P2.153]** **Period and amplitude control stimulating pulses energies**
A Rabinovitch*[1], D. Braunstein[2], I. Aviram[3], R. Thieberger[3], Y. Biton[3],
*[1]Physics Dept., Ben-Gurion University, Israel, [2]Sami Shamoon College of Engineering, Israel, [3]Ben-Gurion University, Israel*

**[P2.154]** **The management of anxiety, insomnia and depression with cranial electrotherapy stimulation**
J Marksberry*,
*Electromedical Products International Inc, USA*

**[P2.155]** **A national longitudinal study for regional variation of inpatient ECT utilization from 4411 hospitals across the united states**
R. Patel[1], V. Sreeram[2], T. Thakur[3], R. Bachu[4], N Youssef*[5],
*[1]Griffin Memorial Hospital, USA, [2]Harlem Hospital, USA, [3]State University of New York (SUNY) Upstate, USA, [4]Providence Hospital, USA, [5]Augusta University, USA*

**[P2.156]** **The theta/betha1 value in right frontolateral and mid-temporal cortices could act as visual attention biomarker in healthy individuals**
A. Yadollahpour[1], F. Riahi[1], S. Jaberzade[2], R Rostami*[3],
*[1]Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of, [2]Monash University, Australia, [3]Tehran University, Iran, Islamic Republic of*

**[P2.157]** **Single session anodal, cathodal and placebo bifrontal tDCS for treatment of intractable chronic tinnitus: A randomized controlled clinical trial**
A. Yadollahpour[1], S. Rashidi[1], S. Jaberzade[2], R Rostami*[3],
*[1]Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of, [2]Monash University, Australia, [3]Tehran University, Iran, Islamic Republic of*

**[P2.158]** **Numerical evaluation of the induced electric field in techniques of transcranical brain stimulation: influence of the anatomic model and skin conductivity.**
A. Paffi[1], M Colella*[1], M. Mambrini[1], F. Apollonio[1], V. De Santis[2], M. Liberti[1],
*[1]Sapienza University of Rome, Italy, [2]Università degli Studi dell'Aquila, Italy*

**[P2.159]** **Distinct symptom-specific treatment targets for antidepressant neuromodulation**
S Siddiqi*[1], S. Taylor[2], D. Cooke[1], M. George[3], A. Pascual-Leone[1], M. Fox[1],
*[1]Harvard Medical School, Berenson-Allen Center for Noninvasive Brain Stimulation, USA, [2]University of Michigan, USA, [3]Medical University of South Carolina, USA*

**[P2.160]** **Functional connectivity changes with targeted rTMS of the dorsal attention network in TBI-associated depression**
S Siddiqi*[1,2,3], N. Trapp[4], C. Hacker[2], S. Kandala[2], E. Leuthardt[2], A. Carter[2], D. Brody[3],
*[1]Harvard Medical School, Berenson-Allen Center for Noninvasive Brain Stimulation, USA, [2]Washington University School of Medicine, USA, [3]Center for Neuroscience & Regenerative Medicine, USUHS, USA, [4]University of Iowa, USA*

**[P2.161]** **The Effects of high frequency repetitive transcranial magnetic stimulation on negative symptoms of schizophrenia: Findings from a randomized, double-blind, sham-controlled trial**
S Singh*, N. Kumar, R. Verma, A. Nehra, S. Kumar,
*All India Institute of Medical Sciences, India*

**[P2.162]** **Deep brain stimulation: first trial in treatment-resistant schizophrenia**
I Corripio*[1], E. Pomarol-Clotet[2], P. McKenna[3], S. Sarró[2], A. Roldan[1],
*[1]Sant Pau Hospital, Spain, [2]FIDMAG-Germanes Hospitalaries, Spain, [3]FIDMAG, Spain*

**[P3.095]** **Case report: Improved rTMS efficacy after fMRI localizes DLPFC target to non-dominant hemisphere**
J Iovine*[1], N. Spivak[1,2], S. Jordan[2,1], K. Mahdavi[1], J. Duncan[3,1], S. Becerra[3,1], H. Packham[1], N. Nicodemus[1], S. Pereles[4], M. Whitney[4], A. Bystrisky[2], T. Kuhn[2,1], M. Mamoun[3,2,1],
*[1]Neurological Associates of West Los Angeles, USA, [2]UCLA, USA, [3]CNS Health, USA, [4]RAD Alliance, USA*

**[P3.110]** **Case study: Comparison of MRI techniques for demonstrating successful ultrasound targeting: BOLD Compared with ASL functional Imaging**
S. Becerra[1], J Duncan*[1], S. Jordan[1,2,3], J. Iovine[2], N. Spivak[2], N. Nicodemus[2], H. Packham[2], S. Pereles[4], M. Whitney[4], A. Bystrisky[3], K. Mahdavi[2], T. Kuhn[1,3], M. Mamoun[2,3],
*[1]Synaptec Network, USA, [2]Neurological Associates Pain Intervention, USA, [3]UCLA, USA, [4]Rad Alliance, USA*

**Poster Session 3**
**Wednesday, 27 February 2019 - 12:00-13:30**
**Room - Exhibitor Hall B**

**[P3.001]** **Anodal tDCS improves attentional control in older adults.**
C Hanley*, A. Tales,
*Swansea University, United Kingdom*

**[P3.002]** **Egocentric processing in the roll plane and dorsal parietal cortex: a TMS-ERP study of the subjective visual vertical**
L Willacker*[1,1,2], J. Dowsett[1,1], M. Dieterich[1,1,2,3], P. Taylor[4,1,2],
*[1]Ludwig-Maximilians-University, Germany, [2]LMU, Germany, [3]Munich Cluster for Systems Neurology, Germany, [4]University Hospital, Ludwig-Maximilians-University, Germany*

**[P3.003]** **Sensorimotor cortices casually contribute to auditory foreign language vocabulary translation following multisensory learning**
B Mathias*[1,2], A. Klingebiel[2], G. Hartwigsen[2], L. Sureth[2], M. Macedonia[2,3], K. Mayer[4], K. von Kriegstein[1,2],
*[1]Technical University Dresden, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Germany, [3]Johannes Kepler University Linz, Austria, [4]University of Münster, Germany*

**[P3.004]** **Stanford accelerated intelligent neuromodulation therapy for treatment-resistant depression (SAINT-TRD)**
E Cole*, M. Gulser, K. Stimpson, B. Bentzley, J. Hawkins, X. Xiao, A. Schatzberg, K. Sudheimer, N. Williams,
*Stanford University, USA*

**[P3.005]** **Accelerated intermittent theta-burst stimulation for treatment-resistant depression in patients with alcohol-use disorder.**
E Cole*, H. Deng, W. Tate, C. Tischler, K. Stimpson, B. Bentzley, A. Schatzberg, K. Sanborn, N. Williams,
*Stanford University, USA*

**[P3.006]** **A randomized controlled study of transcranial direct current stimulation in treatment of generalized anxiety disorder**
Y Lin*[1], C. Zhang[2], Y. Wang[1],
*[1]Capital Medical University, China, [2]Pingguqu Hospital, China*

**[P3.007]** **Symptoms improvement in a senile depression patient using ECT with ketamine anesthesia in the absence of effective convulsion pattern**
N Aoki*,
*Kansai Medical University, Japan*

**[P3.008]** **Rapid theta burst transcranial magnetic stimulation in a hospitalized patient with schizophrenia post-suicide attempt is both safe and effective**
K Stimpson*, D. DeSouza, K. Sudheimer, N. Williams,
*Stanford University, USA*

**[P3.009]** **Correlation of language-eloquent white matter pathways with the course of language function in glioma patients**
S Ille*, L. Engel, B. Meyer, S. Krieg,
*Technical University of Munich, Germany*

**[P3.010]** **Computational model for the modulation of speech-in-noise comprehension through transcranial electrical stimulation**
M Kegler*, T. Reichenbach,
*Imperial College London, United Kingdom*

**[P3.011]** **Combining transcutaneous vagus nerve stimulation and upper-limb robotic rehabilitation in chronic stroke patients**
F Capone*[1], S. Miccininilli[1], G. Pellegrino[2], L. Zollo[1], E. Guglielmelli[1], S. Sterzi[1], V. Di Lazzaro[3],
*[1]Università Campus Bio-Medico, Italy, [2]San Camillo Hospital IRCCS, Italy, [3]Unit of Neurology, Neurophysiology, Neurobiology, Department of Medicine, Università Campus Bio-Medico di Roma, Italy*

**[P3.012]** **Inferior frontal cortex as a key generator of mismatch negativity: A repetitive transcranial magnetic stimulation study**
Y Lin*[1,2], M. Hsieh[1], S. Wang[3], F. Lin[4],
*[1]National Taiwan University Hospital, Taiwan, [2]National Taiwan University, Taiwan, [3]National Health Research Institutes, Taiwan, [4]Department of Biomedical Engineering, National Taiwan University, Taiwan*

**[P3.013]** **The effects of neuromuscular electrical stimulation during repetitive transcranial magnetic stimulation before repetitive facilitation exercise on the hemiparetic hand in chronic stroke patients**
S Etoh*, K. Kawamura, K. Tomonaga, S. Miura, S. Harada, S. Kikuno, M. Ueno, R. Miyata, M. Shimodozono,
*Kagoshima University, Japan*

**[P3.014]** **Defining brain connectivity using time series similarity measures: An application to cortico-cortical evoked potentials**

D Prime*[1,2], M. Woolfe[1,2], S. O'Keefe[1], D. Rowlands[1], S. Dionisio[2],
[1]*Griffith University, Australia,* [2]*Mater Hospital, Australia*

**[P3.015] Realistic sham TMS**

E. Grasin[1], I. Loginov[1], A Masliukova*[2], N. Smirnov[1],
[1]*Neurosoft, Russian Federation,* [2]*Ivanovo State Medical Academy, Russian Federation*

**[P3.016] Non-invasive vagus nerve stimulation for the prevention/treatment of comorbid mild traumatic brain injury and PTSD**

A Schindler*[1,2], J. Meabon[1,2], B. Baskin[2], E. Cooper[1], M. Yagi[1], B. Simon[3], E. Peskind[1,2], P. Phillips[2], D. Cook[1,2],
[1]*VA Puget Sound, USA,* [2]*University of Washington, USA,* [3]*electroCore, Inc, USA*

**[P3.017] The impact of chronotypes and time of the day on tDCS-induced motor cortex plasticity and cortical excitability**

M Salehinejad*[1,2], M. Kuo [1], M. Nitsche[1,3],
[1]*Leibniz Research Centre for Working Environment and Human Factors, Germany,* [2]*Ruhr-University Bochum, Germany,* [3]*University Medical Hospital, Germany*

**[P3.018] Transcranial magnetic stimulation for diplopia in a patient with spinocerebellar ataxia type 6: A case report**

K Kawamura*, S. Etoh, M. Shimodozono,
*Kagoshima University, Japan*

**[P3.019] Evidence of asymmetrical spatial distributions of motor evoked potentials between dominant and non-dominant hands**

V Souza*[1,2], O. Baffa[1], M. Garcia[1,3,3,4],
[1]*Universidade de São Paulo, Brazil,* [2]*Aalto University School of Science, Finland,* [3]*Cidade Universitária, Brazil,* [4]*Federal university of juiz de fora, Brazil*

**[P3.020] Individual differences in state anxiety influence the effect of iTBS over the left dorsolateral prefrontal cortex on HPA sensitivity**

S. De Witte[1], M. M. Pulopulos[2], M. Vanderhasselt[2], R. De Raedt[1], J. Schiettecatte[1], E. Anckaert[1], C Baeken*[3],
[1]*University of Ghent, Belgium,* [2]*University Ghent, Belgium,* [3]*Ghent University, Belgium*

**[P3.021] Absence of antidepressive effects of transcranial pulsed electromagnetic fields for treatment resistant depression – a replication study**

S Van Belkum*[1,2], M. de Boer[1], E. Opmer[1], A. Aleman[1], R. Schoevers[1],
[1]*University of Groningen, Netherlands,* [2]*University of Groningen, University Medical Center Groningen, Department of Neuroscience, The Netherlands., Netherlands*

**[P3.022] High definition transcranial alternating current stimulation of the right fusiform cortex improves visual associative memory**

S Lang*[1,1], L. Gan[1], T. Alrazi[1], O. Monchi[2,1],
[1]*University of Calgary, Canada,* [2]*University of Calgary, Canada*

**[P3.023] Research of paired synchronous electromagnetic stimulation over single brain region for human cortical excitability: A new neuromodulation strategy**

T Han*[1,2], Y. Lin[1,2], C. Liu[1,2], Z. Xu[1,2], Y. Wang[1,2],
[1]*Capital Medical University, China,* [2]*Beijing Key Laboratory of Neuromodulation, China*

**[P3.024] Safety and feasibility of transcranial direct current stimulation for patients with post-polio syndrome**

Y Matsushima*, A. Hachisuka, H. Itoh, K. Sugimoto, S. Saeki,
*University of occupational and environmental health, Japan*

**[P3.025] Sleep-like bistability, loss of causality and complexity in the cerebral cortex of unresponsive wakefulness syndrome patients**

M Fecchio*[1], M. Rosanova[1], S. Casarotto[1], S. Sarasso[1], A. Girardi Casali[2], A. Pigorini[1], A. Comanducci[1], F. Seregni[3], G. Devalle[4], G. Citerio[5], O. Bodart[6], M. Boly[7], O. Gosseries[6], S. Laureys[6], M. Massimini[1],
[1]*University of Milan, Italy,* [2]*Universidade Federal de São Paulo, Brazil,* [3]*Cambridge University Hospital NHS Foundation Trust, United Kingdom,* [4]*IRCCS Fondazione Don Gnocchi, Italy,* [5]*University of Milan Bicocca, Italy,* [6]*University and University Hospital of Liège, Belgium,* [7]*University of Wisconsin, USA*

**[P3.026] Higher efficacy and less inter-individual variability in QPS than TBS: head to head comparison study**

A Tiksnadi*[1,2], T. Murakami[1], W. Wiratman[1,2], Y. Ugawa[1,1],
[1]*Fukushima Medical University, Japan,* [2]*Medicine Universitas Indonesia, Indonesia*

**[P3.027] Remission from depression and tms over left DLPFC share the same network connectivity changes**

M Tik*[1], M. Woletz[1], G. Kranz[1], D. Pfabigan[2], N. Geissberger[1], R. Sladky[1], C. Kraus[1], B. Auer[2], T.

Vanicek[1], K. Paul[2], R. Lanzenberger[1], C. Lamm[2], C. Windischberger[1],
*[1]Medical University of Vienna, Austria, [2]University of Vienna, Austria*

**[P3.028] Long-term effects of deep brain stimulation of the ventral anterior limb of the internal capsule for obsessive compulsive disorder**
I Graat*[1], R. Mocking[1], M. Figee[2], N. Vulink[1], P. de Koning[1], P. Ooms[1], M. Mantione[1], P. van den Munckhof[1], R. Schuurman[1], D. Denys[1],
*[1]Amsterdam UMC, Netherlands, [2]Mount Sinai Hospital, USA*

**[P3.029] Is comorbid autism or bipolar disorder a contra-indication for DBS in patients with OCD?**
I Graat*, G. van Rooijen, R. Mocking, P. de Koning, D. Denys,
*Amsterdam UMC (AMC), Netherlands*

**[P3.030] Decreased functional connectivity between frontal and motor cortex in tourette syndrome**
S Wu*[1], E. Pedapati[1], A. Roeckner[2], D. Huddleston[1], H. Jackson[1], D. Gilbert[1],
*[1]Cincinnati Children's Hospital Medical Center, USA, [2]Emory University, USA*

**[P3.031] A case series exploring the effect of twenty sessions of repetitive transcranial magnetic stimulation (rTMS) on cannabis use and craving**
G Sahlem*[1], M. Caruso[1], R. Malcolm[1], M. George[1,2], A. McRae-Clark[1,2],
*[1]Medical University of South Carolina, USA, [2]Ralph H. Johnson VA Medical Center, USA*

**[P3.032] The effect of continuous theta-burst stimulation on language interference in bilinguals**
A Ware*, J. Lum,
*Deakin University, Australia*

**[P3.033] The effect of number of electrodes in the multi-array tDCS - A computational study**
C Im*, H. Seo, S. Jun,
*Gwangju Institute of science and technology, Republic of Korea,*

**[P3.034] Transcranial pulsed ultrasound regulatesbody temperature in mice**
T Guo*[1,2], L. Qi[2], L. Niu[1], L. Meng[1], H. Zheng[1],
*[1]Chinese Academy of Sciences, China, [2]Northeastern University, China*

**[P3.035] The N100 TEP as a neural predictor of motor learning: A TMS-EEG study**
M Taga*[1], A. Curci[1], I. Lacal[2], D. Turner[1],
*[1]University of East London, United Kingdom, [2]University of East London, Italy*

**[P3.036] Impact of concurrent task performance on transcranial direct current stimulation (tDCS)-induced changes in cortical physiology and working memory**
A Hill*[1], N. Rogasch[2], P. Fitzgerald[1], K. Hoy[1],
*[1]Monash Alfred Psychiatry Research Centre, Australia, [2]Monash University, Australia*

**[P3.037] Moved to Poster session 1**

**[P3.038] Noradrenergic effects on cortical excitability - a study with noninvasive brain stimulation in humans**
H. Kuo[1,2], W. Paulus[2], G. Batsikadze[2], A. Jamil[1], M. Nitsche[1,3], M Kuo*[1],
*[1]Leibniz Research Centre for Working Environment and Human Factors, Germany, [2]Georg-August-University, Germany, [3]Rhur Universität, Germany*

**[P3.039] Propagation of TMS pulses versus functional brain connectivity**
D Klooster*[1,2,3], J. Vink[4], P. van Mierlo[5], P. Boon[1,2,3], D. Cooke[6], T. Gedankien[6], A. Roberts[6], P. Boucher[6], A. Pascual-Leone[7,6], M. Fox[8,6,7], M. Shafi[6,7],
*[1]Academic Center for Epileptology Kempenhaeghe, Netherlands, [2]University Hospital Ghent, Belgium, [3]Eindhoven University of Technology, Netherlands, [4]Utrecht University, Netherlands, [5]Ghent University, Belgium, [6]Berenson-Allen Center for Noninvasive Brain Stimulation, USA, [7]Harvard Medical School, USA, [8]Massachusetts General Hospital, USA*

**[P3.040] A causal role of the frontal eye field in visual stability during optokinetic stimulation: TMS-EEG evidence**
A Mastropasqua*[1], J. Dowsett[1], M. Dieterich[1,2], P. Taylor[1],
*[1]Ludwig-Maximilians-University, Germany, [2]SyNergy – Munich Cluster for Systems Neurology, Germany*

**[P3.041] Inducing neuroplasticity in the primary visual cortex using paired associative stimulation**
F Yavari*[1], L. Marciale Tchuendem[1], M. A. Nitsche[2,1], M. Kuo[1],
*[1]Leibniz Research Centre for Working Environment and Human Factors, Germany, [2]University Medical Hospital Bergmannsheil, Germany*

**[P3.042] Optimization of Vagus Nerve Therapy : a study of the behavioral and electrophysiological effects of transcutaneous VNS**
M Dumoulin*[1], G. Liberati[1], A. Mouraux[1], R. El Tahry[1,2],
*[1]Université Catholique de Louvain, Belgium, [2]Saint-Luc University Hospital, Belgium*

**[P3.043] Transcranial direct current stimulation affects auditory cortex plasticity in normal-hearing and noise-exposed rats**

M Podda*, F. Paciello, S. Cocco, R. Rolesi, D. Troiani, A. Fetoni, G. Paludetti, C. Grassi,
*Università Cattolica del Sacro Cuore, Italy*

**[P3.044] The use of electroconvulsive therapy in dementia with behavioral disturbances**
R Ostroff*, R. Katz, J. Taylor,
*Yale Department of Psychiatry, USA*

**[P3.045] An investigation of the feasibility and limitations of epicranial current stimulation using concentric-ring electrodes**
A Khatoun*, B. Asamoah, M. Mc Laughlin,
*KU Leuven, Belgium*

**[P3.046] Closed-loop application of tDCS to promote responsiveness in patients with disorders of consciousness**
G Martens*[1], A. Barra[1], M. Carrière[1], A. Soria-Frisch[2], G. Ruffini[2], D. Ibáñez[2], A. Rojas[2], S. Laureys[1], A. Thibaut[1],
*[1]University Hospital of Liege, Belgium, [2]Starlab Barcelona, Spain*

**[P3.047] Examining the effect of transcranial direct current stimulation in the arc pointing task**
E Kaminski*[1,2], M. Hoff[2], C. Steele[2], B. Sehm[2], A. Villringer[2], P. Ragert[1,2],
*[1]University of Leipzig, Germany, [2]Max Planck Institute for Human Cognitive and Brain Sciences, Germany*

**[P3.048] Feasibility of using fitness activity tracker as complement tool to symptoms rating scale in rTMS treatment**
J Miron*[1,2], C. Longpré-Poirier[1], V. Desbeaumes Jodoin[1], P. Lespérance[1],
*[1]Centre Hospitalier Universitaire de Montréal, Canada, [2]University of Toronto, Canada*

**[P3.049] The vestibulomyogenic response in the upper and lower limbs prior to movement onset**
M Kennefick*, J. Burma, P. van Donkelaar, C. McNeil, B. Dalton,
*University of British Columbia, Canada*

**[P3.050] Multiple sessions of cathodal tsDCS alter phrenic motoneurons output and spontaneous breathing pattern**
M Niérat*, S. Mehdi, T. Similowski, J. Lamy,
*Sorbonne Université, France*

**[P3.051] Intra- and inter-network effects of navigated transcranial magnetic stimulation using low- and high-frequency pulse application to the dorsolateral prefrontal cortex – a combined rTMS-fMRI approach**
N. Sollmann[1], H. Zhang[2], G. Castrillón[1], K. Kurcyus[1], B. Meyer[2], C. Zimmer[1], S. Krieg[2], S Ille*[3],
*[1]Department of Diagnostic and Interventional Neuroradiology, Klinikum rechts der Isar, Technische Universität München, Germany, [2]Department of Neurosurgery, Klinikum rechts der Isar, Technische Universität München, Germany, [3]Technical University of Munich, Germany*

**[P3.052] Day-to day variations in physical activity patterns affect corticospinal excitability on the following day**
M Ekblom*[1,2], E. Bojsen-Möller[1], O. Tarassova[1], Ö. Ekblom[1],
*[1]The Swedish School of Sport and Health Sciences, Sweden, [2]Karolinska Institutet, Sweden*

**[P3.053] Nine-year prospective safety and effectiveness outcomes from the long-term treatment trial of the RNS® system**
M Morrell*[1,2], R. Investigators[3],
*[1]NeuroPace, Inc., USA, [2]Stanford University Medical Center, USA, [3]Various, USA*

**[P3.054] Excitability changes induced in the motor cortex by transcranial ultrasound stimulation**
B Gibson*[1], J. Sanguinetti[1,2], T. Mullins[1], S. Salazar[1], L. Buchman[1], C. Cutter[1], E. Klein[1], D. Aragon[1], M. Heinrich[1], B. Badran[2,3,4], A. Yu[2], V. Clark[1,5],
*[1]University of New Mexico, USA, [2]Army Research Laboratory, USA, [3]City College of New York, USA, [4]Medical University of South Carolina, USA, [5]The Mind Research Network, USA*

**[P3.055] Transcranial ultrasound stimulation and the effect on inhibition as assessed by a stop signal task**
T. Mullins[1], J. Sanguinetti[1,2], B Gibson*[1], M. Heinrich[1], D. Aragon[1], J. Spinks[1], A. Jones[1], B. Robert[1], M. Lamphere[1], A. Yu[2], V. Clark[1,3],
*[1]Psychology Clinical Neuroscience Center, University of New Mexico, USA, [2]Army Research Laboratory, Aberdeen Proving Ground, USA, [3]The Mind Research Network, USA*

**[P3.056] Repetitive transcranial magnetic stimulation of the dorsal anterior cingulate cortex in the treatment of obsessive compulsive disorder: A double blind randomized clinical trial**
S Dhaliwal*, B. Meek, M. Modirrousta,
*University of Manitoba, Canada*

**[P3.057] Challenge to appropriate use of rTMS for major depression in Japan**
M Nakamura*[1,2], S. Kito[3], K. Shinosaki[4], M. Mimura[5], M. Mizuno[6], J. for rTMS appropriate use document[7],
*[1]Showa University, Japan, [2]Kanagawa Psychiatric Center, Japan, [3]Jikei University, Japan,*

[4]Asakayama Hospital, Japan, [5]Keio University, Japan, [6]Toho University, Japan, [7]Japanese Society of Psychiatry and Neurology, Japan

**[P3.058] Therapeutic potential of multiple sessional intermittent theta burst stimulation over bilateral posterior superior temporal sulcus on children and adolescents with autism spectrum disorder**

H Ni*[1], H. Lin[2], Y. Huang[1],
[1]Chang Gung Memorial Hospital, Taiwan, [2]National Taiwan University Hospital, Taiwan

**[P3.059] Temporary changes in the power of gamma band oscillations in the auditory cortex with transcranial alternating current stimulation (tACS) using GTEN hardware**

E Weik*[1,2], C. Tipper[1,2], J. Khangura[1,2], J. Krotez[1,2], M. Roes[1,2], T. Woodward[1,2],
[1]University of British Columbia, Canada, [2]BC Children's Hospital Research Institute, Canada

**[P3.060] Interindividual differences in both resting-state intracortical and interhemispheric inhibition predicts individual differences in relevant motor performance**

J He*[1], I. Fuelscher[1], J. Coxon[2], W. Teo[3], P. Barhoun[3], P. Enticott[3], N. Chowdhury[4], C. Hyde[5],
[1]Cognitive Neuroscience Unit, School of Psychology, Deakin University, Geelong, Australia, Australia, [2]School of Psychological Sciences and Monash Institute of Cognitive and Clinical Neuroscience, Monash University, Melbourne, Australia, Australia, [3]Deakin University, Australia, [4]The University of Sydney, Australia, [5]Institute for Physical Activity and Nutrition (IPAN), School of Exercise and Nutrition Sciences, Deakin University, Geelong Australia, Australia

**[P3.061] Side effects trajectories in rTMS treatment for depression: 10 Hz vs. intermittent theta-burst stimulation**

A Humaira*[1], S. Gao[1], L. Wu[1], J. Downar[2], D. Blumberger[3], F. Vila-Rodriguez[1],
[1]University of British Columbia, Canada, [2]University of Toronto, Canada, [3]Department of Psychiatry, Centre for Addiction and Mental Health, University of Toronto, Canada

**[P3.062] Transcranial direct current stimulation for acute major depressive episodes: An updated meta-analysis of individual patient data.**

A Moffa*[1], D. Martin[1], A. Brunoni[2,3], A. Alonzo[1], D. Blumberger[4], D. Bennabi[5], Z. Daskalakis[4], F. Fregni[6], F. Padberg[3], U. Palm[3], B. Sampaio-Junior[2], C. Loo[1],
[1]University of New South Wales, Australia, [2]Universidade de Sao Paulo, Brazil, [3]Ludwig-Maximilians-University, Germany, [4]University of Toronto, Canada, [5]University Hospital of Besancon, France, [6]Harvard Medical School, USA

**[P3.063] Altered cortical blood flow during sonication of high-order thalamus using low intensity focused ultrasound pulsation**

J Cain*, M. Monti,
University of California, USA

**[P3.064] Integration of prefrontal transcranial direct current stimulation with cognitive training for treatment of memory dysfunction in epilepsy**

A Roy*, E. Boroda, E. Waldron, K. Lim, T. Henry,
University of Minnesota, USA

**[P3.065] Dosage effects of tDCS on working memory and neurophysiological outcomes**

S Nikolin*, D. Martin, C. Loo, T. Boonstra,
University of New South Wales, Australia

**[P3.066] The effects of DC electrical stimulation to visual cortex and retina on neural responses**

Y Terasawa*, Y. Nakano,
Artificial Vision Institute, Japan

**[P3.067] Investigating the effects of tDCS in autism spectrum disorders**

T Penton*[1], M. Banissy[2], C. Catmur[1], G. Bird[3,1],
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**[P3.068] Neural effects of continuous theta-burst stimulation on single neurons in macaque parietal cortex**

M Romero*, P. Janssen, M. Davare,
KU Leuven, Belgium

**[P3.069] Cerebellar low-intensity focused ultrasound stimulation can normalize asymmetrical hemispheric delta power after mouse ischemic stroke**

H. Baek[1,2], A. Sariev[1,2], S. Dong[3], S. Royer[1,2], H Kim*[1,2],
[1]Korea Institute of Science and Technology, Republic of Korea, [2]Korea University of Science and Technology, Republic of Korea, [3]Sookmyung women's university, Republic of Korea,

**[P3.070] Pre-treatment predictors of cognitive side effects in depressed patients treated with ECT: A systematic review**

M. van Kessel[1], J. van der Vlugt[1], H. Spaans[2], J. Murre[3], E Verwijk*[3,3],
[1]Delta; Antes., Netherlands, [2]Parnassia., Netherlands, [3]University of Amsterdam, Netherlands

**[P3.071]** **EEG recording during online modulation of brain activity by transcranial random noise stimulation**
T Zama*[1], K. Kitajo[1,2],
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**[P3.072]** **Putting one foot in front of the other: Using TMS to advance understanding of lower extremity motor control**
J Kindred*[1,2], E. Wonsetler[3,4], C. Charalambous[5], M. Bowden[6,2,2],
*[1]Ralph H. Johnson Veterans's Affairs Medical Center, USA, [2]Medical University of South Carolina, USA, [3]Department of Health Sciences and Research, Medical University of South Carolina, Charleston, SC, USA, [4]High Point University, USA, [5]New York University School of Medicine, USA, [6]Ralph H. Johnson Veterans's Affairs Medical Center, Charleston, SC, USA*

**[P3.073]** **Transcranial Magnetic Stimulation (TMS) induced Motor Evoked Potential (MEP) in chronic pain patients**
S Nanda*, S. Arya, V. Tiwari, V. Srikumar, U. Kumar, R. Bhatia,
*All India Institute of Medical Sciences, India*

**[P3.074]** **Concurrent tDCS-NIRS-MEG: Insights from a technical pilot**
S Esterer*[1], L. Abbott[1], L. Magazzini[2], D. McGonigle[1],
*[1]Cardiff University, United Kingdom, [2]CUBRIC, School of Psychology, Cardiff University, United Kingdom*

**[P3.075]** **State-dependent effects of transcranial oscillatory currents on the motor system during action observation**
M Feurra*[1,2], E. Blagoveshchensky[1], V. Nikulin[3], M. Nazarova[1], A. Lebedeva[4], D. Pozdeeva[1], M. Yurevich[1], S. Rossi[5],
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**[P3.076]** **Influence of tDCS on emotional and attentional information processing**
B. Sutcubasi[1], Z Kucuk*[2], Z. Tarman[1], B. Metin[1], E. Metin[3], B. Sari[1],
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**[P3.077]** **Treatment resistant depression with partial effect of electroconvulsive treatment achieving long lasting remission with dorsomedial prefrontal intermittent theta-burst stimulation – a case report**
R Bodén*, J. Bengtsson, E. Thörnblom, W. Struckmann, J. Persson,
*Uppsala University, Sweden*

**[P3.078]** **ECT seizure parameter modulation with bupropion: A pilot study**
N Mischel*[1], G. Rakesh[2], G. Falcone-Gunderson[1,3], A. Anderson[1], D. Copeland[4], S. Szabo[2,1], R. Weiner[1],
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**[P3.079]** **Electrophysiological brain abnormalities in depression: Microstate analysis on resting high-density EEG**
A Damborska*[1,2,2], M. Tomescu[1], R. Bartecek[2], E. Honzirkova[2], D. Drobisz[2], C. Michel[1],
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**[P3.080]** **The effect of intermittent theta-burst stimulation on the depressed brain: A sham controlled study with near-infrared spectroscopy**
W Struckmann*, J. Persson, M. Gingnell, R. Bodén,
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**[P3.081]** **Optimized tACS parameters for modulation of alpha oscillation**
B P De Koninck*[1], S. Guay[1], L. Proulx-Begin[1], I. Massé[1,2], L. De Beaumont[1,2],
*[1]University of Montreal, Canada, [2]Research Center of Hôpital du Sacré-Cœur de Montréal, Canada*

**[P3.082]** **Theta-burst stimulation and prefrontal regulation of cardiovascular autonomic outputs: The role of state anxiety**
T Poppa Fioretti*[1], S. de Witte[2], M. Vanderhasselt[2], A. Bechara[1], C. Baeken[2,3],
*[1]University of Southern California, USA, [2]University of Ghent, Belgium, [3]UZ Brussel, Belgium*

**[P3.083]** **Sound paired 20 Hz theta burst transcranial magnetic stimulation treatment of broadband tinnitus**
W Stubbeman*, B. Zarrabi, M. Nable, A. Ramones, M. Gencosmanoglu, R. Khairkhah,
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**[P3.084]** **Different input-output properties throughout the cortex as revealed by TMS-EEG**
E Raffin*[1,2,3], S. Harquel[4,2,5], B. Passera[2,5], H. Siebner[6,7], O. David[2,5],
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*France, [5]University Grenoble Alpes, France, [6]Copenhagen University Hospital Hvidovre, Denmark, [7]Copenhagen University Hospital Bispebjerg, Copenhagen, Denmark*

**[P3.085] Effect of repetitive transcraneal magnetic stimulation on aggressive impulsive behavior in subjects with bpd in a of social exclusion paradigm**

A. Rodriguez Delgado, E. Morelos Santana, A. Torres Marcial, I. Arango de Montis, E. Miranda Terres, J Gonzalez Olvera*,
*Instituto Nacional de Psiquiatria Ramon de la Fuente, Mexico*

**[P3.086] Divergent effects on cortical excitability observed in healthy older adults during active voluntary contraction following motor cortex iTBS**

M Sundman*[1], K. Lim[1], J. Mizell[1], V. Ton That[1], W. Mennie[1], C. Ugonna[1], M. Lindley[1], A. Fuglevand[1], N. Chen[1], R. Wilson[1], Y. Huang[2], Y. Chou[1],
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**[P3.087] Use of human invasive SEEG and non-invasive EEG recordings*in vivo* towards tDCS dose individualization**

P Chhatbar*[1], J. Halford[1], W. Vandergrift[1], Y. Zhang[2], W. Feng[1], M. George[1,3], S. Kautz[1,3],
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**[P3.088] What keeps us from ticking?**

J Müller*, N. Freundlieb,
*University Clinic of Hamburg Eppendorf, Germany*

**[P3.089] Efficacy, safety and tolerability of repetitive transcranial magnetic stimulation for smoking cessation in lung cancer: A preliminary report**

X Li*, B. Toll, M. Carpenter, M. George, M. Dancy, D. Wilson,
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**[P3.090] Optimizing the effects of rTMS on heat pain thresholds with classical conditioning: A preliminary study**

L Proulx Bégin*[1,2], A. Herrero Balbiloni[3,2], S. Bouferguene[3,2], G. Lavigne[3,2], L. De Beaumont[3,2], C. Arbour[3,2],
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**[P3.091] A microTMS system for peripheral nerve stimulation**

M Colella*[1,2], R. Laher[2], D. Press[2], C. McIlduff[2], S. Rutkove[2], M. Liberti[3], A. Pascual-Leone[4], G. Bonmassar[5],
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**[P3.092] Improvment in borderline personality disorder symptoms with dorsomedial prefrontal cortex rtms: Two cases**

A Calderón Moctezuma*[1,2], J. Reyes-López[2,1], L. García-Noguez[1,2], R. Rodríguez-Valdes[3,2], N. Hernández-Chan[3], M. Barbosa-Luna[4], G. Roque-Roque[3,2], S. Cañizares-Gómez[3,2], A. Brunner-Mendoza[4],
*[1]University of Queretaro, Mexico, [2]Nervous System Clinic, Mexico, [3]Autonomous University of Queretaro, Mexico, [4]National Autonomous University of Mexico, Mexico*

**[P3.093] The effect of transcranial magnetic stimulation on living human neurons**

A Thomson*[1,1], S. Tielens[1], T. Schuhmann[1], T. De Graaf[1], G. Kenis[2], B. Rutten[1], A. Sack[1],
*[1]Maastricht University, Netherlands, [2]Maastricht University, Faculty of Health, Medicine and Life Sciences, Department of Psychiatry and Neuropsychology, School for Mental Health and Neuroscience & Center for Integrative Neuroscience, Maastricht University, Netherlands*

**[P3.094] Influence of the effect of race on cortical current flow due to ECT**

C. Thomas[1], Z. Deng[2], Y. Huang[1,3], G. Venkatasubramanian[4], A Datta*[1,5],
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**[P3.095] Moved to poster session 2**

**[P3.096] Effects of repetitive TMS on cognitive function in Alzheimer's disease and mild cognitive impairment: A systematic review and meta-analysis**

Y Chou*,
*University of Arizona, USA*

**[P3.097]** **Structural correlates of accelerated intermittent theta-burst stimulation for treatment-refractory depression**
D De Souza*, M. Gulser, E. Cole, K. Stimpson, X. Xiao, C. Tischler, J. Bishop, W. Tate, K. Sudheimer, N. Williams,
*Stanford University, USA*

**[P3.098]** **Preliminary analysis of accelerated intermittent theta burst stimulation for treatment-resistant depression in an inpatient setting**
W Tate*, E. Cole, C. Tischler, K. Stimpson, B. Bentzley, A. Schatzberg, K. Sanborn, N. Williams,
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**[P3.099]** **Attenuating pain with theta burst stimulation (TBS): A sham-controlled neuroimaging study evaluating the relative efficacy of medial versus dorsolateral stimulation**
L Dowdle*, J. Imperatore, S. Hamilton, M. George, J. Borckardt, C. Hanlon,
*Medical University of South Carolina, USA*

**[P3.100]** **Clinical and neuroplastic effect of inhibitory rTMS on the sensory-motor cortical areas in RLS: A proof of concept study**
G Lanza*[1], D. Aricò[2], B. Lanuzza[1], F. Cosentino[1], M. Cantone[3], M. Papotto[1], D. Paci[4], M. Pennisi[4], R. Bella[5], G. Pennisi[5], W. Paulus[6], R. Ferri[1],
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**[P3.101]** **Open Trial of Repetitive Transcranial Magnetic Stimulation in Youth with Treatment-Resistant Major Depression**
F Mac Master*[1], P. Croarkin[2], T. Wilkes[1], Q. McLellan[1], L. Langevin[1], N. Jaworska[3], Y. Jasaui[1], E. Zewdie[1], P. Ciechanski[1], A. Kirton[1],
*[1]University of Calgary, Canada, [2]Mayo Clinic, USA, [3]University of Ottawa, Canada*

**[P3.102]** **The acute effects of a combined yoga and transcranial direct current stimulation on working memory and mindfulness**
M Danilewitz*, S. Gao, J. Brown, F. Vila-Rodriguez,
*University of British Columbia, Canada*

**[P3.103]** **Model-driven transcranial electric stimulation in memory research**
I Alekseichuk*[1,2], Z. Turi[1], S. Veit[1], W. Paulus[1],
*[1]Georg-August University of Goettingen, Germany, [2]University of Minnesota, USA*

**[P3.104]** **Robotic TMS motor map changes after rTMS intervention in children with Tourette's syndrome**
C Kahl*[1], A. Kirton[1], T. Pringsheim[1], P. Croarkin[2], E. Zewdie[1], R. Swansburg[1], F. MacMaster[1],
*[1]University of Calgary, Canada, [2]Mayo Clinic, USA*

**[P3.105]** **Stability of hierarchical clustering for targeted transcranial magnetic stimulation**
J Bishop*[1], Z. Davis[2], X. Xiao[2], K. Sudheimer[1], N. Williams[1],
*[1]Stanford University, USA, [2]Stanford University, USA*

**[P3.106]** **Rapid-paired associative stimulation induces changes in the excitability profile of unaffected hand muscles in patients with idiopathic dystonia**
R Sondergaard*, L. Gan, Y. Jasaui, Z. Kiss, D. Martino,
*University of Calgary, Canada*

**[P3.107]** **High temporal resolution dynamic network studies of schizophrenia brains by 3-D TMS-EEG techniques**
D Gupta*[1], X. Du[2], E. Hong[2], F. Choa[1],
*[1]University of Maryland Baltimore County, USA, [2]University of Maryland School of Medicine, USA*

**[P3.108]** **The correlation between baseline prestimulus brain activity and anxiety change in single-session transcranial direct current simulation**
K Nishida*[1], R. Pascual-Marqui[1,2], K. Kouji[1], M. Yoshimura[1], S. Ueda[1], S. Ikeda[1], Y. Koshikawa[1], R. Ishii[3], T. Kinoshita[1],
*[1]Kansai Medical University, Japan, [2]University of Zurich, Switzerland, [3]Osaka University Graduate School of Medicine, Japan*

**[P3.109]** **Precision stimulation of parietal lobe targets in neurodegenerative and neuropsychiatric disorders**
J Taylor*[1,2], W. McNerney[1,2], P. Bhatt[1], B. Hambro[1], N. Strossman[1], M. Gilmore[3],
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**[P3.110]** **Moved to poster session 2**

**[P3.111]** **Robotic Transcranial Magnetic Stimulation (TMS) motor mapping in children**
A Giuffre*[1,2], E. Zewdie[1,3,4], C. Kahl[1], A. Kirton[1,3,4],

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**[P3.112] A competence by design model for integrating neurostimulation modalities into psychiatry residency training**

N Ainsworth*, M. Danilewitz, C. Liu, F. Vila-Rodriguez,
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**[P3.113] Repetitive transcranial magnetic stimulation for improving cognition in veterans with TBI: Results from pilot clinical trial**

M. Adamson[1,2], S. Siddiqi[3], G. Swaminath[1], L. Wu[4], W. McNerney[4], K. Wortman[4,2], V. Darcy[4], A. Noda[2], B. Hernandez[2], R. Toll[2], J. Cheng[4], S. Chao[4], M. Yutsis[2], B. Yochim[4], D. Clark[4,2], A. Etkin[2,4], W. Ashford[4,2], O. Harris[4,5,2], J. Yesavage[4,2], J Coetzee*[2],
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**[P3.114] A transcranial direct current stimulation system for simultaneous EEG measurement**

Y. Jung[1], Y. Lee[2], G. Choi[2], H Hwang*[2],
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**[P3.115] Physical therapy using by craniocervical oscillating mechanical stimulation for chronic migraine**

N Imai*[1], M. Hotta [2], M. Shiraishi[3], T. Suzuki[4],
*[1]Japanese Red Cross Shizuoka Hospital, Japan, [2]Hotta Clinic, Japan, [3]St Marianna University School of Medicine, Japan, [4]Suzuki Osteopathic Clinic, Japan*

**[P3.116] Lepidium meyenii (maca) and the cerebral stimulation for mobile phones: Some answers in an animal model**

C Marín Tello*[1], L. Matos-Deza[1], J. Aliaga-Arauco[2], C. Lombardi-Pérez[1], E. Castañeda-Marín[1], R. Rengifo-Penadillos[3], S. Chafloque-Viteri[3], C. Sánchez-Marín[3], E. Ponce-López[4],
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**[P3.117] Deep brain stimulation for Parkinson disease with severe axial disability. A case report**

C Guevara*, M. Baabor,
*University of Chile, Chile*

**[P3.118] Effects of transcranial direct current stimulation on parietal and primary motor cortex on modulates cortex excitability in humans**

S. Bashir[1], A Hamza*[2], F. Al-Sultan[3], W. Kyoung Yoo[4],
*[1]King Fahad Specialist Hospital Dammam, Saudi Arabia, [2]National University of Computer and Emerging Sciences, Pakistan, [3]King Saud University, Saudi Arabia, [4]Hallym University College of Medicine, Korea, Democratic People's Republic of*

**[P3.119] ReEnabling ConsciOus behaViors by Engaging dopamineRgic pathwaYs (RECOVERY)**

T Bender Pape*[1,2], J. Rosenow[3], A. Herrold[1,3], S. Livengood[1], S. Kletzel[1], A. Guernon[3], T. Mallinson[4], D. Bhaumik[5], M. Pacheco[1], V. Patil[1], T. Parrish[2], M. Conneely[6],
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**[P3.120] Magnetic seizure therapy produces neuroplasticity in treatment-resistant depression**

Y. Sun[1], D. Blumberger[1], F. Farzan[2], Z Daskalakis*[1],
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**[P3.121] Transcranial direct current stimulation (tdcs) for postoperative pain relief in arthroscopic rotator cuff repair**

H Shitara*, T. Ichinose, N. Hamano, T. Sasaki, D. Shimoyama, M. Kamiyama, R. Miyamoto, H. Chikuda,
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**[P3.122] Interaction of electrical and ultrasonic neuromodulation: A computational study**

T Tarnaud*[1], W. Joseph[1], L. Martens[1], T. Van Renterghem[2], E. Tanghe[1],
*[1]Ghent University/IMEC, Belgium, [2]Ghent University, Belgium*

**[P3.123] Site-specifics effects of online repetitive transcranial magnetic stimulation (rTMS) on working memory (WM)**

L Beynel*[1], S. Davis [1], C. Crowell[1], S. Hilbig[1], H. Palmer[1], A. Brito[1], C. Hile[1], W. Lim[1], D. Nguyen[1], M. Dannhauer[1], A. Peterchev[1], R. Cabeza[1], H. Lisanby[2,1], B. Luber[2], L. Appelbaum[1],
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**[P3.124] Effects of online repetitive transcranial magnetic stimulation (rTMS) on cognition: A meta-analysis and recommendations for future studies**

L Beynel*[1], L. Appelbaum[1], B. Luber[2], C. Crowell[1], S. Hilbig[1], W. Lim[1], D. Nguyen[1], N. Chrapliwy[1], S.

Davis[1], R. Cabeza[1], H. Lisanby[2,1], Z. Deng[2],
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**[P3.125]** **A setup for studying very early TMS-evoked EEG potentials: Prospects and pitfalls**
S Pillen*[1], N. Knodel[2], C. Zrenner[2], U. Ziemann[2], T. Bergmann[2,3,4],
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**[P3.126]** **Modulating brain functional connectivity using transcranial ultrasound stimulation**
E. Anguluan, E. Kim, J Kim*,
*Gwangju Institute of Science and Technology, Republic of Korea,*

**[P3.127]** **Resting- state functional connectivity as a predictor of response to electroconvulsive therapy in schizophrenia**
X Yang*, Z. Xu, J. Sun, P. Liu, X. Zeng, W. Qin,
*Xidian University, China*

**[P3.128]** **Abnormal brain functional connectivity after subcortical stroke: A TMS-EEG study**
G. Dang[1,2], X. Su[1,2], M. Yang[1,2], S. Che[1,2], H. Ren[1,2], Z. Li[1], Y Guo*[1,2],
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**[P3.129]** **Repetitive TMS over the dorsal premotor cortex impairs the prediction of observed action**
W Stadler*, L. Brich, C. Bächle, J. Hermsdörfer,
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**[P3.130]** **Focal TACS of the primary motor hand area at individual mu and beta rhythm – effects on cortical excitability**
M Madsen*[1], M. Takemi[2,3], J. Kesselheim[1], S. Tashiro[1,4], H. Siebner[2,5],
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**[P3.131]** **Significant changes in psychological profile in OCD-patients after deep brain stimulation**
L. Hiekkala-Tiusanen[1], M. Nyrhinen[1], E. Leinonen[1,2], K. Lehtimäki[1], K Järventausta*[1,2],
*[1]Tampere University Hospital, Finland, [2]University of Tampere, Finland*

**[P3.132]** **Real-time neuronavigation feedback in concurrent TMS-fMRI**
M Woletz*, M. Tik, N. Pratapa, M. Prinčič, A. Schuler, C. Windischberger,
*Medical University of Vienna, Austria*

**[P3.133]** **Human vs Non human primates: practical tips**
L Aceves*[1], D. Doudet[2],
*[1]University of British Columbia, Canada, [2]University of British Columbia, Canada*

**[P3.134]** **Fatigue in hemiparetic children with perinatal stroke is associated with altered cortical excitability**
J Wrightson*[1], E. Zewdie[2,1], H. Kuo[2,1], G. Millet[1,3], A. Kirton[2,4,1],
*[1]University of Calgary, Canada, [2]Alberta Children's Hospital, Canada, [3]Jean Monnet University, France, [4]Jean Monnet University Saint-Etienne, Canada*

**[P3.135]** **Identifying brain stimulation targets for migraine using coordinate-based network mapping**
M Burke*[1], J. Joutsa[2], A. Cohen[1,1], L. Soussand[1], R. Burstein[3], M. Fox[1],
*[1]Harvard Medical School, USA, [2]University of Turku, Finland, [3]Beth Israel Deaconess Medical Center, USA*

**[P3.136]** **Deep brain stimulation of the nucleus basalis of Meynert in an experimental model of dementia**
S Hescham*, H. Liu, M. Aldehri, A. Jahanshahi, Y. Temel,
*Maastricht University, Netherlands*

**[P3.137]** **Unimanual, low-force instability control facilitates the corticospinal excitability in the ipsilateral M1 with no evidence of ipsilateral silent periods**
N Ko*[1,2], C. Laine[2], F. Valero-Cuevas[2], B. Fisher[2],
*[1]California State University, USA, [2]University of Southern California, USA*

**[P3.138]** **Repetitive transcranial magnetic stimulation (rTMS) as an effective intervention for chronic dizziness following mild traumatic brain injury: A case study**
E Paxman*, J. Stilling, L. Mercier, C. Debert,
*University of Calgary, Canada*

**[P3.139]** **Dry electrode impedance conditioning for improved electrophysiological recording and electrical stimulation**
S Turovets*[1], E. Essaki Arumugam[1], A. McCutcheon[1], Y. Tanaka[2], B. McSwain[1],
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**[P3.140]** **Transcranial magnetic stimulation and electroencephalography in advancing the diagnosis and treatment of depression**

F Farzan*,
*Simon Fraser University, Canada*

**[P3.141]** **fMRI correlates of neuromodulation of the dorsolateral prefrontal cortex using transcranial magnetic stimulation in patients with resistant obsessive compulsive disorder**
N Goyal*, C. Roy, D. Ram,
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**[P3.142]** **Development of a clinical transcranial magnetic stimulation course for improving TMS aptitude and attitude in psychiatric residents**
K Raj*, N. Williams, M. Bhati, H. Solvason, C. Debattista,
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**[P3.143]** **Withdrawn**

**[P3.144]** **'Beyond-the-brain' strategy: a new photobiomodulation technique produces a neuroprotective effect in a mouse model of alzheimer's disease by synergistic mechanisms when targeting brain and guts**
G Blivet*[1], L. Auboyer[1], J. Meunier[2], L. Ceolin[2], F. Roman[2], R. Burcelin[3], J. Touchon[4,5],
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**[P3.145]** **Characterizing age-related changes in supplementary motor area—primary motor cortex connectivity**
A Vallence*, B. Rurak, P. Drummond,
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**[P3.146]** **Changes in neuronal oscillations account for modulations in working memory dynamics: EEG-tACS study**
M Ermolova*[1], V. Belyaeva[1], N. Novikov[1], B. Gutkin[1,2], M. Feurra[1], T. Fedele [1],
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**[P3.147]** **Modulation of neural oscillation power spectral density with transcranial photobiomodulation**
R Zomorrodi*[1], G. Loheswaran[2], A. Pushparaj[3], L. Lim[2],
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**[P3.148]** **The pharmacology of interhemispheric signal propagation in the motor cortex**
J. Hui[1,2], R Zomorrodi*[2], B. Salavati[1], P. Lioumis[2], T. Rajji[1,2], D. Blumberger[1,2], Z. Daskalakis[1,2],
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**[P3.149]** **Intermittent theta burst stimulation plus external counterpulsation for upper limb motor recovery after ischemic stroke**
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**[P3.150]** **Withdrawn**

**[P3.151]** **tACS in patients with resistant negative symptoms of schizophrenia: A case series.**
L Kallel*[1], M. Mondino[2], J. Brunelin[2],
*[1]Résidence ENNESRINE, Tunisia, [2]Lyon University, France*

**[P3.152]** **Comparing rotational-field-dTMS to unidirectional-dTMS in healthy volunteers**
Y. Roth[1], G. Pell[2], M. Ankry[3], Y. Hadad[3], A. Eisen[4], Y. Burnishev[4], A Tendler*[3,5], E. Moses[4], A. Zangen[1],
*[1]Ben Gurion University, USA, [2]Ben Gurion University, Israel, [3]Brainsway, Israel, [4]Weizmann, Israel, [5]Advanced Mental Health Care Inc., USA*

**[P3.153]** **How much can patients expect to improve with six weeks of deep TMS for OCD?**
R. Gersner[1], E. Sisko[2], A Tendler*[1,2],
*[1]Brainsway, USA, [2]Advanced Mental Health Care Inc., USA*

**[P3.154]** **Antiepileptogenic effects of Low frequency stimulation immediately before kindling are associated with reduced beta and gamma sub band powers**
A. Yadollahpour[1], M. Jalilifar[1], R Rostami*[2],
*[1]Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of, [2]Tehran University, Iran, Islamic Republic of*

**[P3.155]** **Quantitative assessments of epileptogenesis using spectral power analysis of extracellular EEG: A kindling model in Rat**
A. Yadollahpour[1], M. Jalilifar[1], R Rostami*[2],
*[1]Ahvaz Jundishapur University of Medical Sciences, Iran, Islamic Republic of, [2]Tehran University, Iran, Islamic Republic of*

**[P3.156] Sleep quality in patients with cocaine use disorder undergoing repetitive Transcranial Magnetic Stimulation (rTMS)**

S. Cardullo[1], L. Gomez Perez[1], D. Epstein[2], N. Cellini[3], T. Monteanni[3], A. Terraneo[1], A. Bonci[2,4], L. Gallimberti[1], G Madeo*[1,2],

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**[P3.157] Long-term follow-up of cocaine-use patterns in CUD patients undergoing repetitive Transcranial Magnetic Stimulation treatment**

L. Gomez Perez[1], D. Epstein[2], S. Cardullo[1], N. Cellini[3], M. Sarlo[3], A. Terraneo[1], L. Gallimberti[1], A. Bonci[2,4], G Madeo*[1,2],

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**[P3.158] Directional or omnidirectional Deep Brain Stimulation for Parkinson's Disease: Results of a prospective blinded-comparison multi-centre study**

A. Schnitzler[1], P. Mir[2], M. Brodsky[3], L. Verhagen[4], B Cheeran*[5], E. Karst[5], F. Defresne[6], J. Vesper[1],

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**[P3.159] Clinical factors contributing to morbidity, mortality, and cost in patients requiring ECT for the management of catatonia.**

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**[P3.160] Repetitive transcranial magnetic stimulation (rTMS) in patients with tinnitus: a case series**

S Singh*, J. Bakshi, D. Vir, D. Dua,

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**[P3.161] All you need to know about pediatric tms the pathway from the past to the future in treatment of adolescent mental illness**

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**[P3.162] Transcranial Alternating Current Stimulation Aimed at the IFG Influences Motor Skills and Facial Perception**

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**[P3.163] Deep brain stimulation in treatment resistant schizophrenia:post-stimulation PET changes**

A Roldan*[1], S. Sarró[2], M. Rabella[1], F. Sampedro[3], A. Alonso-Solís[1], E. Grasa[1], M. Portella[1], V. Pérez[4], E. Álvarez[1], J. Molet[5], R. Rodríguez[5], P. McKenna[2], E. Pomarol-Clotet[2], I. Corripio[1],

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**[P3.164] Oxidized phosphatidylcholines as a predictive factor of treatment response to repetitive transcranial magnetic stimulation in major depressive disorder**

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**[P3.165] Low-frequency repetitive transcranial cerebellar magnetic stimulation as an 'add-on' therapy in patients with Essential Tremor**

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**[P1.151] Effectiveness of twice-daily theta burst stimulation at prefrontal cortex on methamphetamine dependents**

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