ORAL PROGRAMME

Saturday, 4th March 2017	
08:00-18:00	NEUROMODEC: tDCS Workshop *|*Rooms: Sears+Pisa*
08:30-16:30	MAG & MORE Workshop *|*Rooms: Aquila Room*

Sunday, 5th March 2017	
12:00-17:00	Registration |*Room: Foyer Sedna*
08:00-18:00	MECTA Workshop *|*Rooms: Atria 1 & 2*
08:30-16:30	MAG & MORE Workshop *|*Rooms: Aquila Room*
18.00-20.00	Neurosoft Workshop *|*Rooms: Jim Mao+Petronas+Liberty*

Monday, 6th March 2017				
07:30-17:45	Registration |*Room: Foyer Sedna*			
Room	**Neptuno+ Urano**			
08:30-09:00	**Opening Remarks,** *Harold A. Sackeim, PhD, Founding Editor, Brain Stimulation and Conference Co-chair*			
09:00-18:00	**Plenary Session 1: Overview of the Commonalities Across the Methods: Focus on Basic Mechanisms ****			
09:00-10:00	**[PL01] Basic Mechanisms of Brain Stimulation** *Randolph J. Nudo, PhD, University of Kansas Medical Center, USA*			
10:00-11:00	**[PL02] Understanding and improving mechanisms of non-invasive brain stimulation** *John Rothwell, PhD, University College London, Queen Square, UK*			
11:00-11:15	Refreshment Break |*Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
11:15-12:15	**[PL03] Transcranial Magnetic Stimulation – past, present and future.** *Anthony T. Barker, PhD, The University of Sheffield, UK*			
12:15-13:30	Lunch and poster session -1 |*Rooms: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
13:30-15:30	**Symposium 1A: Invasive and non-invasive stimulation approaches for obsessive compulsive disorder: treatment and network analyses** *Chair: S. N. Haber, University of Rochester, USA*	**Symposium 1B: Variability in response to non-invasive brain stimulation: what's next?** *Chair: M. Hamada, The University of Tokyo, Japan*	**Symposium 1C: Subcortical modulation of epileptic seizures and their consequences** *Chair: F. E. Hoebeek, Erasmus MC Rotterdam, The Netherlands*	**Symposium 1D: Neural circuitry for time processing and temporal binding of action consequences. Evidence from different paradigms and brain stimulation techniques** *Chair: F. Piras, IRCCS Santa Lucia Foundation, Italy*

13:30-14:00	**[S1A.01] Network analyses of deep brain stimulation and non-invasive stimulation approaches for obsessive compulsive disorder** S. Haber *University of Rochester, USA*	**[S1B.01] Variability of responses to non-invasive brain stimulation to explain limited clinical efficacy in psychiatry** A.H. Hasan *LMU Munich, Germany*	**[S1C.01] Hippocampal deep brain stimulation for epilepsy** P.A.J.M. Boon *Ghent university Hospital, Belgium*	**[S1D.01] Modulating the sense of agency by transcranial direct current stimulation** N. Khalighinejad*, P. Haggard *University College London, UK*
14:00-14:30	**[S1A.02] Low-frequency repetitive transcranial magnetic stimulation for obsessive-compulsive disorder** A. Mantovani*[1], H.B. Simpson[2], G. D'Urso[3], E. Santarnecchi[4], S. Rossi[5], S.H. Lisanby[6] *[1]City University of New York, USA, [2]Columbia University, USA, [3]University of Naples Federico II, Italy, [4]Harvard University, USA, [5]Siena University, Italy, [6]National Institute of Mental Health, USA*	**[S1B.02] Variability in response to non-invasive brain stimulation: basic physiology** B. Cheeran*[1], V. Lopez-Alonso[2], M.F. Del-Olmo[2], *[1]University of Oxford, UK, [2]University of A Coruña, Spain*	**[S1C.02] Novel insights in the mechanism of action of vagus nerve stimulation** K. Vonck *Ghent university Hospital, Belgium*	**[S1D.02] The spatial representation of time in visual cortex** G. Fortunato*[1], T. Kénel-Pierre[2], M.M. Murray[2], D. Bueti[1] *[1]International School for Advanced Studies (SISSA), Neuroscience Area, Italy, [2]University Hospital of Lausanne, Switzerland*
14:30-15:00	**[S1A.03] The NIMH DBS for OCD controlled trial: one-year outcomes** B.D. Greenberg[1] et al *[1]Butler Hospital, USA, [2]Brown University, USA*	**[S1B.03] Brain state dependency of corticospinal excitability** U. Ziemann*, C. Zrenner, D. Desideri, P. Belardinelli *University of Tübingen, Germany*	**[S1C.03] Optogenetic stimulation of the thalamus to bi-directionally control epileptic seizures** J.T. Paz *University of California San Francisco, USA*	**[S1D.03] Mechanisms of Time Processing : evidence from tDCS and Parkinson disease** P.S. Bisiacchi*, A. Cavazzana *Dep General Psychology, Italy*
15:00-15:30	[S1A.04] **Polarity-dependent effects of transcranial direct current stimulation in obsessive-compulsive disorder** G. D'Urso*[1], S. Patti[1], E. Toscano[1], A. de Bartolomeis[1], A. Mantovani[2,3] *[1]University of Naples Federico II, Italy, [2]City University of New York, USA, [3]Columbia University, USA*	**[S1B.04] Variability in response to non-invasive brain stimulation in stroke patients** N.S. Ward *UCL Institute of Neurology, UK*	**[S1C.04] Cerebellar impact on pathological oscillations in thalamo-cortical networks** F.E. Hoebeek *Erasmus MC Rotterdam, The Netherlands*	**[S1D.04] Investigating the role of different brain areas in temporal processing using non-invasive brain stimulation techniques** G. Mioni*[1], V. Fracasso[1], F. Stablum[1], S. Grondin[2] *[1]University of Padova, Italy, [2]Laval University, Canada*
15:30-15:45	Refreshment Break and Poster Viewing |*Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
15:45-17:45	**Symposium 2A: Advances in the practice of Electroconvulsive Therapy (ECT)** *Chair: H.A. Sackeim, Columbia University, USA*	**Symposium 2B: Non-invasive brain stimulation to enhance stroke recovery – next steps ***** *Chair: F.C. Hummel, Swiss Federal Institute of Technology (EPFL), Switzerland*	**Symposium 2C: Current direction in TMS revisited** *Chair: Y. Ugawa, Fukushima Medical University, Japan*	**Symposium 2D: The effects of non-invasive brain stimulation on cortical plasticity: from animal models to human studies** *Chair: L.J. Romero Lauro, University of Milano-Bicocca, Italy*

15:45-16:15	**[S2A.01] Anaesthetic advances in ECT: from bench to bedside** V. Gálvez*[1,2], D. Hazdi-Pavlovic[1,2], H. Mark[1,2], S. Harper[1,2], H.J. Leyden[1,2], C.K. Loo[1,2] *[1]School of Psychiatry, University of New South Wales, Australia, [2]The Black Dog Institute, Australia, [3]Wesley Hospital, Australia, [4]St George Hospital, Australia*	**[S2B.01] Brain stimulation in aphasia rehabilitation: Current state and future projects** A. Flöel*[1], R. Darkow[1], M. Meinzer[2] *[1]Charite Universitätsmedizin Berlin, Germany, [2]University of Queensland, Australia*	**[S2C.01] Dendritic computation and I-wave generation** Y. Ugawa *Fukushima Medical University, Japan*	**[S2D.01] Effects of DCS on functional and structural plasticity - mechanistical information from rodent models** B. Fritsch *University Hospital Freiburg, Germany*
16:15-16:45	**[S2A.02] Systematic review and meta-analysis of randomised controlled trials of bitemporal versus high-dose right unilateral ECT for depression** D.M. McLoughlin*[1,2], E. Kolshus[1,2], A. Jelovac[1,2] *[1]Trinity College Dublin, Ireland, [2]St Patrick's University Hospital, Ireland*	**[S2B.02] Novel treatment rTMS strategies to counteract neglect**. G. Koch *Santa Lucia Foundation, Italy*	**[S2C.02] Current direction - basic physiology and plasticity** M. Hamada *the University of Tokyo, Japan*	**[S2D.02] Tracking the effects of tDCS on cortical plasticity by means of TMS-EEG** L.J. Romero Lauro*[1], A. Pisoni[1], M. Rosanova[2], G. Mattavelli[1], N. Bolognini[1], G. Vallar[1,3] *[1]University of Milano-Bicocca, Italy, [2]University of Milano, Italy, [3]IRCCS Istituto Auxologico Italiano, Italy*
16:45-17:15	**[S2A.03] How brief should brief be? An update on ultrabrief pulse ECT** P. Sienaert*[1], E. Verwijk[2], F. Bouckaert[1], H.P. Spaans[2] *[1]UPC KU Leuven, Belgium, [2]Parnassia Psychiatric Institute, The Netherlands*	**[S2B.03] Decoding post-stroke motor function from structural brain images** N.S. Ward *UCL Institute of Neurology, UK*	**[S2C.03] Current direction in TMS revisited: Behavior** R. Hannah *UCL Institute of Neurology, UK*	**[S2D.03] Exploring new tools to deal with old problems: Magnetic fields (TMS/tSMS) and the visual cortico-thalamic network** C. Rivadulla[1], J. Aguilá[1], S. Prieto[1], J. Aguilar[2], J. Cudeiro*[1,3] *[1]University of A Coruña, Spain, [2]Hospital de Parapléjicos de Toledo, Spain, [3]Centro de Estimulación Cerebral de Galicia, Spain*
17:15-17:45	**[S2A.04] Focal and spatially-targeted ECT: comparison of MST and FEAST** H.A. Sackeim*[1], E.B. Short[2], G.L. Salem[2], J.B. Fox[2], S. Kerns[2], M.S. George[2] *[1]Columbia University, USA, [2]Medical University of South Carolina, USA*	**[S2B.04] Non-invasive brain stimulation to enhance stroke recovery – towards patient-tailored strategies** F.C. Hummel *Swiss Federal Institute of Technology (EPFL), Switzerland* **[S2B.05] The role of the cerebellum on motor recovery following stroke** P. Celnik *Johns Hopkins, USA*	**[S2C.04] Motor learning, Cerebellar Inhibition and Intracortical M1 circuitry** P. Celnik *Johns Hopkins, USA*	**[S2D.04] The role of inhibition in motor performance and learning** J. Kolasinski, A. Johnstone, V. Bachtiar, C.J. Stagg* *University of Oxford, UK*
18:00-20:00	Welcome Reception and Poster Session 1 | *Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			

Tuesday, 7th March 2017				
07:30-17:45	Registration |*Room: Foyer Sedna*			
07:30-08:30	NEUROSTAR Workshop * |*Room: Eiffel+Sears+Pisa*			
Room	**Neptuno+ Urano**			
08:30-17:45	**Plenary Session 2: Using Brain Stimulation Methods to Unlock How the Brain Works ****			
08:30-09:30	**[PL04] Advances in Modeling and New Technologies** *Marom Bikson, PhD, The City College of New York, USA*			
09:30-10:30	**[PL05] TBC** *David Pitcher, PhD, University of York, UK*			
10:30-11:00	Refreshment Break |*Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
11:00-12:00	**[PL06] Advances in Brain Stimulation Induced Plasticity** *Ulf Ziemann, MD, University of Tuebingen, Germany*			
12:00-13:30	Lunch and Poster Session 2 |*Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
12:00-13:30	**Editorial Board Meeting, *Brain Stimulation*** (Editorial Board Members and Scientific Program Committee Members) |*Room: Atria 2*			
13:30-15:30	**Workshops (Hands on Demonstrations and Round Table Discussions with Experts)******			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
13:30-14:25	Research Uses of tDCS, *Marom Bikson, PhD & Adam Woods, PhD*	Clinical Use of TMS and ECT, *Paul Fitzgerald, MBBS, PhD, Mark George, MD & Harold Sackeim, PhD*	Advanced TMS Methods – PAS, Theta Burst TMS, *John Rothwell, PhD & Ulf Ziemann, MD*	Deep Brain Stimulation: Hot Topics and Demonstration, *Andres Lozano, MD, PhD*
14:30-15:30	Repeat - Research Uses of tDCS, *Marom Bikson, PhD & Adam Woods, PhD*	Repeat - Clinical Use of TMS and ECT, *Paul Fitzgerald, MBBS, PhD, Mark George, MD & Harold Sackeim, PhD*	Repeat - Advanced TMS Methods – PAS, Theta Burst TMS, *John Rothwell, PhD & Ulf Ziemann, MD*	Repeat - Deep Brain Stimulation: Hot Topics and Demonstration, *Andres Lozano, MD, PhD*
15:30-16:00	Refreshment Break and Poster Viewng|*Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
15:45-17:45	**Symposium 3A: Evidence of brain circuits from the analysis of motor cortex output** *Chair: J. Valls-Sole, Hospital Clinic. University of Barcelona, Spain*	**Symposium 3B: Addiction. The next frontier in TMS treatment development? Translating our knowledge of neural circuits to develop evidence-based substance abuse treatment strategies** *Chair: C.A. Hanlon, Medical University of South Carolina, USA*	**Symposium 3C: The triple M approach: Mapping, Modeling and Modulation in brain stimulation research** *Chair: H.R.Siebner, Danish Research Centre for Magnetic Resonance, Cop, Madagascar*	**Symposium 3D: New imaging technologies paving the road of DBS for psychiatric disorders** *Chair: T.E. Schlaepfer, University Hospital Freiburg, Germany*
15:45-16:15	**[S3A.01] Modulation of motor output by parietal input**	**[S3B.01] Ventral medial prefrontal cortex theta burst stimulation decreases salience network activity in cocaine users**	**[S3C.01] Modeling-informed tACS allows shaping oscillatory activity in specific brain networks**	**[S3D.01] New imaging technologies paving the road of DBS for psychiatric disorders**

	M. Hallett *National Institutes of Health, USA*	**and alcohol users** C. Hanlon*, L. Dowdle, R. Anton, M. George *Medical University of South Carolina, USA*	C.S. Herrmann *Oldenburg University, Germany*	T.E. Schlaepfer*[1], J.A. Barcia[2], C.E. MyIntyre[3], V.A. Coenen[4] *[1]University Hospital Freiburg, Germany, [2]Servicio de Neurocirugía del Hospital Clínico San Carlos (Madrid), Spain, [3]Case Western Reserve University, USA, [4]University Hospital Freiburg, Germany*
16:15-16:45	**[S3A.02] Interhemispheric sensorimotor connectivity of the upper limbs** N. Wenderoth*, M. Bächinger, K.L. Ruddy *ETH Zürich, Switzerland*	**[S3B.02] Dorsolateral prefrontal cortex transcranial magnetic stimulation as a tool to decrease pain and craving in opiate dependent individuals: a pilot study of feasibility and effect size.** G. Sahlem*[1], J. Breedlove[1], J. Taylor[2,1], B. Badran[1], A. Lauer[1], M. George[1,2], K. Brady[1,2], J. Borckardt[1,2], S. Back[1,2], C. Hanlon[1,2] *[1]Medical University of South Carolina, USA, [2]Ralph Johnson VA Medical Center, USA, [3]Yale University, USA*	**[S3C.02] Temporal neuronavigation of transcranial brain stimulation: Exploiting the periodicity of intrinsic brain activity** H.R. Siebner[1,2] *[1]Copenhagen University Hospital Hvidovre, Denmark, [2]Copenhagen University Hospital Bispebjerg, Denmark*	**[S3D.02] Artificial induction of cortical plasticity by high frequency cortical stimulation permits to increase resection of brain tumors located in Eloquent areas** J.A. Barcia*, C. Nombela, J. Matías-Guiu, M. Pérez *Hospital Clínico San Carlos, Spain*
16:45-17:15	**[S3A.03] Cerebellar influence on motor cortex excitability** G. Koch *Santa Lucia Foundation, Italy*	**[S3B.03] Dorsolateral prefrontal cortex TMS reduces cocaine use: A pilot study** A. Terraneo*[1], L. Leggio[1], M. Saladinie[1], M. Ermanie[1], A. Bonci[1], L. Gallimberti[1] *[1]IRCCS, San Camillo, Venezia, Italy, [2]National Institute of Drug Abuse, Inreamural, USA*	**[S3C.03] How biophysical models can help to reveal the mechanisms underlying motor cortex stimulation by TMS** A. Thielscher[1,2] *[1]Danish Research Center for MR, Copenhagen University Hospital Hvidovre, Denmark, [2]Technical University of Denmark, Denmark*	**[S3D.03] Diffusion tensor imaging tractography assisted direct targeting of the cerebello-thalamo-cortical network for deep brain stimulation in tremor - surgical strategy and intra-operative effects** V.A. Coenen*[1,2], T. Prokop[1,2], B. Sajonz[1,2], N. Allert[3], B. Maedler[1,2], C. Jenkner[1], H. Urbach[1,2], P.C. Reinacher[1] *[1]Medical Faculty Freiburg University, Germany, [2]Freibur University Medical Center, Freiburg, Germany, [3]Bonn University, Germany*
17:15-17:45	**[S3A.04] The complex relationship between pain and motor cortex** J.P. Lefaucheur[1,2] *[1]Henri Mondor Hospital, Creteil, France, [2]Faculty of Medicine, Creteil, France*	**[S3B.04] Continuous theta burst TMS as a tool to change decision-making in smokers** W. Bickel*[1], S. Snider[1], C. Hanlon[2], J. Stein[1] *[1]Virginia Tech Carilion, USA, [2]Medical University of South Carolina, USA*	**[S3C.04] Mapping TMS local and remote immediate effects by concurrent TMS/fMRI using a dedicated high-sensitivity coil array** M. Tik*, M. Woletz, L. Navarro de Lara, R. Sladky, A. Hoffmann, A. Hummer, C. Windischberger *Medical University of Vienna, Austria*	**[S3D.04] Diffusion tensor magnetic resonance imaging tractographic analysis of slMFB DBS in major depression** V.A. Coenen*[1,2], T.E. Schlaepfer[1,2], B. Bewernick[3], J. Bostroem[3], E. Hattingen[3], H. Urbach[1,2], M. Li[1] *[1]Freiburg University Medical Center,*

				Germany, [2]Medical Faculty Freiburg University, Germany, [3]Bonn University, Germany
19:30-22:00	Conference Dinner (separate ticket required) Location: Finca Mas Solers			

Wednesday, 8th March 2017				
08:00-09:30	Registration | *Room:Foyer Sedna*			
Room	**Neptuno+ Urano**			
08:30-18:00	**Plenary Session 3: State of the Art Clinical Applications of Brain Stimulation Methods ****			
08:30-09:30	**[PL07] Functional and Biological effects of DBS in Human motor, mood and memory circuits** *Andres M Lozano MD PhD, Toronto Western Hospital, University of Toronto, Canada*			
09:30-10:30	**[PL08] Novel forms of stimulation therapy for neurological disorders** *Josep Valls-Sole, Hospital Clinic. University of Barcelona, Spain*			
10:30-11:00	Refreshment Break | *Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
11:00-12:00	**[PL09] Uses in Psychiatric Disorders** *Paul Fitzgerald, MBBS, PhD, Monash Alfred Psychiatry Research Centre, The Alfred and Monash University Central Clinical School, Australia*			
12:00-13:30	Lunch and Poster Session 3: *Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
13:30-15:30	**Symposium 4A: Brain-state dependent and closed-loop neuromodulation of human cortex** *Chair: A. Gharabaghi. University of Tuebingen, Germany*	**Symposium 4B: Clinical Neuroscience Informing Application of Non-invasive Brain Stimulation** *Chair: L.L. Carpenter, Butler Hospital/Brown Dept Psychiatry & Human Behavior, USA*	**Symposium 4C: An update on home-based non-invasive brain stimulation therapies** *Chair: H. Knotkova, MJHS Institute for Innovation in Palliative Care, USA*	**Symposium 4D: Frontiers in pediatric and neurodevelopmental brain stimulation** *Chair: P. E. Croarkin, Mayo Clinic, USA*
13:30-14:00	**[S4A.01] Combining brain-state dependent cortical and peripheral stimulation for corticospinal plasticity** A. Gharabaghi *University of Tuebingen, Germany*	**[S4B.01] Network mechanisms of clinical response to TMS in Posttraumatic stress and major depressive disorders** N.S. Philip*, J. Barredo, M. v 'ant Wout, J. Almeida, A.R. Tyrka, L.H. Price, L.L. Carpenter *Brown University, USA*	**[S4C.01] Home-based neuromodulatory technologies for migraine and orofacial pain disorders** A. DaSilva *University of Michigan, USA*	**[S4D.01] Non-invasive neuromodulation trials in children: Lessons from perinatal stroke** A. Kirton *University of Calgary, Canada*
14:00-14:30	**[S4A.02] Closed-loop transcranial brain stimulation during sleep: EEG-informed, phase-specific targeting of human slow oscillations with single-pulse TMS**	**[S4B.02] Rational targeting thalamo-cortical oscillations with non-invasive brain stimulation** F. Frohlich *UNC at Chapel Hill, USA*	**[S4C.02] Principles in Use of home-based tDCS in Depression** C.K. Loo*[1,2], A. Alonzo[1,2], J. Fong[1,2] *[1]University of New South Wales, Australia, [2]Black Dog Institute, Australia*	**[S4D.02] Therapeutic brain stimulation and biomarker development in adolescent depression** P.E. Croarkin *Mayo Clinic, USA*

	H.R. Siebner[1,2] *[1]Copenhagen University Hospital Hvidovre, Denmark, [2]Copenhagen University Hospital Bispebjerg, Denmark*			
14:30-15:00	**[S4A.03] Precise Temporal Association between Cortical Potentials Evoked by Motor Imagination and Afference Induces Cortical Plasticity** N. Mrachacz-Kersting *Aalborg University, Denmark*	**[S4B.03] Combined EEG/TMS/fMRI studies asking whether phase matters** M.S. George*[1], T. R. Brown[1], J. Muraskin[1], G.T. Saber[1], J. Doose[1], H. Moss[1], R. Goldman[2], P. Sajda[3] *[1]Medical University of South Carolina, USA, [2]University of Wisconsin, USA, [3]Columbia University, USA*	**[S4C.03] Adaptation of technology and protocol for remotely-supervised transcranial direct current stimulation (tDCS) in patients with complex symptoms due to serious chronic illness** H. Knotkova[1,2] *[1]MJHS Institute for Innovation in Palliative Care, USA, [2]Albert Einstein College of Medicine, The Bronx, NY, USA*	**[S4D.03] Biomarkers of behavioral and motor control in children: Tourette Syndrome, ADHD, ASD, and neuropharmacology** D.L. Gilbert *University of Cincinnati, USA*
15:00-15:30	**[S4A.04]** Phase of brain oscillations determines the direction of induced plasticity in real-time EEG-triggered TMS C. Zrenner*, P. Belardinelli, D. Desideri, U. Ziemann *University of Tübingen, Germany*	**[S4B.04] Synergistic effects of ketamine and theta burst stimulation in the treatment of major depressive disorder (MDD)** A.F. Leuchter*, R. Espinoza, N. Suthana, A. Hunter, I.A. Cook *University of California Los Angeles, USA*	**[S4C.04] Procedures and results using a remotely-supervised protocol for at-home access to tDCS in multiple sclerosis** L. Charvet*, M. Shaw *New York University, USA*	**[S4D.04] Targeting discrete symptom domains using non-invasive brain stimulation in autism spectrum disorder** P.G. Enticott *Deakin Unversity, Australia*
15:30-15:45	Refreshment Break and Poster Viewing| *Room: Foyer Sedna, Jupiter + Mercurio and Foyer Auditorio*			
Rooms	*Neptuno + Urano*	*Auditorium Millennium*	*Eiffel+Sears+Pisa*	*Jim Mao+Petronas+Liberty*
15:45-17:45	**Symposium 5A: Cortico-Cortical Contributions to Motor Control** *Chair: J. C. Rothwell, UCL Institute of Neurology, UK*	**Symposium 5B: Vagus nerve stimulation: basic mechanisms, clinical evidence and non-invasive approaches** *Chair: T.Usichenko, McMaster University, Canada*	**Symposium 5C: Advances in tDCS and rTMS for chronic pain: From molecules to functional outcomes** *Chair: H. Knotkova, MJHS Institute for Innovation in Palliative Care, USA*	**Symposium 5D: Accelerated rTMS: a promising new avenue to treat mood disorders?** *Chair: C. Baeken, Ghent University, Belgium*
15:45-16:15	**[S5A.01] Methods to examine I-wave interactions and effects of afferent input** R. Chen *University of Toronto, USA*	**[S5B.01] From auricular acupuncture to transcutaneous vagal nerve stimulation (TVNS)** T.I. Usichenko[1,2] *[1]McMaster University, Canada, [2]University of Greifswald, Germany*	**[S5C.01] Differences between rTMS and tDCS in the analgesic potential of non-invasive motor cortex stimulation** J.P. Lefaucheur[1] *[1]Henri Mondor Hospital, Creteil, France, [2]Faculty of Medicine, Creteil, France*	**[S5D.01] Brain influences of accelerated rTMS in major depression** C. Baeken *Ghent University, Belgium*
16:15-16:45	**[S5A.02] I-wave interactions following Human Spinal Cord Injury** M. A. Perez *University of Miami, USA*	**[S5B.02] The physiological and neurobiological effects of transcutaneous auricular vagus nerve stimulation (taVNS)** B.W. Badran*[1], C.E. Glusman[1], A.W.	**[S5C.02] New insights in vivo into the treatment of migraine and other chronic pain disorders using non-invasive neuromodulation**	**[S5D.02] rTMS in depression - accelerating response to therapy** P.B. Fitzgerald *Monash University, Australia*

		Badran[2], C.W. Austelle[1], W.H. DeVries[1], J.J. Borckhardt[1], M.S. George[1,3] *[1]Medical University of South Carolina, USA, [2]San Jose State University, USA, [3]Ralph H. Johnson VA Medical Center, USA*	A. DaSilva *Headache & Orofacial Pain Laboratory, University of Michigan, USA*	
16:45-17:15	**[S5A.03] Computational modelling of cortical responses to transcranial magnetic stimulation** J. Triesch *J.W. Goethe University, Germany*	**[S5B.03] Update on the elucidation of the mechanism of action of vagus nerve stimulation** K.J.E. Vonck *Ghent University Hospital, Belgium*	**[S5C.03] Cortical treatment of neuropathic with rTMS and tDCS: from anecdote to evidence** L. Garcia-Larrea *Inserm and University Of Lyon, France*	**[S5D.03] Accelerated rTMS: Pragmatic Considerations for the Development of an Inpatient rTMS Approach** N.R. Williams *Stanford University, USA*
17:15-17:45	**[S5A.04] Epidural activity evoked by different forms of brain stimulation** v. Di Lazzaro *Policlinico Universitario Campus Bio-Medico, Italy*	**[S5B.04] Vagus nerve stimulation therapy for chronic medical disorders** L.L. Carpenter[1,2] *[1]Butler Hospital, USA, [2]Brown University, USA*	**[S5C.04] Evidence-based review of transcranial direct current stimulation (tDCS) for chronic pain syndromes** H. Knotkova[1,2] *[1]MJHS Institute for Innovation in Palliative Care, USA, [2]Albert Einstein College of Medicine, USA*	**[S5D.04] Optimizing the inter-session interval for accelerated rTMS** J. Downar *University of Toronto, Canada*
Room	**Neptuno+ Urano**			
17:45-18:00	Closing Remarks, Poster Award, and Conference Summary *Mark S. George, MD & Vincent Walsh, PhD*			

* The Industry Sponsored Workshops are not part of the official Scientific Program and their content has not been seen or approved by the Scientific Program Committee. They are independent from the main meeting science program but are listed here for overall coordination.

** For this meeting, the Plenary Speakers, apart from the overall Award Lecture by Prof. Barker, are derived from the deputy editors of *Brain Stimulation*. This tradition began at the 1st International Brain Stimulation Conference in Singapore, in order to guarantee a high level of science at that initial program. The current deputy editor list has a gender imbalance, which then translates to these plenary speakers. The Program Committee has worked to make sure the rest of the program is gender balanced, as well as balanced by topic, region, and career length of the speakers.

*** This symposium has 5, rather than 4 speakers. The length of time for each speaker will be determined by the chair. This may make going from talk to talk across symposia difficult for this symposium.

**** Workshops will be one hour long each, and then will repeat for the next hour. Attendees can attend one, then another in the next hour.