



RAZIONALE SCIENTIFICO

The 7th edition of the European Conference on Brain Stimulation in Mental Health (ECBS), the biannual official congress of the European Society for Brain Stimulation (ESBS). ECBS is a dynamic and interdisciplinary event bringing together key opinion leaders, researchers, and innovators committed to advancing brain stimulation practices in psychiatry and neurology.

Brain Stimulation (BS) is one of the fastest-growing frontiers in neuroscience and mental health care. With exponential advances in technology, increasing clinical applications, and expanding regulatory validation, BS is transforming how we understand and treat psychiatric and neurological disorders worldwide.

This year's theme – New Frontiers in Brain Stimulation Practice across Lifespan -highlights our focus on personalized and age-inclusive approaches. We will explore how brain stimulation is reshaping mental health care from childhood to old age, addressing a wide spectrum of clinical conditions and applications in special populations with unique physiological needs.

A major focus will be on the complex interactions between brain stimulation and the neurophysiological and neurobiological underpinnings of mental disorders.

We'll also discuss the integration of brain stimulation with pharmacological treatments, which offers largely unexplored possibilities for improved and synergistic treatments for patients with psychiatric and neurological disorders.

A special emphasis will be given also to the latest technological advances and to the personalization of treatment protocols: home-based non-invasive brain stimulation, accelerated and adaptive protocols, invasive brain stimulation, and emerging non-electromagnetic stimulation approaches.

PROGRAMMA SCIENTIFICO

15 October 2026

08.00-09.00 Registration

SALA GALATEA

09.00-12.00 Pre-conference Course – Introduction to Non-Invasive Brain Stimulation (NIBS)

09.00–09.10 Welcome and introduction
Chris Baeken

09.10–09.30 The certification pathway of the European Society of Brain Stimulation (ESBS)
Chris Baeken

09.30–09.40 Q&A on ESBS certification
All Participants



- 09:40–09:45** Short break
- 09:45–10:05** Transcranial Magnetic Stimulation (TMS) basics: what it is and how it works
Lasse Christiansen
- 10:05–10:25** Transcranial Electrical Stimulation (tES) basics: what it is and how it works
Sofia Fernandes
- 10:25–10:40** Overview of current clinical and research guidelines
Albino Oliveira-Maia
- 10:40–11:00** Safety and ethics in NIBS
Weronika Debowska
- 11:00–11:05** Short break
- 11:05–12:00** Hands-on session with TMS and tES selected devices
All participants

SALA GALATEA

- 13.30-14.00** **ECBS Welcome Session (ECBS chair, ESBS president, authorities)**
Giordano D’Urso, Chris Baeken
- 14.00-14.50** **Keynote speaker - Paolo Maria Rossini**
Non-invasive brain stimulation methods: a window on physiological and pathological brain function
- 14.50-15.00** **Conferral of the ESBS Lifetime Achievement Award**

SALA GALATEA

15.00-16.20 |

S1 Non-invasive Brain Stimulation in Psychiatric Disorders

Chairs: **Bernardo Dell’Osso, Alexander Sack**

- 15.00-15.15** Transcranial Brain Stimulation in Depression: About Settings and Access to Treatment -
Frank Padberg
- 15.15-15.30** Non-invasive Brain Stimulation in Obsessive-Compulsive Disorder - **Beatrice Benatti**



- 15.30-15.45** Non-invasive Brain Stimulation in Addiction: Clinical Perspectives and Future Directions - **Graziella Madeo**
- 15.45-16.00** Psychedelics or Non-invasive Brain Stimulation in treatment-resistant psychiatric disorders? - **Giovanni Martinotti**
- 16.00-16.20** Discussion of the topics presented
All participants

SALA DIONE

15.00-16.20 |
S2 Non-invasive Brain Stimulation in the Pediatric Population
Chairs: **Til Ole Bergmann, Yosuke Morishima**

- 15.00-15.15** Transcranial Electrical Stimulation in the Pediatric Population: Overview - **Vera Moliadze**
- 15.15-15.30** Optimizing rTMS for Adolescent Resistant Depression: Current Evidence and Emerging Protocols - **Belen Rubio**
- 15.30-15.45** Compensatory Mechanism of Theta Oscillations in Clinical High Risk for Psychosis - **Yosuke Morishima**
- 15.45-16.00** Biomarkers of Clinical Response to Transcranial Magnetic Stimulation - **Lukasz Smigielski**
- 16.00-16.20** Discussion of the topics presented
All participants
- 16.20-16.40** Coffee break

SALA GALATEA

16.40-18.00 |
S3 The neurobiology of electrical stimulation: from molecules to behavior
Chairs: **Giordano D'Urso, Alberto Priori**

- 16.40-16.55** Experimental evidence for electric field-induced destabilization of amyloid fibrils and alfa-synuclein in vitro: theoretical implications for direct current stimulation in Alzheimer's disease and Parkinson's disease - **Sara Marceglia**
- 16.55-17.10** The effects of electrical stimulation on molecular biomarkers in normal and pathological conditions: from in vitro to in vivo studies - **Paola Signorelli**



- 17.10-17.25** Direct Current Stimulation modulates gene expression related to human diseases in animal models - **Tommaso Bocci**
- 17.25-17.40** Neurobiological underpinnings of tDCS effects in bipolar disorder – **Marco Manzo**
- 17.40-18.00** **Discussion of the topics presented**
All participants

SALA DIONE

16.40-18.00 |

S4 Network-Guided Brain Stimulation in Alzheimer's Disease: Toward Precision Neuromodulation

Chairs: Giacomo Koch, Willem de Haan

- 16.40-16.55** Investigating mechanisms of memory improvement with 40Hz precuneus tACS and MEG in pre-dementia AD: the MEMENTO study - **Annel Koomen**
- 16.55-17.10** Computational Modeling of Precuneus TMS: Optimizing Induced Electric Fields in the Presence of Alzheimer's-Related Atrophy - **Hidde Woerdman**
- 17.10-17.25** TMS-EEG-fMRI Integration: Personalizing Non-Invasive Brain Stimulation and Mapping Causal Brain Dynamics - **Elias Casula**
- 17.25-17.40** Cerebellar Rhythms and Precision Neuromodulation: Mechanisms and Translational Impact - **Danny Spampinato**
- 17.40-18.00** **Discussion of the topics presented**
All participant

18.00-19.30 | ESBS General Assembly

16 October 2026

08.00-08.30 Registration

SALA GALATEA

- 08.30-09.30** Workshop: Complex Neurological PSYCHIATRY conditions treated with FNON
FNON stands for Functional Network-Oriented Neuromodulation - **Petros Kattou**
- 09.30-10.20** **Keynote speakers – Odile Van den Heuvel, Sophie Fitzsimmons**
From circuit dysfunction to personalized brain stimulation in obsessive-compulsive disorder



SALA GALATEA

10.20-11.20 |

S5 Non-Invasive Brain Stimulation: a bridge between Neurophysiology, Neuropsychology, and Neurochemistry

Chairs: Letizia Leocani/Luigi Trojano

10.20-10.35 NIBS and Neurophysiology - **Simone Rossi**

10.35-10.50 NIBS and Neuropsychology - **Roberta Ferrucci**

10.50-11.05 NIBS and drugs - **Ulf Ziemann**

11.05-11.20 **Discussion of the topics presented**
All participants

SALA DIONE

10.20-11.20 |

S6 Optimizing theta-burst stimulation in obsessive-compulsive disorder: personalized targeting and oscillatory circuit engagement

Chairs: Mircea Polosan, Estelle Raffin

10.20-10.35 Targeting OCD Circuits with TMS: From Pathophysiological Rationale to Personalized Stimulation - **Jean-Marie Batail**

10.35-10.50 Personalized Right Inferior Frontal Gyrus-targeted iTBS Treatment in OCD: Results of the MAGTOC Randomized Clinical Trial - **Sylvain Harquel**

10.50-11.05 Harnessing High-Gamma Theta-Burst Stimulation to Enhance TBS-Induced Plasticity - **Estelle Raffin**

11.05-11.20 **Discussion of the topics presented**
All participants

11.20-11.40 **Coffee break**



SALA GALATEA

11.40-13.00 |

S7 Advancements in Accelerated and Personalized Brain Stimulation: Integrating Clinical Efficacy, Personalized Target Engagement & Stability and TMS-EEG

Chairs: Eric van Exel, Philip van Eijndhoven

- 11.40-11.55** Comparing The Clinical Efficacy of 5-day Multi Daily Neuronavigated iTBS vs. Standard rTMS in Treatment-Resistant Depression: Results from the Dutch Depression Outcome Trial – **Tom Biemans**
- 11.55-12.10** Prospective Validation of fMRI-Guided Targeting in Accelerated iTBS for Major Depressive Disorder: A Comparison With Standard Scalp-Based 10 Hz rTMS - **Coen Coomans**
- 12.10-12.25** Target stability and variability of personalized fMRI-guided TMS in a clinical trial for PTSD - **Sanne van Rooij**
- 12.25-12.40** Electrophysiological Correlates of Deep TMS effects in Major Depressive Disorder, and Clinical Outcomes of an Accelerated Deep TMS Protocol from a Recent Multisite Trial - **Abraham Zangen**
- 12.40-13.00** Discussion of the topics presented
All participants

SALA DIONE

11.40-13.00 |

S8 | Optimizing Non-Invasive Brain Stimulation for Schizophrenia: Toward Personalized and Mechanism-Based Interventions

Chairs: Marine Mondino, Antonio Vita

- 11.40-11.55** Mapping symptom-general and symptom-specific targets for transcranial magnetic stimulation in schizophrenia: an electric-field modeling meta-analysis - **Indrit Bègue**
- 11.55-12.10** tRNS for difficult to treat symptoms of schizophrenia. Results from a French multicentre RCT - **Jerôme Brunelin**
- 12.10-12.25** Is tDCS effective for the negative symptoms of schizophrenia? A meta-analytic study of clinical moderators and stimulation parameters- **Raquel Guiomar**
- 12.25-12.40** Beyond Symptom Reduction in Schizophrenia: tDCS Effects on Life Engagement and Cigarette Smoking as a Moderator of tDCS Outcomes on Negative and Cognitive Symptoms - **Jacopo Lisoni**
- 12.40-13.00** Discussion of the topics presented
All participants



13.00-14.00 LUNCH

SALA GALATEA

14.00-14.50 **Keynote speaker - Harold Sackheim:**
92 years of seizure therapy: what have we learned and what is the future?

SALA GALATEA

14.50-16.10 |
S9 Dosing Approaches Across Neuromodulation Techniques: Insights from TMS and ECT
Chairs: **Chris Baeken, Julia Meijer**

- 14.50-15.05 General overview of dosing parameters across major neuromodulation techniques - **Julia Meijer**
- 15.05-15.20 Is It the Dose or the Schedule? Antidepressant Effects of Accelerated vs Daily iTBS - **Beatriz Cavendish**
- 15.20-15.35 From atlas to individual: estimating TMS dose with population-level electric field models - **Ole Numssen**
- 15.35-15.50 Less Is More? How higher-than-intended ECT dosing may reduce remission rates – **Eric van Exel**
- 15.50-16.10 Discussion of the topics presented
All participants

SALA DIONE

14.50-16.10 |
S10 Targeting Brain Connectivity with Non-Invasive Brain Stimulation: From Mechanisms to Translation
Chairs: **Tuba Aktürk, Jelena Trajkovic**

- 14.50-15.05 Flexible Fronto-Parietal Theta Communication: Frequency- and Phase-Specific tACS Effects on Episodic Memory - **Tuba Aktürk**
- 15.05-15.20 Personalized ccPAS Enhances Dorsal Attention Network Connectivity and Spatial Attention
Jelena Trajkovic
- 15.20-15.35 State-Dependent Brain Stimulation: Insights from Hidden Markov Modeling of Network Dynamics - **Laura Marzetti**



15.35-15.50 Application of 40 Hz Gamma Entrainment Increases EEG Resting State Alpha Activity in Healthy Controls and Alzheimer's Disease Patients - **Bahar Güntekin**

15.50-16.10 Discussion of the topics presented
All participants

16.10-16.30 Coffee break

SALA GALATEA

16.30-17.30 |

S11 | Interventional Psychiatry for Depression Across the Lifespan: Challenges and Opportunities

Chairs: Peter Giacobbe, Enoch Ng

16.30-16.45 Youth and rTMS for Depression - **Enoch Ng**

16.45-17.00 Adverse Childhood Experiences and Interventional Psychiatry – **Peter Giacobbe**

17.00-17.15 Ultrabrief Pulse ECT in Adults and Older Adults - **Declan McLoughlin**

17.15-17.30 Discussion of the topics presented
All participants

SALA DIONE

16.30-17.30 |

S12 Optimizing Brain Stimulation: Plasticity, Neural Circuits, and Metabolic Health as the emerging Therapeutic Triad for Improved Mental Health Outcomes

Chairs: Sean Nestor, Maria Vasileiadi

16.30-16.42 Brain circuit-based underpinnings of TMS therapeutic outcomes: new findings - **Robin Cash**

16.42-16.54 A Case for Considering Metabolic Health in Psychiatric TMS Outcomes- **Maria Vasileiadi**

16.54-17.06 Translating Synaptic Mechanisms of TMS into Novel Protocols and Effective Outcomes - **Joshua Brown**

17.06-17.18 D-Cycloserine Augmentation of Intermittent Theta Burst Stimulation (iTBS) in Depression (COGENT): A Multi-Site, Randomised, Placebo-Controlled Trial
Leo Chen

17.18-17.30 Discussion of the topics presented
All participants



SALA GALATEA

17.30-18.30 |

S13 Invasive brain stimulation in Psychiatric Disorders

Chairs: **Felice Esposito, Martijn Figee**

17.30-17.45 Deep Brain Stimulation in Depression - **Roel Mocking**

17.45-18.00 Deep Brain Stimulation in Schizophrenia - **Nicola Cascella**

18.00-18.15 Deep Brain Stimulation in Obsessive-Compulsive Disorder - **Martijn Figee**

18.15-18.30 **Discussion of the topics presented**
All participants

SALA DIONE

17.30-18.30 | **Free communications session**

Chairs: **Debby Klooster, Giacomo Grassi**

17.30-17.40 kTMP: An Innovative, Comfortable Non-Invasive Brain Stimulation Method for Modulating Brain Activity and Its Clinical Applications – **Ludovica Labruna**

17.40-17.50 ABIS-XR: A Multimodal Closed-Loop EEG–ECG Framework for Adaptive Neurostimulation in Virtual Reality – **Anna Letournel**

17.50-18.00 White Matter Correlates of Repetitive Transcranial Magnetic Stimulation Combined with Exposure and Response Prevention Therapy in Obsessive-Compulsive Disorder – **Tjardo Postma**

18.00-18.10 Intermittent tACS Differentially Modulates Working Memory and Neural Oscillations – **Haijing Huang**

18.10-18.20 A Combined tDCS and Videogame Training Approach for Adult ADHD: An Exploratory Study – **Benedetta Cherbacich**

18.20-18.30 Restoring Sleep and Circadian Rhythm with Home-Based Brain Stimulation
Ksenija Maravic Da Silva



17 October 2026

08.00-08.30 Registration

SALA GALATEA

08.30-09.30 |

S14 Beyond the Acute Response: Rethinking rTMS Maintenance Strategies in Depression

Chairs: **Anne Sauvaget, Jean-Marie Batail**

08.30-08.45 Maintenance Protocols in rTMS: State of the Art and Perspectives from French Real-World Data (DS Natur Cohort) - **Noomane Bouaziz**

08.45-09.00 rTMS and Brain Plasticity: Understanding the Biological Determinants of Clinical Stability - **Jean-Marie Batail**

09.00-09.15 Maintaining Remission After ECT: What Role for rTMS? - **Maud Rotharmel**

09.15-09.30 Discussion of the topics presented
All participants

SALA DIONE

08.30-09.30 |

S15 State-dependent Modulation of Non-Invasive Brain Stimulation: From Mechanisms to Clinical Applications

Chairs: **Iris Dalhuisen**

08.30-08.45 Modulation of TMS-Induced Neuroplasticity by D-Serine Supplementation - **Thomas van der Velde**

08.45-09.00 State-dependent neuromodulation: bridging experimental insights and clinical applications - **Stefanie De Smet**

09.00-09.15 Enhancing effect of cognitive interventions on non-invasive brain stimulation for depression and depressive symptoms: A systematic review - **Marloes Wurkum**

09.15-09.30 Discussion of the topics presented
All participants



SALA GALATEA

09.30-10.20 Keynote speaker - Marom Bikson
What Was Once Impossible: How Better Electrode Technology Transforms Outcomes

SALA GALATEA

10.20-11.20 Brain Stimulation regulation roundtable
Chairs: Lasse Christiansen, Til Ole Bergman
All participants

SALA DIONE

10.20-11.20|
S16 Personalizing rTMS in Depression through the Fronto-Vagal Network: Heart-Brain Coupling, Clinical Target Engagement, and Inflammation
Chairs: Soili M. Lehto, Roberto Goya-Maldonado

10.20-10.35 Beyond Beam-F3: A Grid-Based Frontal Mapping Approach using Heart-Brain Coupling to Guide Personalised rTMS in Depression - **Jessica Jacobs**

10.35-10.50 Heart-Brain Coupling as a Target Engagement Biomarker for Personalized rTMS: A Lifespan Normative Modelling Perspective - **Martijn Arns**

10.50-11.05 Frontovagal Circuit Engagement under Inflammation as a Determinant of rTMS Clinical Effects in Depression - **Bruno Pedraz-Petrozzi**

11.05-11.20 Discussion of the topics presented
All participants

11.20-11.40 Coffee break

SALA GALATEA

11.40-13.00|
S17 Emerging Technologies for Individualized Biomarkers and Adaptive Treatments in Mental Health
Chairs: Juha Gogulski, Pantelis Lioumis

11.40-11.55 TMS-EEG biomarkers of brain circuits in health and depression - **Pantelis Lioumis**

11.55-12.10 Automated strategies for individualized TMS targeting - **Ida Granö**



- 12.10-12.25** Automated stimulation and enhanced biomarkers with multi-locus TMS - **Risto Ilmoniemi**
- 12.25-12.40** Future perspectives of biomarker-guided rTMS interventions - **Juha Gogulski**
- 12.40-13.00** Discussion of the topics presented
All participants

SALA DIONE

11.40-13.00|

S18 Brain-State Dependent Modulation of Motor Cortex Excitability

Chairs: **Marten Nuyts, Sybren Van Hoornweder**

- 11.40-11.55** The Functional Significance of the Sensorimotor Rhythm in Modulating Cortical Response to Perturbation - **Leo Tomasevic**
- 11.55-12.10** Does prestimulus alpha oscillation predict the immediate TMS-EEG response? – **Marta Bortoletto**
- 12.10-12.25** Sensorimotor Beta States Shape Cortical Responses to Stimulation During Movement - **Marten Nuyts**
- 12.25-12.40** Beta oscillations in motor control: from mechanisms to modulation - **Sybren Van Hoornweder**
- 12.40-13.00** Discussion of the topics presented
All participants

13.00-14.00 LUNCH

SALA GALATEA

- 14.00-14.50** Keynote speaker - **Nikita van der Vinne**
The next generation of personalized brain stimulation



SALA GALATEA

14.50-16.10 |

S19 Mapping the Active Brain: From Circuit Mechanisms to Clinical Applications

Chairs: **Elisa Kallioniemi, Martin Tik**

- 14.50-15.05** Approaches for cognitive mapping: from correlational to causal and predictive viewpoints on the road to neuropsychiatric applications - **Anna-Lisa Schuler**
- 15.05-15.20** Real-time causal mapping of pain circuitry with TMS-EEG: Implications for neuropsychiatric disorders - **Elisa Kallioniemi**
- 15.20-15.35** What we can learn from invasive assessment of excitability and its relevance for neuropsychiatric conditions - **Giovanni Pellegrino**
- 15.35-15.50** Real-time neurochemical mapping for TMS depression treatment: A new interleaved TMS-MRS framework - **Maria Vasileiadi**
- 15.50-16.10** Discussion of the topics presented
All participant

SALA DIONE

14.50-16.10 |

S20 Non-Invasive Brain Stimulation for Borderline Personality Disorder: From Neurobiology to Personalized Treatment Strategies

Chairs: **Jacopo Lisoni, Emmanuel Poulet**

- 14.50-15.05** Effects of tDCS over the rVLPFC on hypersensitivity to rejection in borderline personality disorder - **Chiara De Panfilis**
- 15.05-15.20** Effectiveness of bipolar-balanced prefrontal tDCS in patients with borderline personality disorder: Results from a randomized, double-blind, sham-controlled trial – **Jacopo Lisoni**
- 15.20-15.35** Enhanced tDCS Protocols Targeting the Left Dorsolateral Prefrontal Cortex (IDL PFC): Pilot Clinical Outcomes - **Lionel Cailhol**
- 15.35-15.50** Modulating inhibitory control network in borderline personality disorder using cortico-cortical paired associative stimulation - **Cecilia Neige**
- 15.50-16.10** Discussion of the topics presented
All participants

16.10-16.30 Coffee break



SALA GALATEA

16.30-17.30 Career development roundtable
Speakers: Alexander Hunold, Sofia Fernandes, Eva dijkstra e giacomo grassi.
Chair: Debby Klooster e Yasmin Lopes Viera

SALA DIONE

16.30-17.50

S21 Advancing Non-Invasive Brain Stimulation for Bipolar Disorder: Mechanisms, Targets, and Clinical Evidence

Chairs: Eva Oostra, Eric van Exel

- 16.30-16.45** TMS-EEG in people with Bipolar Depression - a comparison with healthy controls - **Wianne Schipper**
- 16.45-17.00** aiTBS for Bipolar Depression - a systematic review and protocol - **Urmi Pahladsingh**
- 17.00-17.15** First results of a Dutch multicenter sham-controlled rTMS trial for Treatment Resistant Bipolar Depression - **Eva Oostra**
- 17.15-17.30** Targeting Reward Circuits in Affective Psychosis: Personalized Beta-Gamma HD-tES of the Right Orbitofrontal Cortex - **Paulo Lizano**
- 17.30-17.50** Discussion of the topics presented
All participants

SALA GALATEA

17.30-18.30 Free Communications Session
Chairs: Carmen Concerto, Theodoros Koutsomitros

- 17.30-17.40** Polarity-Dependent Modulation of Memory Consolidation by Closed-Loop Acoustic Stimulation During Slow-Wave Sleep – **Lisa Marshall**
- 17.40-17.50** Lesion network mapping in obsessive-compulsive disorder: from causal evidence to treatment? - **Gonçalo Cotovio**
- 17.50-18.00** NIBSdose.ai: A population-level dosing atlas for TMS – **Ole Numssen**
- 18.00-18.10** Effects of Frontoparietal Network Neuromodulation on Impulsive Decision-Making in Problematic Smartphone Use – **Ana Sanchez Kuhn**



- 18.10-18.20** Superficial white matter microstructural changes after accelerated intermittent theta burst stimulation treatment is related to anhedonia improvement in treatment-resistant depression – **Yichen Zhang**
- 18.20-18.30** Lost in Translation: Closing the Loop Between Computational Models and Clinical-Experimental NIBS - **Axel Thielscher**

SALA DIONE

- 17.50-18.30** ESBS guidelines
All participants

SALA GALATEA

- 18.30-19.00** POSTER AWARDS and Research exchange Challenge Award 2026
CONFERENCE CLOSING (ESBS President)

All participants