THE BRAIN AND THE CHIP 2026
WORLD RESEARCH CONGRESS PROGRAM SCHEDULE

Meeting venue:
Complejo San Juan
Calle Dr. Pérez Mateos, 2
03550 San Juan de Alicante (Spain)
Google Maps / Location Link: https://maps.app.goo.gl/E5HrpjEcharGz7vb7

MONDAY, OCTOBER 26, 2026

(Presentations are 20-minutes long, plus a 10-minute Q&A – Discussion)

8:30 - 9:00 am **WALK-IN AND REGISTRATION**

9:00 - 9:30 am **WELCOME & INTRODUCTION**
Academic authorities

Session 1: Neural implants: Surgical challenges

Moderator: Juan Antonio Barcia, M.D., Ph.D., Hospital Clínico San Carlos, Madrid, Spain

9:30 - 10:00 am **Functional Neurosurgery: Restoring and Modulating Brain Function**
Julio Albisua, M.D., Ph.D., Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain

10:00 - 10:30 am **Fine-tuning neural circuits to heal the brain: Next generation neurosurgery**
Andres Lozano, M.D., Ph.D.,Toronto Western Hospital, Toronto, Canada

10:30 - 11:00 am **Precision Matters: Standard vs. Robot-Assisted Microelectrode Array Implantation in the Occipital Lobe**
Pablo González-López, M.D., Ph.D., Hospital General Universitario Dr. Balmis Alicante, Alicante, Spain

11:00 - 11:30 am **Coffee BREAK**

Session 2: Restoring function and unlocking Human Cognition

Moderator: Pieter Roelfsema, M.D. and Ph.D., Netherlands Institute for Neuroscience, Amsterdam

11:30 - 12:00 pm **Translating neural decoding into assistive restoration after paralysis**
Alessandro Del Vecchio, Ph.D., Friedrich-Alexander University Erlangen-Nürnberg, Germany

12:00 - 12:30 pm **Towards a cellular-resolution brain-computer interface for stroke-induced disorders of language**
Simon Jacob M.D., Ph.D., TUM University Hospital, Munich, Germany

12:30 - 1:00 pm **Experiences elicited intra-cortical micro-stimulation (ICMS) delivered in the human anterior intraparietal region**
David Bjånes, Ph.D., University of Utah, Salt Lake City, US

1:00 - 1:30 pm **Exploring human cognition with iBCIs**
Luke Bashford, Ph.D., Newcastle University, Newcastle upon Tyne, UK

1:30 - 3:00 pm **LUNCH**

Session 3: Advanced paradigms in BCI: encoding, control and hardware engineering

Moderator: Simon Jacob M.D., Ph.D., TUM University Hospital, Munich, Germany

3:00 - 3:30 pm **Spatiotemporal encoding of touch signals in the human somatosensory and motor cortices**
Giacomo Valle, Ph.D., Chalmers University of Technology, Gothenburg, Sweden

3:30 - 4:00 pm **Imagination strategies for generalized brain-computer interface control**
Ali Hadi Alamri, University of Chicago, Chicago, US

4:00 - 4:30 pm **NeuroDots for brain-network modulation: Why and which technology is needed?**
Wouter Serdijn, Ph.D., Delft University of Technology, Delft, Netherlands

4:30 - 5:00 pm **Coffee BREAK**

Session 4: Single-neuron dynamics and cortical plasticity in humans

Moderator: Michael Schmid, University of Fribourg, Fribourg, Switzerland

5:00 – 5:30 pm **Spatio-temporal profile of electrical stimulation in V1**
Ján Antolík, Charles University, Prague, Czechia

5:30 – 6:00 pm **Intracortical microstimulation induces prolonged and dose-dependent changes in human V1 single neuron activity**
Aitor Morales-Gregorio, Charles University, Prague, Czechia

6:00 – 6:30 pm **Causal control of selective cortical plasticity between single units in human cortex**
Anna Mitola, University of Parma, Parma, Italy.

6:30 – 7:30 pm **QUICKFIRE POSTER PRESENTATIONS**

"The Brain's Symphony":

9:00- 10:30 pm. **The Brain's Symphony.** We invite you to experience The Brain's Symphony, a unique concert where music, science, and art converge at the Gran Teatro de Elche.

This extraordinary evening will feature the world premiere of original musical pieces composed directly from real electrophysiological brain recordings in blind volunteers. Additionally, the audience will be introduced to the fascinating phenomenon of synesthesia, exploring how sound, color, and neural activity intertwine in an unforgettable artistic journey bridging creativity and discovery (open to the public).

Buses to Gran Teatro of Elche will depart from the hotel entrance at 20:00

TUESDAY, OCTOBER 27, 2026

(Presentations are 20-minutes long, plus a 10-minute Q&A – Discussion)

Session 5: Preserving and restoring human vision

Moderator: Gislin Dagnelie, Ph.D., Johns Hopkins University School of Medicine. Baltimore, US

9:00 – 9:30 am **Bionic vision technologies: Progress and perspectives on retinal prostheses**
Andrea Cusumano, M.D., Ph.D**.,** University of Rome Tor Vergata, Rome, Italy

9:30 – 10:00 am **From retinal optogenetics to brain sonogenetics: Expanding the toolbox for Vision restoration**
Gregory Gauvain, Institut de la Vision, Paris, France

10:00 – 10:30 am **Phosphene perception in macaque V1: a direct comparison of optogenetic and electrical cortical stimulation for visual restoration**
Michael Schmid, University of Fribourg, Fribourg, Switzerland

10:30 – 11:00 am **Closed loop visual cortical prostheses**
Patrick Degenaar, Ph.D., Newcastle University, Newcastle upon Tyne, UK

11:00 – 11:30 am **Coffee BREAK**

Session 6: Cortical neuroprostheses for auditory restoration

Moderator: David Bjanes, Ph.D., University of Utah, Salt Lake City, US

11:30 - 12:00 am **Designing an auditory cortical prosthesis**
Brice Bathellier, Ph.D**.,** Institut Pasteur, Paris, France

12:00 – 12:30 pm **Deep encoding models for vision and audition**
Fabian Sinz, Ph.D., Georg-August-University Göttingen, Göttingen, Germany

12:30 - 1:00 pm **A biomimetic deep encoder for auditory restoration by cortical stimulation**
Charly Lamothe, Institut Pasteur, Paris, France

1:00 - 3:00 pm **LUNCH**

Session 7: Cortical visual prostheses: Clinical trials I

Moderator: Avi Caspi, Ph.D**.,** Jerusalem College of Technology, Jerusalem, Israel

3:00 – 3:30 pm **The intracortical visual prosthesis (ICVP) after 4.5 years in human participants**
Michael P. Barry, Ph.D., Chicago Lighthouse, Illinois Institute of Technology, Chicago, Illinois.

3:30 – 4:00 pm **Can artificial vision be functional? Performance with the intracortical visual prosthesis**
Patricia Grant, Ph.D., Chicago Lighthouse, Chicago, Illinois. US

4:00 –4:30 pm **From phosphenes to functional vision: Perceptual learning and neural adaptation with an intracortical visual prosthesis.**
Leili Soo, Ph.D., University Miguel Hernandez, Elche, Spain

4:30 – 5:00 pm **Towards a thalamic visual prosthesis: electrical and optogenetic approaches**
Pieter Roelfsema, M.D. and Ph.D**.,** Netherlands Institute for Neuroscience (KNAW), Amsterdam, The Netherlands, Institut de la Vision, Paris, France.

5:00 - 5:30 pm **Coffee BREAK**

Session 8: Cortical visual prostheses: Clinical trials II

Moderator: Ione Fine, Ph.D., University of Washington & University of Leeds, Seattle and Leeds.

5:30 – 6:00 pm **Eye movements in cortical visual prostheses: What we learned over 5 years from Orion and CORTIVIS**
Avi Caspi, Ph.D**.,** Jerusalem College of Technology, Jerusalem, Israel

6:00 – 6:30 pm **Development of novel assessments for low and ultra-low vision**
Gislin Dagnelie, Ph.D., Johns Hopkins University School of Medicine. Baltimore, US

6:30 – 7:30 pm **POSTER PRESENTATIONS**

"Gala Dinner":

9:00- 10:30 pm. **Gala Dinner at Finca Santa Luzia Restaurant**
Avenida de Alicante, 38, Sant Joan d'Alacant
Within walking distance of the hotel (approximately 600 metres)
Google Maps / Location Link: https://maps.app.goo.gl/UHTgParTxrB1mDu86

WEDNESDAY, OCTOBER 28, 2026

(Presentations are 20-minutes long, plus a 10-minute Q&A – Discussion)

Session 9: Emerging iBCI paradigms: Stimulation, AI and computational approaches

Moderator: Alessandro Del Vecchio, Ph.D., Friedrich-Alexander University Erlangen-Nürnberg, Germany

9:00 – 9:30 am **Phosphene detection via microstimulation in the NHP LGN**
Xing Chen, Ph.D., University of Pittsburgh, Pittsburgh, Pennsylvania

9:30 – 10:00 am **AI-assisted navigation in virtual reality in macaque monkeys**
Peter Janssen, M.D., Ph.D., KU Leuven, Leuven, Belgium

10:00 – 10:30 am **Closed-loop stimulation and brain-state decoding in the blind human V1**
Antonio Lozano and Alexander Kovalev, University Miguel Hernandez, Elche, Spain

10:30 – 11:00 am **Pulse trains to percepts: Using virtual patients to examine neural adaptation and perceptual persistence**
Ione Fine, Ph.D., University of Washington & University of Leeds, Seattle and Leeds.

11:00 -11:30 am **Coffee BREAK**

Session 10: Translating Neurotech: Industry Breakthroughs and Commercial Frontiers I

Moderator: Luke Bashford, Ph.D., Newcastle University, Newcastle upon Tyne, UK

11:30 – 12:00 pm **Building brain-computer interfaces at a neurotech Company**
Spencer Kellis, Blackrock Neurotech, Salt Lake City, Utah, US

12:00 – 12:30 pm **Translating intracortical interfaces for motor and sensory restoration**
Daniel Adams, Ph.D., Neuralink, South San Francisco, California, US

12:30 – 1:00 pm **Flexible High Electrode Count Array based Cortical visual prosthesis**
Frederik Ceyssens, Ph.D., ReVision Implant N.V., Leuven, Belgium

1:00 – 1:30 pm **From preclinical LGN stimulation to a first-in-human visual neuroprosthesis study with the Fountain Probe**
Bert Monna, Ph.D., Phosphoenix B.V., Amsterdam, the Netherlands

1:30 - 3:00 pm **LUNCH**

Session 11: Translating Neurotech: Industry Breakthroughs and Commercial Frontiers II

Moderator: Andrea Cusumano, M.D., Ph.D., University Rome Tor Vergata, Rome, Italy

3:00 – 3:30 pm **Neural decoding and precision modulation via Graphene BCI: Toward autonomous Therapies for motor disorders.**
Matteo Donegà, Ph.D., INBRAIN Neuroelectronics, Barcelona, Spain

3:30 – 4:00 pm **Ultrasound Brain-computer interfaces**
Bashar W. Badran, Ph.D., Gestala, China

<u>Session 12</u>: The Human Element: Patient voices, Neurorights, and Society

Moderator: Laura Ponce. Plano vs Plano, Spain.

4:00 - 4:30 pm **Keynote & Fireside Chat: Living with a chip in the brain: A patient's journey through neurotechnology**
Scott Imbrie, Chicago, Illinois (US)

4:30 – 6:00 pm **Interactive Panel discussion: Freedom of thought in the age of neurotechnology and AI: Rights, limits and realities.** Panelists:

- Cristina Martínez, Telefonica Defensa y Seguridad & Neurorights Foundation
- David Sánchez, Federation of Associations for Hereditary Retinal Dystrophies
- Henrietta Howells, Ph.D., Nature Neuroscience
- Spencer Kellis, Blackrock Neurotech, Salt Lake City, Utah, US
- Daniel Adams, Ph.D., Neuralink, South San Francisco, California, US
- Bashar W. Badran, Ph.D., Gestala, China
- Antonio Gutiérrez, Ph.D, M.D., Hospital La Fe and SENFE, Valencia, Spain.

<u>Session 13: Presentation of the EU iBCI consortium and Group discussion</u>

Moderator: Eduardo Fernandez, M.D., Ph.D., University Miguel Hernandez, Spain

6:00 – 6:30 pm **EU iBCI & Open Discussion & Closing remarks**
Giacomo Valle, Ph.D**.,** Chalmers University of Technology, Gothenburg, Sweden

SCAN THE QR CODE

Access the online congress programme, including the schedule, sessions, speakers, and presentation details.