

## Technology-driven combinatorial therapy to rewire the spinal cord after injury

The conference brings together leading scientists from the fields of neuroscience and biomedical and neuroengineering. Despite substantial progress in understanding the cascade of cellular and molecular events caused by spinal cord trauma, to date, there are no effective interventions that mitigate the extent of damage, and current treatment strategies have proven insufficiently effective in patients.

Traumatic spinal cord injuries (SCI) are primarily caused by mechanical damage to the central nervous system. They result in impairment of motor, sensory, and autonomic functions, thus requiring tailored and personalised treatment strategies. Plasticity can result in new connections and neural circuits, contributing to a compensatory recovery of function. Conventional therapies focus on resolving individual aspects of SCI, thereby neglecting synergies to tackle multiple targets simultaneously. Technological advances in drug delivery systems, biomaterials, electronics, and robotics have resulted in novel developments to regain lost function after SCI. ReWIRE develops and links high-tech routes into new personalized, combinatorial approaches to rewire the spinal cord.

# International Neuromodulation Conference

August 24 - 26, 2026, Kardinal Schulte Haus, Bergisch Gladbach, Germany



14:00	Arrival, Registration, Welcome + Coffee Break
<b>DAY 1</b>	
<b>I. From Damage to Repair: The Biology Behind Spinal Cord Recovery</b>	
16:00	Simone di Giovanni (Imperial College London)
16:30	Andrea Tedeschi (The Ohio State University College of Medicine)
17:00	Mayssa Mokalled (Hope Center for Neurological Disorders, Washington University School of Medicine, St Louis)
17:30	Homara Nawabi (Grenoble Institute of Neuroscience)
18:00	Rapid Fire Poster Talks
18:15	Poster Session
19:30	Dinner (Poster Session Continued)
20:30	Evening Lecture – Mark Tuszynski (University of California San Diego)
<b>DAY 2</b>	
<b>II. Spinal Cord Injury Bridges</b>	
09:00	Wolfram Tetzlaff (University of British Columbia)
09:30	Zaida Álvarez (Northwestern University and Institute for Bioengineering of Catalonia)
10:00	Patricia Dankers (Eindhoven University of Technology)
10:30	Coffee Break /Poster Session
11:45	Hoc Khiem Trieu (Hamburg University of Technology) Veronica Estrada (DWI – Leibniz Institute for Interactive Materials)
12:15	Aileen Anderson (University of California Irvine)
13:00	Lunch Break

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III. Neurotechnology I	
Focus on Devices	
14:30	Francesca Santoro (RWTH Aachen University and Forschungszentrum Jülich)
15:00	Thomas Stieglitz (Albert Ludwigs University of Freiburg)
15:30	Maria Asplund (Chalmers University of Technology)
16:00	Coffee Break & Poster Session
Focus on Building Blocks	
18:00	Tetiana Askenova (Commissariat à l'énergie atomique et aux énergies alternatives)
18:30	Giacomo Valle (Chalmers University of Technology)
19:00	Dinner
DAY 3	
IV. Neurotechnology II – Clinical Translation & Application	
09:00	Silvestro Micera (École Polytechnique Fédérale de Lausanne and School of Advanced Studies Sant'Anna)
09:30	Monica Perez (Northwestern University)
10:00	Brian Kwon (ICORD, University of British Columbia and Vancouver Hospital)
10:30	Coffee Break
11:30	Tommaso Proietti (Scuola Superiore Sant'Anna)
12:00	Stanisa Raspopovic (Medical University of Vienna)
12:30	Leonie Asboth (Lausanne University Hospital)
13:00	Lunch & Departure