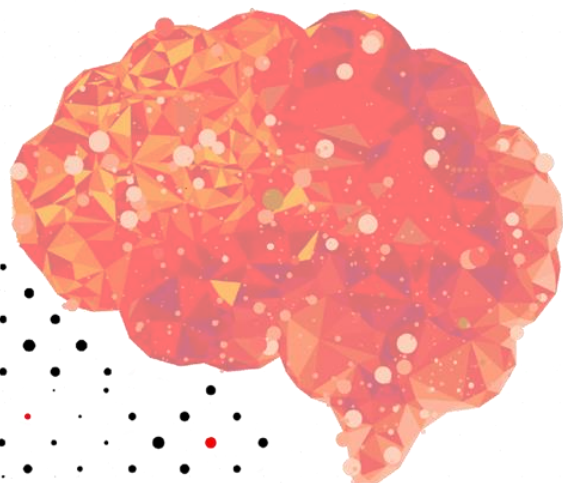


SION STROKE RECOVERY CONFERENCE



11-12th
December



<https://ssrc2023.epfl.ch/home/>

Sion, Valais (CH)



EPFL

SSRC2023

General program

Monday 11th December

- 08:00 – Registration and welcoming coffee
- 08:45 – Opening Ceremony
- 09:00 – Invited Talks Session 1 : Multimodal imaging
- 11:00 – Coffee Break
- 11:30 – Selected Talks Session 1
- 13:00 – Lunch
- 14:00 – Invited Talks Session 2 : Innovative neurotechnologies (1)
- 15:30 – Coffee Break
- 14:00 – Invited Talks Session 2 : Innovative neurotechnologies (2)
- 18:00 – Poster Session (until 20:00)
- 19:00 – Conference Cocktail (until 22:00)

Tuesday 12th December

- 08:30 – Welcoming / Coffee
- 09:00 – Invited Talks Session 3 : Multi-domain / Behavior & Learning
- 11:00 – Coffee Break
- 11:30 – Selected Talks Session 2
- 13:00 – Lunch
- 14:00 – Selected Talks Session 3
- 15:00 – Coffee break
- 15:30 – Invited Talks Session 4 : Personalized treatment strategies
- 17:30 – Awards and closing ceremony

Day 1

Monday 11th December

Invited talks 1 : Multimodal imaging (09:00 – 11:00)

Chairs: U. Ziemann, E. Beanato

- **A. Guggisberg** – Multimodal neuroimaging of network plasticity
- **P. J. Koch** – How structural connectivity and disconnectivity informs about outcome courses after stroke
- **M. Corbetta** - Insight from indirect disconnection methods on behavioral impairment and prognosis
- **D. Van de Ville** – Anatomy shapes activity: graph signal processing to quantify structure-function relationships

Selected talks 1 (11:30 – 13:00)

Chairs: G. Kwakkel, A. Kuppuswamy

- **M. Bassolino** – The perceptual experience of the affected limb after stroke
- **T. Bertoni** – Body ownership alterations in stroke emerge from reduced proprioceptive precision and damage to the fronto-parietal network
- **L. Defferard**- Eye-tracking during a free viewing exploration task in immersive virtual reality detects attention deficits in brain-injured patients
- **L. Mayrhuber**- How to increase daily arm use after stroke? The effect of activity-based smart reminders.

Invited talks 2: Innovative neurotechnologies (14:00 – 17:00)

Chairs: F. Hummel, A. Guggisberg

- **N. Grossman** – Non-invasive Deep Brain Stimulation via Temporal Interference of Electric Fields
- **E. Beanato** – Temporal interference to modulate human behavior, perspectives for stroke recovery
- **T. Kimberley** – Long-term results of VNS-REHAB trial and implications for the future of stroke recovery
- **H. Kim** - Transcranial Focused Ultrasound Neuromodulation for Stroke Recovery
- **C-F. Latchoumane** – Neurotechnologies for stroke rehabilitation in non-human primates
- **S. Micera** – Implantable and wearable systems for stroke recovery

Poster Session (18:00 – 20:00)

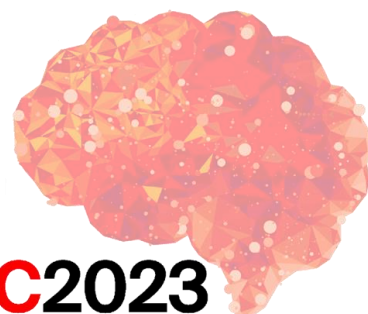
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Poster session

Monday 11th December

- **M. Bevilacqua**–Enhancing motion discrimination in the blind visual field of stroke patients through Hebbian plasticity depends on the residual structural and functional integrity of the cortical motion pathway.
- **L. Catinari**–Identifying Attention Deficits in Brain Injured Patients via Eye-Tracking within Immersive VR Cognitive Assessment Battery
- **W. Cieżobka**- Intra- and inter-hemispheric effective connectivity and automatic classification of ischemic stroke using reservoir computing causality
- **C. Farcy** – Neural mechanisms underlying improved new-word learning with high-density transcranial direct current stimulation
- **B. Favre-Bulle** – Efficacy of a new virtual reality-based serious game for the rehabilitation of unilateral neglect in patients with acquired brain injury
- **R. Jones** – Boosting and mapping rTMS-induced plasticity for stroke rehabilitation
- **S. Konik** – Characterise disturbances in the perception of the affected upper limb following stroke with the new Affected Limb Perception Questionnaire (ALPQ)
- **J. Lippert** – Impact of comorbid sleep-disordered breathing and atrial fibrillation on the long-term outcome after ischemic stroke
- **I. Martinelli**– A quantitative, digital method for Human Figure Drawings analysis to reveal distortions in body perception after stroke
- **R. B. Netser** – Neurotechnology-based intensive upper-extremity supplementary training for inpatients with sub-acute stroke: A Feasibility Study
- **E. Ojardias** – Combining aerobic exercise and tDCS for post-stroke hemiparetic patients to improve gait performance. The ESTIMAH feasibility study
- **M. Pelosin** – Patients’ lesion and rehab, atlas-based disconnectome analysis
- **Z. Rotach** – Exploring attention recovery and cerebral modulation following a new virtual-reality training in patients with stroke
- **V. Sharma** – Exploring the Frequency-Mediated Dynamic Repertoire of Brain Activity Following Stroke
- **C. Vitrac** – Interplay and significance of interhemispheric and intrahemispheric reorganization of motor recovery after stroke
- **F. Windel** –Unravelling the underlying networks of fatigue in neurological disorders: from connectivity analyses to non-invasive deep brain stimulation intervention
- **D. Zeugin** – Analyzing Attentional Deficits and Spatial Neglect Through Reinforcement Learning and Deep Neural Networks



Day 2

Tuesday 12th December

Invited talks 3 : Behavior and learning (09:00 – 11:00)

Chairs : M. Corbetta, E. Raffin

- **L. Cohen** – Novel behavioral and neurophysiological targets to modulate motor learning after stroke
- **A. Kuppaswamy** – The emergence of post-stroke fatigue: a new framework
- **L. Fleury** – A multi-domain behavioral clustering of acute stroke patients
- **G. Kwakkel** – Understanding the time course of behavioral restitution and compensation after stroke

Selected talks 2 (11:30 – 13:00)

Chairs : G. Koch, P.J. Koch

- **B. Volbers** – Perihemorrhagic edema, hematoma volumes and outcome in intracerebral hemorrhage: location matters
- **S. Harquel** – Stroke recovery-related changes in cortical reactivity based on modulation of intracortical inhibition
- **N. Kinany** – Post-stroke reorganization of transient brain activity characterizes deficits and recovery of cognitive functions
- **E. Raffin** – Re-orchestrating cross-frequency oscillatory interactions for visual recovery

Selected talks 3 (14:00 – 15:00)

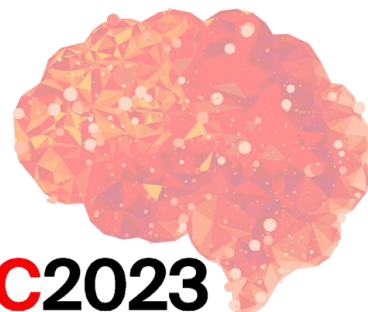
Chairs: L. Cohen, L. Fleury

- **L. Shmuelof** – The phenotype of motor impairments after a stroke: Weakness and pathological synergies emerge together but recover separately
- **F. Mawase** – Direction-dependent neural control of finger dexterity in health and after stroke
- **P. Vassiliadis** – Principles of reinforcement learning during continuous motor control

Invited talks 4: Personalized treatment strategies (15:30 – 17:30)

Chairs: T. Kimberley, H. Kim

- **F. Hummel** – Combination of neurotechnologies for upper limb motor recovery in stroke patients with severe hemiparesis
- **C. Grefkes-Hermann** – Brain connectivity and network modulation after stroke
- **U. Ziemann** – Brain state-dependent and closed-loop stimulation for individualized modification of human brain networks
- **G. Koch** – Emerging Non Invasive Brain Stimulation treatments for cognitive impairment in the Alzheimer's disease continuum



Venue and directions

Conference venue: Campus Energypolis



Aula Conference Room

Rue de l'Industrie 23 (north entrance)

Opening and closing, oral sessions and symposia



Restaurant La Ruche

Rue de l'Industrie 21

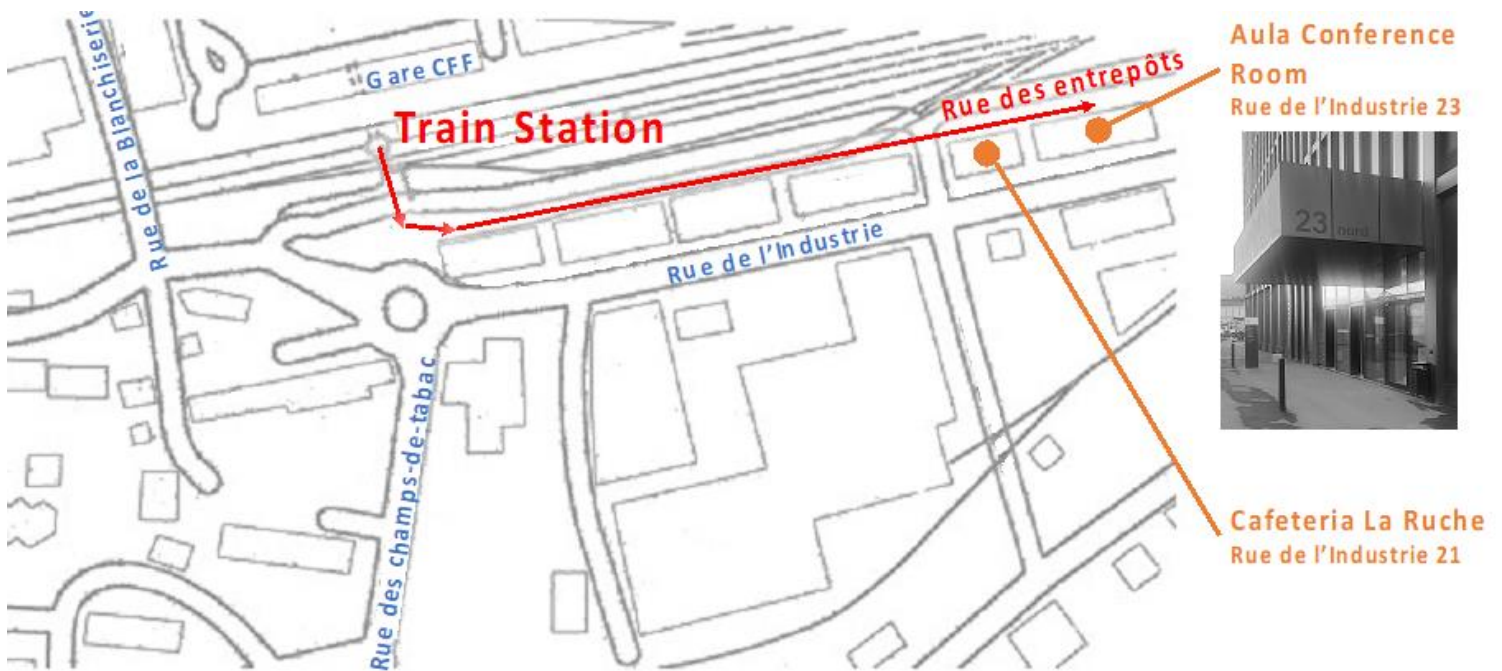
Welcoming and registration, coffee breaks,
lunches, poster session & cocktail
(mezzanine)

Venue and directions

Directions



- Sion train station <-> Conference Venue: 500-meters walking



- At the train station, head towards the EPFL/Campus Energypolis/Quartier sud exit (opposite to the city center exit).
- Once outside, take the left onto the narrow “Rue des entrepôts” before the buildings and roundabout – Follow the signs indicating the direction of “Campus Energypolis” direction.
- For welcoming and registration on Monday morning, continue until Rue de l'Industrie 21 (north entrance on Rue des entrepôts) to reach the Cafeteria La Ruche (mezzanine). Coffee breaks, lunches, poster session and cocktail, will also take place there.
- Then, continue until the Aula Conference Room (Rue de l'Industrie 23), where the opening and closing ceremonies, as well as all oral sessions and symposia will be held. The north entrance of the building is on the street “Rue des entrepôts”, cf. image.
- Please note that signs and staff members staff will be around to help you finding your way in case you need.



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For more information

<https://ssrc2023.epfl.ch>