iNAV 2024

June 17-21, 2024
Kurhaus Merano | ITALY

5th Interdisciplinary Navigation Symposium

www.inavsymposium.com

REGISTRATION	BRING YOUR OWN	WELCOME RECEPTION	CONFERENCE DINNER
Monday 17th 16.00 - 18.00 **Tuesday 18th** 8.00 - 8.45 *Kurhaus Merano*	**COMPUTER** if you are presenting as an **Invited Speaker**. *(NOT for Data Blitz talks)*	**Monday 17th** 18.00-20.00 | Drinks + Snacks | *Kurhaus Merano Terracce*	**Friday 21st** 19.30 | 3-course-menu | *KiMM Meran*

Venue

Adress:
Kurhaus Merano
Corso della Libertà, 33
39012 Merano BZ
Italy
Google maps: https://maps.app.goo.gl/UCTWPCQa2yEUBhmN6

Registration

Please register on site to receive your name badge for the conference and two drink vouchers for the Welcome Reception.

WHERE: **Foyer at Kurhaus Merano**
WHEN: **Monday 17th 16.00 - 18.00**
Tuesday 18th 8.00 - 8.45

Participants arriving later are requested to register at the Registration Desk in the foyer.

Internet access

There is free internet access at the Kurhaus Merano for all attendees during the conference.

1. Connect your device (e.g. laptop) to the local network (Wifi).
2. Launch your web browser (e.g. Internet Explorer or Firefox).
3. The login page will automatically appear. If not, enter any website.
4. Enter Username and Password.
5. Use http://logon.now for re-login or status info and logoff.

Username: **ticket3219**	Password: **pjet**

Poster Presentation

For those presenting a Poster during the conference please follow the instructions below:

- Find your poster number in the list of the iNAV homepage and hang your poster on your allocated poster board **by 16:00 on Tuesday 18 June** (pins are provided).
- Posters will be on the boards from Tuesday to Thursday.
- There are two scheduled time slots for the poster presentations, but you will only be asked to be present at your poster during one specific session.
- Poster Session 1: **Tuesday, 18 June from 18:30 – 20:00 CET** (even numbers)
- Poster Session 2: **Wednesday, 19 June from 18:00 – 19:30 CET** (odd numbers)

Remind to take down your poster on Thursday before lunch!

Data Blitz Talk

In order for things to run smoothly you will need to complete the following five action items:

- The **program schedule** can be found here: Data Blitz Talk Schedule. Please note the day and time of your presentation.
- All talks will be **5 min + 1 min for questions**. We need to keep to this schedule, so please plan accordingly.
- We advise you to clearly define your scientific question at the beginning of your talk, and provide a clear take-home message on the last slide.
- File Format: A single **pdf file** (16:9) with a maximum size of **10 MB**
- Please **name your pdf file** as follows: "[Session]_[Last name]", replacing Session with S1, S2 or S3 according to the session you are scheduled for on the iNAV website (e.g., "S1_Simpson.pdf" for Data Blitz Session 1 and last name Simpson).
- Please **upload** the pdf file no later than **10 June** here: File upload (Jotform)

Due to the short time available for the talk, it is necessary to distil a message into an easily understandable graphic format and rely on the image to convey the message.

Speaker

Most of the speaker sessions are scheduled for 90 minutes and will have 4 speakers. Thus, each talk should be NO MORE than **20 minutes in length (including any question period).** WE WILL STRICTLY HOLD THIS LIMIT!

Note also that you can present from your own laptop, and there will be an HDMI connector. Should your laptop require any adapters to connect to HDMI, please make sure to bring those along.

Taxi / Public Transport

There are two taxi companies for your rides around Merano:

SMART TAXI
www.smart-taxi-merano.it
ph. +39 0473 5353

RADIO TAXI FUNK MERAN
ph. +39 0335 5718080

The **Südtirol Alto Adige Guest Pass** (that you will receive in selected accommodation) is granting you free access to all public transport in the entire South Tyrol.

Outings

For Thursday, June 20th, we have planned an afternoon with various activities (Hiking, E-Mountainbiking, Via Ferrata).
Please book your tour on the iNAV website: https://inavsymposium.com/activities/

BRING:
- Sportswear suitable for a hike/bike tour
- Trainers/hiking shoes
- Backbag with food and drink
- Rainwear in case of poor weather

MEETING POINT: 13.45 at Kurhaus Merano (Passer-Promenade)

Check this website https://www.merano-suedtirol.it/en/merano/active-relaxing.html to see what else you can do in the area.

Emergency

Here you can find a list of the most important telephone numbers for a carefree stay in Merano.

Emergency number: 112

First aid: Merano hospital: phone: +39 0473 263020

Hospital: Merano hospital, Via Rossini 12, Merano, phone: +39 0473 263333

Welcome Reception

To meet your colleagues before the conference starts you are invited to our Welcome Reception with drinks and snacks (no dinner).

WHEN? **Monday June 17, 18.00 – 20.00**

WHERE? **Kurhaus Merano Terrace,** Corso della Libertà, 33, 39012 Merano BZ, Italy,

Google maps: https://maps.app.goo.gl/UCTWPCQa2yEUBhmN6

HOW? Get your **drinking vouchers** upon registration at the Kurhaus.

Additional guests can pay for their drinks separately on site.

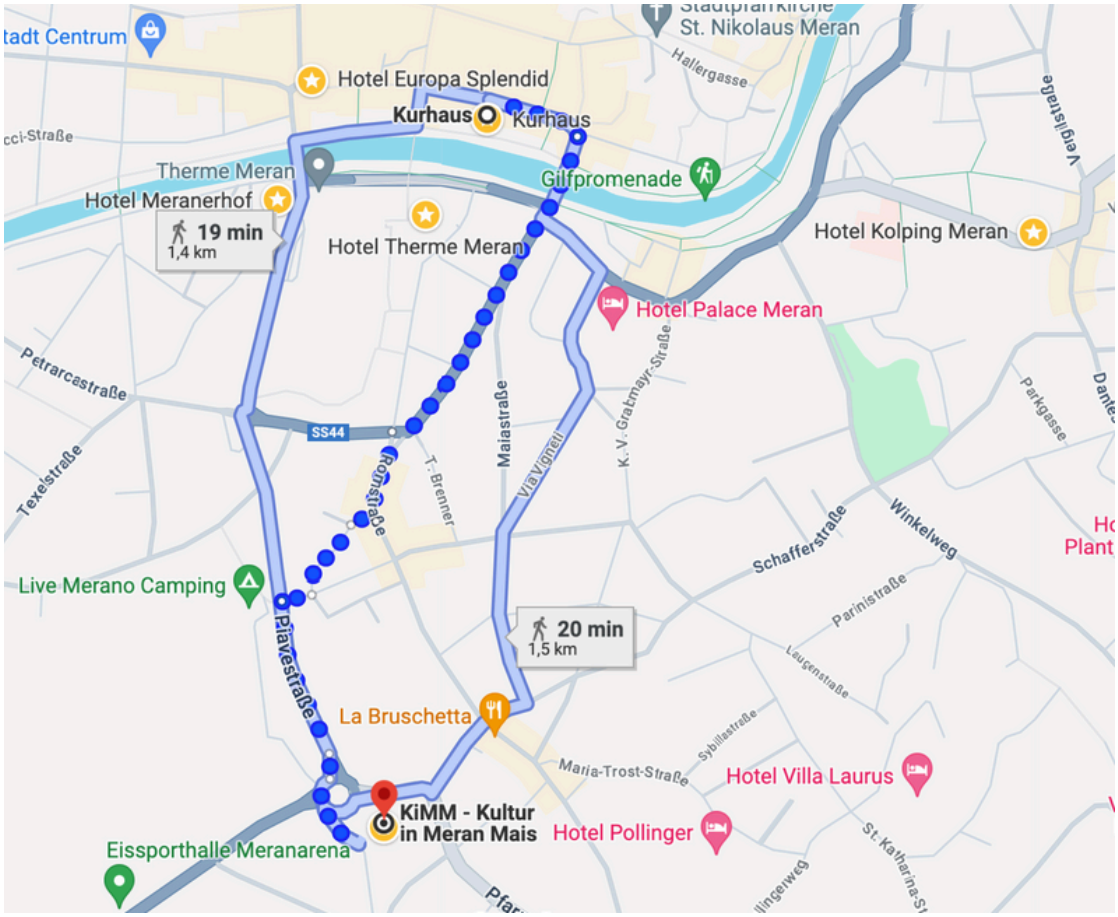
Conference Dinner

The conference dinner will be held on the last evening after the end of the conference (included in registration fee).

WHEN? **FRIDAY, June 21 19:30**

WHERE? **KiMM – Kultur in Meran Mais**, Pfarrgasse 2, 39012 Merano (Google route)

HOW? You can walk in 15-20 min from the Kurhaus Merano to the KiMM dinner location.



Program

Monday, June 17

16:00 - 18:00	**Registration at Kurhaus**
18:00 - 20:00	Welcome Reception at Kurhaus Terrace

Tuesday, June 18

8:00 - 8:45	Registration at Kurhaus
8:45 - 9:00	Introduction
9:00 - 10:30	Session 1 | Chair: Jeffrey Taube
	Roberto Bottini | University of Trento - Altered grid-like coding in early blind people during spatial navigation
	Franscesca Sargolini | CNRS Aix-Marseille – Distance coding in the entorhinal cortex
	May-Britt Moser | Norwegian University of Science and Technology – Development of grid cell circuits in the entorhinal cortex: Nature or nurture?
	Edvard Moser | Norwegian University of Science and Technology – From grid cells to navigation: Theta-paced sweeps in the entorhinal-hippocampal spatial map
10:30 - 11:00	Coffee-Break
11:00 - 12:30	Session 2 | Chair: Sang Ah Lee
	Nachum Ulanovsky | Weizmann Institute – Neuroscience going wild: Neural codes for space in social groups of bats and in bats navigating outdoors on a remote oceanic island
	David Foster| UC Berkeley – Hippocampal navigation in the real world: the case of barriers
	Cory Inman | University of Utah – Capturing and enhancing episodic memories made in the wild
	Denise Head | Washington University – The role of age, learning goals and individual differences in real-world learning
12:30 - 14:00	Lunch
14:00 - 15:30	Session 3 | Chair: Thomas Wolbers
	Emma Wood | University of Edinburgh – Age-dependent alterations in directional coding in a rat model of Fragile X Syndrome
	Carol Barnes | University of Arizona – What is the impact of locomotion restraint on temporal lobe cell properties?
	Thomas Wolbers | DZNE Magdeburg – Spatial coding in SuperAgers - a window into preserved episodic memory?
15:30 - 16:00	Coffee-Break
16:00 - 17:00	Data Blitz Session 1 | Chair: Sang Ah Lee
17:00 - 18:15	Session 4 | Chair: Laure Rondi-Reig
	Andrea Green | University of Montreal – Vestibular reference frames for encoding spatial self-motion and orientation in the cerebellum
	Laure Rondi-Reig | Sorbonne Université – Cerebellum and disorientation
	Hiroshi Ito | Max Planck Institute for Brain Research – Memory and decision of navigational goals
18:30 - 20:00	Poster Session 1 (even Poster numbers)

Program

Wednesday, June 19

9:00 - 10:30	Session 5 | Chair: Jeffrey Taube
	Jeffrey Taube | Dartmouth College – Generating the head direction signal: Two types of head direction cells in the Lateral Mammillary Nuclei
	Ruben Portugues | Technical University of Munich – The heading direction system in the larval zebrafish
	Andreas Herz | University of Munich – One, two, three (or more): Ring-attractor networks in the zebrafish heading-direction system
	Hugo Spiers | University College London – What makes someone a good navigator? Evidence from 4 million people in Project Sea Hero Quest
10:30 - 11:00	Coffee-Break
11:00 - 12:30	Session 6 | Chair: Joshua Jacobs
	Michael Hasselmo | Boston University – Egocentric and allocentric representations in cortical structures
	Aaron Wilber | Florida State University – Reference Frame Coordination in a Parietal-Hippocampal Network
	Douglas Nitz | UC San Diego – Subicular encoding of location secondary to orientation within path networks
	Joshua Jacobs | Columbia University – Rhythmic correlates of spatial memory encoding in the human brain
12:30 -14:00	Lunch
14:00 - 15:30	Session 7 | Chair: Sylvia Wirth
	Inah Lee | Seoul National University – Subtle visual change in a virtual environment induces heterogeneous remapping systematically in CA1, but not CA3
	Elisabeth Buffalo | University of Washington – Behavioral relevance governs hippocampal activity in monkeys during virtual navigation
	Sylvia Wirth | Institut des Sciences Cognitives Lyon – Neural signals upstream from hippocampus during virtual navigation in the macaque
	Russell Epstein | University of Pennsylvania – Spatial codes in the human brain during naturalistic virtual navigation
15:30 - 15:45	Coffee-Break
15:45 - 16:30	Topic Discussion 1
16:30 - 17:45	Data Blitz Session 2 | Chair: Joshua Jacobs
18:00 - 19:30	Poster Session 2 (odd Poster numbers)

Thursday, June 20

9:00 - 10:30	Session 8 | Chair: Sang Ah Lee
	Sang Ah Lee | Seoul National University – Common Spatiotemporal Representations Underlying Navigation and Episodic Memory
	Dennis Chan | University College London – Impaired navigation in early Alzheimer's disease
	Shahar Arzy | Hebrew University of Jerusalem – The interplay between spatial and social cognition in health and Alzheimer's disease
	Steven Weisberg | University of Florida – Supporting and Enhancing Human Wayfinding
10:30-11:00	Coffee-Break
11:00 - 12:30	Session 9 | Chair: Joshua Jacobs
	James Knierim | Johns Hopkins University – Optic Flow Control over Hippocampal Place Fields
	Neil Burgess | University College London – Neural mechanisms of spatial updating
	Weimin Mou | University of Alberta – While Path Integration Updates Spatial Representations During Walking, Inconsistent Piloting Cues Disrupt them Afterward
	Dori Derdikman | Technion, Haifa – You do not enter the same (hippocampal) river twice
12:30-13:45	Lunch
13:45 - 18:00	Optional Outings

Program

Friday, June 21

9:00 - 10:30	Session 10 | Chair: Laure Rondi-Reig
	Caswell Barry | University College London – Matching Patterns: Replay as a Reflection of Experienced Theta Sequences
	Jill Leutgeb | UC San Diego – Precise spatial memory despite rapidly changing place cell representations
	Zoran Tiganj | Indiana University – A computational model for encoding spatio-temporal trajectories in the hippocampal formation
	Albert Lee | Harvard University – Investigating memory recall and imagination with a hippocampal brain-machine interface
10:30 - 11:00	Coffee-Break
11:00 - 12:30	Session 11 | Chair: Thomas Wolbers
	Mary Hegarty | UC Santa Barbara – How should we measure navigation ability?
	Kathleen Cullen | Johns Hopkins University – Eye Movement Encoding in the Rodent Head Direction Circuit
	Julio Martinez Trujillo | Western University – The marmoset Hippocampus is a GPS, but G is for gaze
	Andrew Glennerster | University of Reading – A canvas for spikes
12:30 - 14:00	Lunch
14:00 - 15:30	Data Blitz Session 3 | Chair: Joshua Jacobs
15:30 - 16:00	Coffee-Break
16:00 - 17:30	Session 12 | Chair: Sylvia Wirth
	Dmitriy Aronov | Columbia University – A code for episodic memories in the hippocampus of a food-caching bird
	Katherine Nagel | NYU School of Medicine – Neural circuit mechanisms for working memory and evidence integration during olfactory navigation
	Daniela Schiller | Icahn School of Medicine at Mount Sinai – Neural Trajectories of Conceptually Related Events
	Kim Stachenfeld | Columbia University – Predictive maps for representation learning and simulation in deep RL
17:30 - 18:15	Topic Disussion 2
18:15 - 18:30	Wrap-up & Final Thoughts
19:30	Conference Dinner with Aperitivo and 3-course-menue at KiMM

Registered participants (until June 14)

Marco Abrate | University College London
Elena Aggius Vella | Reichman University
Asra Albu-Swailim | University College London
Dmitriy Aronov | Columbia University
Shahar Arzy | Hebrew University of Jerusalem
Giorgio Ascoli | George Mason University
Shabnam BAHRAMIASL | Institut Sciences Cognitives
Philip Bahrd | German Center for Neurodegenerative Diseases
Manasvini Balakrishnan | University College London
Irina Barnaveli | Max Planck Institute for Human Cognitive and Brain Sciences
Carol Barnes | University of Arizona
Lior Baron | CUNY Graduate Center
Caswell Barry | University College London
Joshua Bassett | University College London
Yasmine Bassil | Emory University
Marcia BECU | Kavli Institute for Systems Neuroscience
Jerome Beetz | University of Wuerzburg
Tugce Belge | DZNE Magdeburg
Matthieu Bernard | DZNE Magdeburg
Katarina Biljman | Tel Aviv University
Ikhwan Bin Khalid | Charité – Universitätsmedizin Berlin
Maxime Bleau | School of optometry, University of Montreal
Otmar Bock | German Sport University
Norbert Boeddeker | Bielefeld University
Roberto Bottini | University of Trento
Thackery Brown | Georgia Institute of Technology
Elizabeth Buffalo | University of Washington
Michael Bukwich | Sainsbury Wellcome Centre, UCL
Neil Burgess | University College London
Andrea Castegnaro | University College London
Tikal Catena | UC Santa Barbara
Dennis Chan | UCL Institute of Cognitive Neuroscience
Varnan Chandreswaran | Ruhr-University Bochum
Ruma Chatterji | University of Cincinnati, Ohio, USA
Daniel Robert Chebat | Ariel University
Yue Chen | University of Alberta
Xiaoli Chen | Zhejiang University
Jiayu Chen | Deutsches Zentrum für Neurodegenerative Erkrankungen e. V. (DZNE)
Yingyan Chen | Zhejiang University
Guifen Chen | Queen Mary University of London
Sen Cheng | Ruhr University Bochum
Selmaan Chettih | Columbia University, Zuckerman Institute
Debanjan Chowdhury | Heidelberg University
Liz Chrastil | University of California, Irvine
Giorgio Colombo | Singapore-ETH Centre
Alexandra Constantinescu | University College London
Daniela Cossio | University of California, Irvine
Kathleen Cullen | Johns Hopkins
Eylon Dary | Sainsbury Wellcome Centre (UCL)
Dori Derdikman | Technion, Haifa, Israel

Jie Ding | Centre for Eye and Vision Research
Anja Domadenik | Technical University of Munich
Stephanie Doner | Temple University
Thomas Donoghue | Columbia University
Paul Dudchenko | University of Stirling
Nada El Mahmoudi | Ernst Strungmann Institute
Uri Elias | Hebrew University of Jerusalem
Cassandra Engstrom | Brown University
Alexander Eperon | University of Trento
Russell Epstein | University of Pennsylvania
Mehdi Fallahnezhad | Sorbonne University
David Foster | UC Berkeley
Julia Frankenstein | Centre of Cognitive Science TU Darmstadt
Desdemona Fricker | CNRS Paris
Michal Gabay | Tel-Aviv University
Christoffer Gahnstrom | University of Pennsylvania
Gaspare Galati | Sapienza University of Rome
Kayla Garner | Northwestern University
Andrew Glennerster | University of Reading, UK
Rebecca Goldin | George Mason University
Klaus Gramann | Technische Universitaet Berlin
Andrea Green | Université de Montréal
Lara Gregorians | Singapore-ETH Centre
Yi Gu | National Institute of Neurological Disorders and Stroke
Zohar Hagbi | Dartmouth College
Pho Hale | University of Michigan
Michael Hasselmo | Boston University, Center for Systems Neuroscience
Li He | Beijing Normal University
Denise Head | Washington University in St. Louis
Mary Hegarty | Univeristy of California, Santa Barbara
Estibaliz Herrera | Georgia Institute of Technology
Andreas Herz | LMU Munich
Ju-Yi Huang | German Sport University Cologne
Deetje Iggena | Charité-Universitätsmedizin Berlin
Cory Inman | University of Utah
Hiroshi Ito | Max Planck Institute for Brain Research
Pierre-Yves Jacob | Center of Research in Psychology and Neurosciences - CNRS
Joshua Jacobs | Columbia University
Thomas Jahans-Price | UCL
Sein Jeung | TU Berlin
Zilong Ji | University College London
Sepiedeh Keshavarzi | University of Cambridge
Fabian Kessler | Centre of Cognitive Science TU Darmstadt
Hye-A Kim | Max Planck Institute for Brain Research
Jiyeon Kim | Seoul National University
Misun Kim | University College London
James Knierim | Johns Hopkins University
Luca Kolibius | Columbia University
Dorota Kossowska-Kuhn | Florida State University
Anabel Kröhnert | Cognitive Neuroscience Bielefeld University
Lukas Kunz | University Hospital Bonn
Francesca Lanzarini | Ernst Strüngmann Institut

Jean Laurens | Ernst Strüngmann Institute for Neuroscience
Hagar Lavian | Technical University of Munich
Sang Ah Lee | Seoul National University
Sumin Lee | Seoul National University
Albert Lee | Howard Hughes Medical Institute / Beth Israel Deaconess Medical Center / Harvard University
Inah Lee | Seoul National University
Jeonghyun Lee | Seoul National University
Jill Leutgeb | University of California, San Diego
Stefan Leutgeb | University of California San Diego
Colin Lever | Durham University
Jennifer Li | Max Planck Institute for Biological Cybernetics
Eleonora Lomi | University College London
Shachar Maidenbaum | Ben Gurion University
Francisco José Maldonado Torralba | University of Tartu
Pascal Malkemper | Max Planck Institute for Neurobiology of Behavior
Troy Margrie | Sainsbury Wellcome Centre
Julio Martinez-Trujillo | Western University
Christina May | NYU Langone Health
Uwe Mayer | University of Trento
Andrew McAvan | Vanderbilt University
Chelsie McWhorter | University of California Santa Barbara
Siyuan Mei | LMU
Markus Meister | Caltech
Chiara Meneghetti | University of Padova
Laura Miola | University of Padova
Sheri Mizumori | University of Washington
Alison Montagrin | University of Geneva - Department of Basic Neuroscience
May-Britt Moser | NTNU Kavli Institute for Systems Neuroscience
Edvard Moser | NTNU Kavli institute
Weimin Mou | University of Alberta
Marjan Mozaffarilegha | Max Planck institute for brain research
Laurenz Muessig | University College London
Veronica Muffato | University of Padova
Alana Muller | University of Arizona
Mitchell Munns | University of California, Santa Barbara
Katherine Nagel | NYU School of Medicine
Tobias Navarro Schroeder | Kavli Institute, NTNU
Clément Naveilhan | LAMHESS - Université Côte d'Azur
Laura Nett | University Hospital Bonn
Coco Newton | University College London
Kim Nguyen | Temple University
Douglas A. Nitz | University of California, San Diego
Eden Or | Ben Gurion University of the Negev
Jianxin Ou | Beijing Normal University
Shaked Palgi | Weizmann Institute of Science
Anne-Lise Paradis | Neuroscience Paris Seine
Sang-Eon Park | Seoul National University
Rafael Pedrosa | University College London
Jingjie Peng | University of Heidelberg, Germany cancer research center
Laura Piccardi | Sapienza University of Rome
Benjamin Pitt | Institute for Advanced Study in Toulouse (IAST)
Ruben Portugues | Technical University of Munich

Yafei Qi | Vanderbilt University
Yukun Qu | Beijing Normal University
Stephen Ramanoel | LAMHESS - Université Côte d'Azur
Michal Ramot | Weizmann Institute of Science
Riccardo Ratto | QMUL
Aviv Ratzon | Technion - Israel Institute of Technology
Saikat Ray | Weizmann Institute of Science
Mihoby Razafinimanana | Sorbonne Université
Guglielmo Reggio | University College London
Volker Reisner | Max Planck Institute for Human Cognitive and Brain Sciences
Sophia Rekers | Charité - University Medicine Berlin
Ronen Reshef | UCLA
Daniel Reznik | Max Planck Society
Drew Robson | Max Planck Institute for Biological Cybernetics
Edmund Rolls | Oxford Centre for Computational Neuroscience
Laure Rondi-Reig | Sorbonne Université-CNRS-Inserm
Constantin Rothkopf | Centre of Cognitive Science TU Darmstadt
Charlotte Roy | Ulm University
Pearl Saldanha | Kavli Institute for Systems Neuroscience
Francesca Sargolini | Aix-Marseille University - CNRS
Jonas Scherer | Bielefeld University
Daniela Schiller | Icahn School of Medicine at Mount Sinai
Martin Seeber | UCLA
Vladislava Segen | DZNE, Magdeburg
Sarah Seger | University of Arizona
Jennifer Shearon | Washington University in St. Louis
Denis Sheynikhovich | Sorbonne Université - Institut de la Vision
Jung Han Shin | Seoul National University
Sarah Shipley | University College London
Yadurshana Sivashankar | University of Waterloo
Hugo Spiers | University College London
Kimberly Stachenfeld | DeepMind / Columbia University
Matthias Stangl | Boston University
Michael Starrett Ambrose | University of California, Irvine
Martin Stemmler | Ludwig-Maximilians-Universität München
Deepak Surendran | Ernst Strüngmann Institute (ESI) for Neuroscience
Jake Swan | University College London
Jeffrey Taube | Dartmouth College
José Teixeira | Donders Centre for Neuroscience
Zoran Tiganj | Indiana University
Josephine Timm | Institute for Experimental Epileptology and Cognition Research
Alexis Topete | UC Santa Barbara
Alina Tu | University of California, Irvine
Nachum Ulanovsky | Weizmann Institute of Science
Enny van Beest | University College London
Isabella Varsavsky | University College London
Marie VERICEL | Université Claude Bernard Lyon 1, CNRS
Arseniy Veselov | University of Munich (LMU)
Silvia Viana da Silva | DZNE Berlin
Simone Viganò | Max Planck Institute for Human Cognitive and Brain Sciences
Ilan Vol | Ben Gurion University
Jasmin L. Walter | University of Osnabrück

Erica Ward | University of California, Irvine
Ziwei Wei | Zhejiang University
Steven Weisberg | University of Florida
John Widloski | UC Berkeley
Bastian Wiederhold | University of Oxford
Aaron Wilber | Florida State University
Thomas Wills | University College London
Sylvia Wirth | Institute of Cognitive Science
Hannah Wirtshafter | Northwestern University
Thomas Wolbers | DZNE Magdeb
Emma Wood | University of Edinburgh
Zhibing Xiao | Beijing Normal University
Yangwen Xu | Max Planck Institute for Human Cognitive and Brain Sciences
Xiuting Yang | Queen Mary University of London
Mehmet Yanik | ETH Zurich
Nofar Yarimi | Ben Gurion University
Emre Yavuz | University College London
Xhensjana Zenelaj | Sorbonne University
Zijian Zhang | University of Alberta
xiaoyu Zhou | Beijing Normal University
Mantong (Mable) Zhou | University of California, Santa Barbara
Farzad Ziaie Nezhad | Ernst Strüngmann Institut Max Planck, Goethe Universität