



# iSCAN SYMPOSIUM

We are pleased to announce the 4th iSCAN Symposium, a premier scientific conference on spatial navigation in aging and neurodegeneration, which will be held in-person from **December 04-06, 2023** at the DZNE Magdeburg.

December  
04 - 06th

## Organizers

### Thomas Wolbers

German Center for Neurodegenerative Diseases Magdeburg, DE

### Motoharu Yoshida

German Center for Neurodegenerative Diseases Magdeburg, DE

### Vladislava Segen

German Center for Neurodegenerative Diseases Magdeburg, DE

### Antonio Rebores

Leibniz Institute for Neurobiology, DE

### Philip Bahrd

German Center for Neurodegenerative Diseases Magdeburg, DE

### Rolando Andres Torrado Arevalo

Leibniz Institute for Neurobiology, DE

## Venue and contact

### iSCAN Team

iscan@dzne.de

Deutsches Zentrum für  
Neurodegenerative Erkrankungen  
Leipziger Straße 44 / Haus 64  
39120 Magdeburg

## Speakers

### David Berron

German Center for  
Neurodegenerative Diseases, DE

### Dennis Chan

Institute of Cognitive Neuroscience, UK

### Gillian Coughlan

Harvard Medical School, US

### Dori Derdikman

Israel Institute of Technology, IL

### Michael Hasselmo

Boston University, US

### Tina Iachini

University of Campania Vanvitelli, IT

### Kei Igarashi

University of California, US

### Hiroshi Ito

Max Planck Institute, DE

### Emilio Kropf

Buenos Aires Institute of  
Neuroscience, AR

### Julija Krupic

University of Cambridge, UK

### Nora Newcombe

Temple University, US

### Ehren Newman

Indiana University, US

### Adrien Peyrache

McGill University, CA

### Magdalena Sauvage

Leibniz Institute for Neurobiology, DE

### Nicholas W. Schuck

Hamburg University, DE

### Annabelle Singer

Georgia Institute of Technology, US

### Stefan Tipel

German Center for  
Neurodegenerative Diseases Rostock,  
DE

### Zoran Tiganj

Indiana University, US

### Silvia Viana da Silva

German Center for  
Neurodegenerative Diseases Berlin,  
DE

### Jan Wiener

Bournemouth University, UK

### Arne Ekstrom

University of Arizona, US

## Registration

Blitz talk and poster sessions are  
open for all!

### Abstract submission deadline

October 31st 2023



Visit our [website](#)  
for full program  
and registration

# Presentations

**Emilio Kropf** (Leloir Institute - FIL - IIBBA/CONICET)  
Hippocampal electrophysiology in Octodon Degus, a 'natural' model for Alzheimer's disease

**Gillian Coughlan** (Harvard Medical School)  
Digital approaches to preclinical and clinical Alzheimer's disease. What spatial orientation can tell us.

**Annabelle Singer** (Georgia Institute of Technology & Emory University)  
Inhibition in Navigation: Deficits in disease and causal roles in memory

**Ehren Newman** (Indiana University)  
rTCT: Enabling reverse translational study of path integration decline in Alzheimer's Disease

**Dennis Chan** (University College London)  
Impaired path integration in AD: transition point from at-risk to disease onset

**Michael Hasselmo** (Boston University)  
Coding of space and time in cortical structures

**David Berron** (DZNE Magdeburg)  
Unsupervised digital cognitive assessment of memory impairment and change in early stages of Alzheimer's disease

**Tina Iachini** (University of Campania Vanvitelli)  
Spatial frames of reference and ageing

**Nicolas W. Schuck** (Hamburg University)  
Effects of age and dopamine on spatial fMRI signals: activity, decoding and tuning functions

**Hiroshi Ito** (Max Planck Institute, Frankfurt)  
Decision and memory of navigational goals

**Adrien Peyrache** (McGill University)  
Learning a cognitive map

**Nora Newcombe** (Temple University)  
Episodic memory across age and species

**Dori Derdikman** (IIT Haifa)  
Use it or lose it - when the hippocampal system sleeps while on duty

**Magdalena Sauvage** (LIN Magdeburg)  
Hippocampal sub-network for spatial and non-spatial memory

**Jan Wiener** (Bournemouth University)  
Mixed-methods approaches to navigation: How age-related navigation declines affect everyday wayfinding

**Victor Schinazi** (Bond University)  
Introducing the Spatial Performance Assessment for Cognitive Evaluation (SPACE): A novel game for the early detection of cognitive impairment

**Silvia Viana da Silva** (DZNE Berlin)  
Localized APP pathology results in progressive network dysfunction by disorganizing spike timing

**Zoran Tiganj** (Indiana University)  
A neural model of degradation in mammalian path integration

**Arne Ekstrom** (University of Arizona)  
Moving beyond the egocentric-allothetic dichotomy in aging and navigation

**Julija Krupic** (University of Cambridge)  
Progressively increasing time horizons in grid cells and CA1 place cells

**Stefan Teipel** (DZNE Rostock)  
Prediction of Disorientation by Accelerometric and Gait Features in Young and Older Adults navigating in a Virtually Enriched Environment

**Kei Igarashi** (UC Irvine)  
Entorhinal cortex dysfunction in Alzheimer's disease