

## How to get there



### Venue

Kaiserin Friedrich-Haus  
Robert-Koch-Platz 7 | 10115 Berlin  
<http://www.kaiserin-friedrich-stiftung.de/kfs-haus.html>

### Contact Leopoldina

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The **German National Academy of Sciences Leopoldina** brings together the expertise of some 1,500 distinguished scientists to bear on questions of social and political relevance, publishing unbiased and timely scientific opinions. The Leopoldina represents the German scientific community in international committees and pursues the advancement of science for the benefit of humankind and for a better future.

Chartered by law in 1961, **The Israel Academy of Sciences and Humanities** acts as a national focal point for Israeli scholarship in all branches of the sciences, social sciences and humanities. The Academy comprises 125 of Israel's most distinguished scientists and scholars. It is tasked with promoting Israeli scientific excellence; advising the government on scientific matters of national interest; publishing scholarly research of lasting merit; and maintaining active contact with the broader international scientific and scholarly community.



האקדמיה הלאומית הישראלית למדעים  
المجمع الوطني الإسرائيلي للعلوم والآداب  
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



## 6<sup>th</sup> Inter-Academy Symposium

### From Synapses to Circuits in Health and Disease

A growing number of people is confronted with neurodegenerative diseases. The 6<sup>th</sup> Inter-Academy Symposium provides a platform for scientific discussions on nerve cells, synapses and their interactions in neuron structures and regulatory circuits. Advancements in these research areas shall contribute to the development of new therapies for neuropsychiatric diseases such as Alzheimer's and Parkinson's disease, depression and schizophrenia.

Renowned Israeli and German experts discuss these issues during their talks. Postdocs and PhD-candidates from both countries present their current neuroscience research in the frame of a poster session. The Neurowissenschaftliche Gesellschaft e.V. financially supports the participation of German scientists in this session.

The German National Academy of Sciences Leopoldina and the Israel Academy of Sciences and Humanities have been organizing a series of symposia in neurosciences since 2008. The scientific coordinators of the current symposium are Prof Yadin Dudai and Prof Israel Nelken on the side of the Israel Academy and Prof Peter Riederer ML, Prof Helmut Kettenmann ML, Prof Peter Hegemann ML, Prof Arthur Konnerth ML, Prof Ad Aertsen ML and Prof Dietmar Schmitz on the side of Leopoldina.

### Registration

Participation is free of charge.  
For participation in the symposium,  
please kindly register here until 02/05/2018:  
[www.leopoldina.org/de/6ias](http://www.leopoldina.org/de/6ias)

Find us on 

[www.leopoldina.org](http://www.leopoldina.org)  
[www.academy.ac.il](http://www.academy.ac.il)  
[www.nwg-info.de](http://www.nwg-info.de)

## From Synapses to Circuits in Health and Disease

Joint Symposium by the German National Academy of Sciences Leopoldina and the Israel Academy of Sciences and Humanities

8 – 9 May 2018

Kaiserin Friedrich-Haus  
Robert-Koch-Platz 7 | 10115 Berlin

The Leopoldina and the Israel Academy of Sciences and Humanities kindly thank the Neurowissenschaftliche Gesellschaft e.V. for the financial support of a number of young scientists.



# Program

## Tuesday, 8 May 2018

### 08:30 – 09:00 | Registration

### 09:00 – 09:15 | Welcome Addresses

Jörg Hacker ML  
*President of the German National Academy of Sciences Leopoldina, Halle (Saale)*

Yadin Dudai  
*Israel Academy of Sciences and Humanities, Jerusalem*

Helmut Kettenmann ML  
*German Neuroscience Society, Berlin*

### Session 1

**Facilitator:** Peter Hegemann ML  
*Humboldt University of Berlin, Berlin*

### 09:15 – 09:45

**Cellular and Network Mechanisms in Motor Learning**  
Jackie Schiller  
*Technion – Israel Institute of Technology, Haifa*

### 09:45 – 10:15

**Restructuring of Synapses and Networks in Epilepsy**  
Carola Haas  
*University of Freiburg, Freiburg*

### 10:15 – 10:45 | Coffee Break

### Session 2

**Facilitator:** Gabriele Rune  
*University Medical Center Hamburg-Eppendorf, Hamburg*

### 10:45 – 11:15

**Principles of Neural Coding in the Grid Cell System: Implications for Dynamics and Organization**  
Yoram Burak  
*Hebrew University of Jerusalem, Jerusalem*

### 11:15 – 11:45

**Cerebral Cortex Connectomics**  
Moritz Helmstaedter  
*Max Planck Institute for Brain Research, Frankfurt (Main)*

### 11:45 – 12:15

**The Dynamic Architecture of the Adult Visual Cortex: How to Keep My Brain Young?**  
Siegfried Löwel  
*University of Göttingen, Göttingen*

### 12:15 – 13:15 | Lunch Break

### Session 3

**Facilitator:** Menahem Segal  
*Weizmann Institute of Science, Rehovot*

### 13:15 – 13:45

**Mechanisms of Sexually Dimorphic Neuronal Connectivity: From Molecules and Synapses to Circuits and Behaviors**  
Meital Oren-Suissa  
*Weizmann Institute of Science, Rehovot*

### 13:45 – 14:15

**Sexual Touch, Genital Cortex and Changes to Body and Brain in Puberty**  
Michael Brecht  
*Humboldt University of Berlin, Berlin*

### 14:15 – 15:30 | Poster Session (incl. Coffee) | Seminar Room

### Session 4

**Facilitator:** Helmut Kettenmann ML  
*Max-Delbrück-Center for Molecular Medicine, Berlin*

### 15:30 – 16:00

**Optogenetic Dissection of Prefrontal Circuits for Cognitive Control**  
Ofer Yizhar  
*Weizmann Institute of Science, Rehovot*

### 16:00 – 16:30

**Differential Roles for Two Striatal Inhibitory Inputs to the Ventral Pallidum in Cocaine Seeking**  
Yonatan Kupchik  
*Hebrew University of Jerusalem, Jerusalem*

### 16:30 – 17:00

**Neuronal Inhibition and Its Role for Spatial Coding and Memory**  
Hannah Monyer ML  
*Heidelberg University Hospital, Heidelberg*

## Wednesday, 9 May 2018

### Session 5

**Facilitator:** Ad Aertsen ML  
*University of Freiburg, Freiburg*

### 08:30 – 09:15 | Keynote Lecture for Michael Frotscher

**Synaptic Mechanisms of Pattern Completion and Pattern Separation**  
Peter Jonas ML  
*IST Austria, Klosterneuburg*

### 09:15 – 09:45

**Stress and High Fat Diet Modulation of Prefrontal Function and Plasticity in the Juvenile Rat**  
Mouna Maroun  
*University of Haifa, Haifa*

### 09:45 – 10:15

**Visual Processing and Top-Down Influences during Visual Perception in Behaving Monkeys**  
Hamutal Slovin  
*Bar Ilan University, Ramat Gan*

### 10:15 – 10:45 | Coffee Break

### Session 6

**Facilitator:** Moussa Youdim ML  
*Technion – Israel Institute of Technology, Haifa*

### 10:45 – 11:15

**Rhythmic Sampling – a Domain General Principle in the Architecture of Attention**  
Ayelet Landau  
*Hebrew University of Jerusalem, Jerusalem*

### 11:15 – 11:45

**Studying Axonal Cell Biology in Vivo**  
Thomas Misgeld  
*Technical University Munich, Munich*

### 11:45 – 12:15

**Alpha-Synuclein and Synapsin Jointly Regulate the Synaptic Vesicle Cycle**  
Daniel Gitler  
*Ben-Gurion University of the Negev, Beer-Sheva*

### 12:15 – 12:20 | Poster-Award Ceremony

**Facilitators:** Yadin Dudai  
*Weizmann Institute of Science, Rehovot*

Peter Riederer ML  
*University of Würzburg, Würzburg*

### 12:20 – 13:15 | Lunch Break

### Session 7

**Facilitators:** Arthur Konnerth ML  
*Technical University Munich, Munich*

Israel Nelken  
*Hebrew University of Jerusalem, Jerusalem*

### 13:15 – 14:15 | Training Measures and Scientific Cooperation

**My German Collaborations – A Short Personal Account**  
Israel Nelken  
*Hebrew University of Jerusalem, Jerusalem*

**Israeli-German Cooperation: A Functional 3D Map of the Mouse Auditory Cortex in Vivo**  
Carsten Tischbirek  
*Technical University Munich, Munich*

**Training in Experimental Neuroscience at the Marine Biological Laboratory Eilat**  
Yosef Yarom  
*Hebrew University of Jerusalem, Jerusalem*

**German-Israeli Scientific Cooperation: DFG Funding Opportunities**  
Ute Stotz  
*German Research Foundation (DFG), Bonn*

**German-Israeli Foundation (GIF) – Research Funding Programs**  
Stephanie Weberring  
*German-Israeli Foundation for Scientific Research and Development (GIF)*

### Session 8

**Facilitator:** Dietmar Schmitz  
*Charité – Neuroscience Research Center, Berlin*

### 14:15 – 14:45

**Sensory Processing Across Behavioral and Neuromodulatory States**  
Yuval Nir  
*Tel Aviv University, Tel Aviv*

### 14:45 – 15:15

**Spiking Neurons Can Discover Predictive Features by Aggregate-Label Learning**  
Robert Güting  
*Charité – Universitätsmedizin, Berlin*

### 15:15 – 15:30 | Concluding Remarks and Farewell

Yadin Dudai  
*Weizmann Institute of Science, Rehovot*

Peter Riederer ML  
*University of Würzburg, Würzburg*