

## German-Turkish Science Dialogue

A JOINT INITIATIVE OF THE GERMAN NATIONAL ACADEMY OF SCIENCES LEOPOLDINA AND THE ALEXANDER VON HUMBOLDT FOUNDATION

With the motto "Science Bridging Nations", the "German-Turkish Year of Research, Education and Innovation" was launched in January 2014 in Berlin. This joint initiative of the German Federal Ministry of Education and Research and the Turkish Ministry of Science, Industry and Technology aims to highlight the scientific cooperation between the

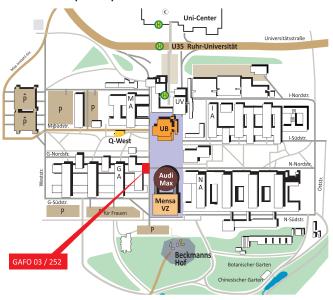
two countries and to support new forward-looking joint projects. In this way, both countries intend to rise to the global and social challenges by providing suitable solutions and developing new technologies.



Forschung, Bildung und Innovation 2014 Türk-Alman Arastırma Eğitim ve İnovasyon Yılı 2014

On the occasion of the German-Turkish Year of Science, the Leopoldina and the Humboldt Foundation have started a joint format: the "German-Turkish Science Dialogue". The framework fosters the ambition of scientists tackling the the systemic challenges of future developments: in societies, spaces and economies, in environment and health, as well as in the research-driven advancement of science and the innovation-based development of new technologies.

#### Campus map of the Ruhr-Universität Bochum



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. It represents the German scientific community in international committees and pursues the advancement of science for the

benefit of humankind and for a better future.

The Alexander von Humboldt Foundation is unique in that it not only provides individual sponsorship for outstandingly qualified researchers but also integrates them in a globe-spanning network of excellence during their entire lifetime. This "Humboldt Family" connects the world's academic elite with Germany.





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## www.leopoldina.org/de/science-dialogue

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### In cooperation with

Ruhr-Universität Bochum Faculty of Psychology Biopsychology Lab

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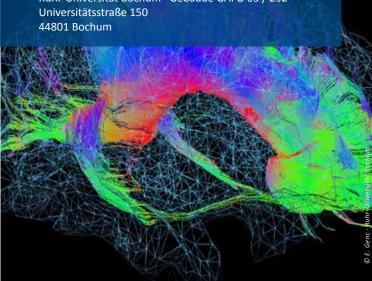


# Neuroscience: From Structure to **Function and Back**

2<sup>nd</sup> German-Turkish Science Dialogue

16 June 2015 · 14:00 - 19:00 hrs

Ruhr-Universität Bochum · Gebäude GAFO 03 / 252 Universitätsstraße 150



# Neuroscience: From Structure to Function and Back

The human brain is the most complex living structure in the known universe. It has a capacity to store more information than any current supercomputer and has enabled us to create a cultural evolution that started a new geological epoch – the Anthropocene. The brain shapes our thoughts, beliefs, hopes, dreams, and imaginations. Thus, it is our brain that makes us human.

Neuroscience is now the globally leading science and brain researchers are inspired to try to decipher the brain's command of all its diverse functions. The last twenty years have witnessed enormous progress that allows tackling questions that were far beyond reach only a short while ago. But despite this breath-taking progress, the journey to truly understand our own brain is still at its beginning. More than 1,000 disorders of the brain and nervous system result in more hospitalisations than any other disease group, including heart disease and cancer. Still, neuroscience is unable to come up with causal cures for the vast majority of these diseases. What is needed is concerted action where scientists studying structure are in close cooperation with those analysing function. Similarly, neuroscientists have to go back and forth between bench and bedside to reciprocally transfer insights from basic to clinical neurosciences.

Neuroscience cannot be just a national endeavour, but depends on the free exchange of ideas across national borders. The "2<sup>nd</sup> German-Turkish Science Dialogue" thus represents a timely joint initiative of the German National Academy Leopoldina and the Alexander von Humboldt Foundation to congregate scientists from Germany and Turkey. These researchers study the complexity of brain functions and thereby unveil the beauty of an organ that makes us who we are.

## **Programme**

## Tuesday · 16 June 2015

Ruhr-Universität Bochum · Gebäude GAFO 03 / 252 Universitätsstraße 150 44801 Bochum

#### 14:00 - 14:15

#### **Welcome Addresses**

## Representatives of the organising institutions

Professor Dr Onur Güntürkün
Ruhr-Universität Bochum · Biopsychology Lab
Lucian Brujan
German National Academy of Sciences Leopoldina
Dr Judith Schildt
Alexander von Humboldt Foundation

#### 14:15 - 14:45

#### **Multimodal Imaging of Brain Rhythms**

Professor Dr Tamer Demiralp

istanbul University · Department of Physiology

#### 14:45 - 15:45

NET-fMRI of Large-Scale Brain Networks: Mapping Dynamic Connectivity in Epochs of Synaptic and System Consolidation

Professor Dr Nikos K. Logothetis

Max Planck Institute for Biological Cybernetics Tübingen

Department of Physiology of Cognitive Processes

#### 15:45 - 16:15

Anatomical Variations Shape Individuality in Conscious Perception and Higher Cognitive Functions

Dr Erhan Genc Ruhr-Universität Bochum · Biopsychology Lab

#### 16:15 - 16:45

**Coffee Break** 

#### 16:45 - 17:15

### Context-Dependent Lightness and Its Implications for Connectivity in Human Visual Cortex

Professor Dr Huseyin Boyaci Bilkent University Ankara · Department of Psychology National Magnetic Resonance Research Center (UMRAM) · Ankara

#### 17:15 - 17:45

**Predicting Actions: Bottom-Up and Top-Down** 

Professor Dr Ricarda I. Schubotz University of Münster · Institute of Psychology

#### 17:45 - 18:15

Interval Timing and Temporal Decision Making with a Particular Focus on the Behavioral and Modeling Aspects

Professor Dr Fuat Balcı Koç University İstanbul · Department of Psychology

#### 18:15 - 19:00

## Wrap-Up Discussion

#### Moderation

Professor Dr Onur Güntürkün Ruhr-Universität Bochum · Biopsychology Lab

