



The Adaptive Mind - General Meeting
Thu 6 – Fri 7 June, 2024
Rauischholzhausen Castle
Schlosspark I, 35085 Ebsdorfergrund

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Thursday, June 6th

Time

9:00 *Coffee and Arrival*

9:50 **Welcome note**

Keynote lecture: Stefania Bracci (University of Trento)

Chair: Katja Fiehler

10:00 Stefania Bracci: *Understanding human object vision*

Talk session I: Cognition

Chair: Anna-Lena Eckert

11:00 Daniel Kaiser & Rico Stecher: *Alpha Rhythms and the Contents of Mental Images*

11:30 Hamidreza Jamalabadi: *Physics and Engineering of Cognitive Systems*

12:00 *Lunch*

Talk session 2: Scene Perception

Chair: Oliver Hahn

- 1:30 Melissa Vö, Aylin Kallmayer, Dilara Türk, & Vicky Nicholls: *The Genesis of Scene Grammar*
- 2:00 Bianca Baltaretu, Immo Schuetz, Melissa Vö, & Katja Fiehler: *Scene Semantics Effects on Allocentric Spatial Coding for Action in Naturalistic (Virtual) Environments*
- 2:30 *Coffee Break*
- 2:30 **Individual project meetings / Meeting of the directorate**
- 3:30 **Poster session**
- 6:30 *Dinner*

Keynote lecture: Dora Angelaki (New York University)

Chair: Constantin Rothkopf

- 8:00 Dora Angelaki: *Belief embodiment through eye movements facilitates memory-guided navigation*
- 9:00 *Evening*

Friday, June 7th

Time

Keynote lecture: Rhodri Cusack (Trinity College Dublin)

Chair: Roland Fleming

- 9:00 Rhodri Cusack: *Characterising the Development of Visual Recognition in Infants with Neuroimaging and Computational Modelling*

Talk session 3: Maladaptation and Special Populations

Chair: Lukas Kirchner

- 10:00 Stefan Hofmann: *Psychopathology as Maladaptation*
- 10:30 *Coffee Break*

- 11:00 Johannes Falck, Benjamin Straube, Gudrun Schwarzer, Yee Lee Shing:
Examining the Influence of Depression, Anxiety and ADHD on Learning and Decision-Making during Childhood and Adolescence
- 11:30 Kai Streiling, Rasmus Schülke, Thomas Wallis, Benjamin Straube, & Loes van Dam: *Choice- and trial-history effects on causality perception in Schizophrenia*

12:00 Lunch

Keynote lecture: Hendrikje Nienborg (National Eye Institute, USA)

Chair: Frank Bremmer

- 1:30 Hendrikje Nienborg: *Action-perception loops in primate neural circuits*
- 2:30 Coffee Break

Talk session 4: Sensory Processing and Learning

Chair: Britta Hinneberg

- 3:00 Anna-Lena Eckert, Elena Fuehrer, Christina Schmitter, Benjamin Straube, Katja Fiehler, & Dominik Endres: *Modelling Sensory Attenuation as Bayesian Causal Inference across two Datasets*
- 3:30 Jan Peters: *Robot Learning - where Cognitive Science & AI meet?*
- 4:00 Closing and Departure

Posters

1. Abir Chowdhury, Alap Kshirsagar, Kai Ploeger, Jan Peters, & Hermann Müller: *Control strategies in a bimanual, coordinated, and rhythmic activity with temporal and spatial constraints: A Case Study with Toss Juggling*
2. Alexander Schütz, Ogün Bolat, Kin Kori, Tilo Kircher, & Benjamin Straube: *Sustained directional preferences in ambiguous motion stimuli in patients with schizophrenia spectrum disorder*
3. Alexander Kreß & Frank Bremmer: *Navigating neural landscapes: Towards optimal stimuli for neurons involved in primate self-motion processing*
4. Anna Schroeger, Alexander Goettker, Doris Braun, & Karl Gegenfurtner: *Adaptive eye movements in an interception game*
5. Anna-Lena Eckert, Janik Pawlowski, Dominik Endres, Winfried Rief, Andrea Hermann, Raphaela Zimmer, & Lukas Kirchner: *Active inference of Social States in Depression - An Update*

6. Aylin Kallmayer & Melissa Vö: *More than meets the eye: Neural evidence for scene grammar representations during individual object processing*
7. Benedikt Kretzmeyer, Meaghan McManus, Constantin Rothkopf, & Katja Fiehler: *Whac-A-Mole – Learning Rational Temporal Eye and Head Movements in Virtual Reality*
8. Britta Hinneberg, Lea Junge-Bornholt, Heiko Maurer, Lisa Maurer, Hermann Müller & Mathias Hegele: *EEG recording during basketball free-throw shooting – Is there a signal in all the noise?*
9. Christina Schmitter, Konstantin Kufer, Olaf Steinsträter, Jens Sommer, Tilo Kircher, & Benjamin Straube: *Neural correlates and neural stimulation of temporal recalibration mechanisms in patients with schizophrenia spectrum disorders and healthy individuals*
10. Danilo Kuhn, Jan Tünnermann, & Anna Schubö: *Action intention and vision onset modulate movement planning and attentional selection in a real-world foraging task*
11. Fabian Tatai, Dominik Straub, Dimitrios Voudouris, Katja Fiehler, & Constantin Rothkopf: *Modeling sensory enhancement and suppression during reaching movements with optimal control*
12. Francisco López, Marcel Raabe, Bertram Shi, & Jochen Triesch: *Self-Calibrating Saccade-Vergence Interactions*
13. Frieder Hartmann, Guido Maiello, Constantin Rothkopf, & Roland Fleming: *Human grasp selection with articulated hands*
14. Harun Ar Rashid, Lukas Uhlmann, Tilo Kircher, & Benjamin Straube: *The processing of self-generated action feedback in SSD: What can we learn from the temporal dynamics of BOLD response?*
15. Hua-Chun Sun, Filipp Schmidt, Alexandra Schmid, Martin Hebart, & Roland Fleming: *Cortical representations of core visual material dimensions*
16. Laura Faßbender, Lisa Maurer, Johannes Falck, Yee Lee Shing, & Gudrun Schwarzer: *The Magic Drawer 2.0: Neural Mechanisms of Error-Processing in Children and Adults Performing a Motor Task*
17. Lina Eicke-Kanani, Yunyan Duan, Fabian Tatai, Christina Schmitter, Benjamin Straube, Constantin Rothkopf, & Thomas Wallis: *From visual features of moving objects to subjective impressions of causality*
18. Lisa Pui Yee Lin, Katja Doerschner, & Knut Drewing: *Exploring multidimensional objects: Influence of shape and material properties on touch patterns*
19. Meaghan McManus, Immo Schütz, Dimitris Voudouris, & Katja Fiehler: *Tactile sensitivity on a moving limb is modulated by visuomotor predictability and task demands*
20. Oliver Hahn, Nikita Araslanov, Simone Schaub-Meyer, & Stefan Roth: *Boosting Unsupervised Semantic Segmentation with Principal Mask Proposals*
21. Prakhar Godara & Angela Yu: *How much to think in an unknown world? - a meta-BAMDP framework*
22. Rozana Ovsepian & Alexander Schütz: *Smooth Pursuit Gain in Schizophrenia Patients*
23. Stefan Lenze, André Pietsch, Julia-Katharina Pfarr, Christian Berger, Ortrun Brand, & Dominik Endres: *Data Hub*
24. Sule Tasliyurt-Celebi, Benjamin de Haas, Melissa Vö, & Katharina Dobs: *Using CNNs to understand how bottom-up and top-down processes shape human face detection*
25. Yifei He, Ody Edward, Tilo Kircher, & Benjamin Straube: *Differential effects of self-initiated, externally triggered, and passive movements on perceptual decision of action's sensory outcome: An exploratory neural DDM analysis*