



Hanse-Wissenschaftskolleg  
Institute for Advanced Study

## Workshop

# Toward Open and Robust Neuroimaging

*Uncovering Researchers' Degrees of Freedom and Providing  
Community Solutions for Their Handling*

*Topic 1: Analysis of fMRI data based on graph theory*

Delmenhorst, 04.-06. March 2024

### Organizer:

Andrea Hildebrandt, Carsten Gießing,  
Stefan Debener, Christiane Thiel

Funded by: HWK & German Research Foundation (DFG)

### Venue:


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Program

## 4 March 2024 – Day 1

- 12:30 – 13:00      **Arrival at the HWK and introduction**  
**Joint session with topic 2: Welcome, objectives and getting to know each other**  
*Chair: Andrea Hildebrandt*
- 13:00 – 14:00      *LUNCH*
- 14:00 – 15:00      **Presentation: The concept of multiverse analysis and a Knowledge Space of data processing and analytical decisions in graph theory based fMRI research**  
*Presenters: Andrea Hildebrandt & Daniel Kristanto*
- Questions and discussion on the idea of a knowledge space of analytical choices**  
*Chair: Carsten Gießing*
- 15:00 – 16:00      **Presentation: Results of the crowdsourcing survey on data processing and analytical decisions in graph theory fMRI research**  
*Presenters: Andrea Hildebrandt & Daniel Kristanto*
- General discussion: Feedback on the content and usability of the crowdsourcing platform**  
*Chair: Andrea Hildebrandt*
- 16:00 – 16:30      *COFFEE BREAK*
- 16:30 – 18:30      **Workshop 1 – Knowledge Space / Part I: Deflating the multiverse**  
*Facilitators: Carsten Gießing & Daniel Kristanto*
- 18:30 – 20:00      *DINNER AND RETURN TO THE HOTEL*

## 5 March 2024 – Day 2

- 10:00 – 10:30 **Joint session with topic 2: On replication terminology and replication success criteria**  
*Presenter: Andrea Hildebrandt*
- 10:30 – 11:30 **Workshop 2 – What is replication: Agreeing on replication terminology and replication success criteria**  
*Facilitator: Andrea Hildebrandt*
- 11:30 – 12:00 **COFFEE BREAK**
- 12:00 – 13:00 **Workshop 1 – Knowledge Space / Part II a: Pipeline equivalence and high-impact steps**  
*Facilitators: Micha Burkhardt & Carsten Gießing*
- 13:00 – 14:00 **LUNCH**
- 14:00 – 16:00 **Workshop 1 – Knowledge Space / Part II b: Pipeline equivalence and high-impact steps**  
*Facilitators: Micha Burkhardt & Carsten Gießing*
- 16:00 – 21:00 **Excursion and outdoor dinner**

## 6 March 2024 – Day 3

- 10:00 – 11:30 **Workshop 1 – Knowledge Space / Part III: Discussing which pipelines (realizations of the multiverse) are needed to document the robustness of results**  
*Facilitators: Andrea Hildebrandt & Carsten Gießing*
- 11:30 – 12:00 **COFFEE BREAK**
- 12:00 – 13:00 **Closing session: Publication plans, open points**  
*Chair: Andrea Hildebrandt*
- 13:00 – 14:30 **LUNCH AND FAREWEL**