

The Chair of Psychology III (Cognition & Behavior Unit) at Julius-Maximilians-Universität Würzburg (JMU), Germany, is inviting applications for a

Doctoral Researcher Position/Project Staff Position (m/f/d)

The contract will start on **October 1, 2026**, and will be fixed term for an initial period of **three years**. The position is part time (**75%** of the regular weekly working hours). Remuneration will be based on the collective agreement for the public service of German federal states (*Tarifvertrag für den öffentlichen Dienst der Länder*, TV-L).

This position is part of the DFG-funded project “Modeling Retrieval Dependencies in Episodic Memory and Beyond” (Project No. 580316327). A short description of the project can be found on the following page. The project aims at the development and refinement of an approach for the statistical modeling of dependencies in item responses, with applications to the measurement of binding processes in memory (particularly episodic memory). We offer a friendly and appreciative working environment with excellent working conditions and outstanding facilities (modern laboratories, computing resources, psychophysiological equipment) in the center of Würzburg.

Responsibilities of the candidate:

- Planning, preparation, and execution of simulation studies
- Planning, preparation, and execution of behavioral experiments
- Development of an R package
- Data analysis
- Publication in international peer-reviewed journals
- Presentations at national and international conferences

Requirements/Qualifications

- Master’s degree in Psychology, Computer Science, Data Science, Human–Computer Interaction, or a related field
- Experience in programming (especially R; initial experience with Stan is an advantage)
- Experience in statistics and data analysis
- (Initial) experience with statistical modeling of cognitive processes and psychometric models (especially Item Response Theory) is an advantage

The JMU aims to reduce the underrepresentation of women and therefore explicitly encourages qualified women to apply. Severely handicapped applicants will be given preferential consideration in the case of broadly equal suitability, ability and professional achievements.

Please send your application documents (CV, motivation letter, publication list if applicable, relevant certificates, transcript of records, etc.) **in German or English**, preferably by e-mail as a **single PDF file**, no later than **June 1, 2026** to:

Dr. Marcel Schreiner
Department of Psychology III
Röntgenring 11, 97070 Würzburg
E-Mail: marcel.schreiner@uni-wuerzburg.de

Please do not send any original documents to us; only send photocopies. As we need to save costs, we will not be able to return your documents to you. They will be shredded shortly after a hiring decision has been made. If you enclose a postage-paid return envelope, we will return your application documents to you three months after a hiring decision has been made.



Short Project Description

Memories typically encompass several pieces of information that need to be bound together to enable coherent memory representations. Such binding is studied in various research domains, such as object memory, working memory, action control, source memory, and episodic memory. A comprehensive understanding of these binding processes requires adequate measurement tools. This project aims to advance a promising modeling approach grounded in item response theory for measuring stochastic retrieval dependencies. This approach enables the investigation of binding processes through the statistical modeling of retrieval dependencies within and between item groups. The project comprises simulation studies, empirical experiments, and software development. It is organized in four work packages, which aim at extending the modeling approach to multi-factorial designs, integrate polytomous data formats, derive person-level dependency estimates and improve estimation, and implement it in an R package. The project outcomes will enable the measurement of binding processes in a broader range of experimental contexts, open avenues for new research questions, improve the quality of measurement, and ease the application of the modeling approach, making it more accessible to the broader research community. The project will thus facilitate binding research in various research domains, and more generally provide and improve a tool to study stochastic dependencies within and between item groups.