CSC-Tübingen PhD Scholarship Program

2026/2027 application round: prospective PhD positions at the University of Tübingen

Faculty:	Faculty of Science

Institute / Section / Subject: Department of Psychology, Diagnostics and Cognitive Neuropsychology
Supervising Professor(s):

- *Prof. Dr. Hans-Christoph Nuerk, University of Tübingen, Germany*
- *Dr. Gabriella Daroczy, University of Tübingen, Germany*
- *Prof. Dr. Yunfeng He, Liaoning University, China*

About the Supervisor(s): Prof. Dr. Hans-Christoph Nuerk, & Dr. Gabriella Daroczy, are experts in numerical cognition, eye tracking methodology and statistics, while Prof. Dr. Yunfeng He is an expert in mathematical cognition in giftedness.

Specification/Project title: ***Profiles of Mathematical Giftedness: Domain-General and Domain-Specific Cognitive Abilities and Personality Attributes***

Topic Description: The aim is to investigate profiles of giftedness in Chinese and German children and adults by combining domain-general abilities (e.g. working memory, intelligence) with domain-specific mathematical abilities (e.g. magnitude processing, place-value representations, mathematical problem-solving). We will additionally and cognitive diagnostic assessments of abilities, skills, emotions and motivation. In the final part of the project, this will be complemented by innovative state-of-the-art eye-tracking methodology which will go beyond conventional static measures (e.g. gaze duration) and extend to multivariate approaches to capture the dynamics of eye-movements (e.g. scan-path analysis).

The goal of this project is to identify potential profiles of mathematical giftedness that go beyond simple performance indicators and distinguish subgroups within populations such as STEM students and mathematically gifted children.

By establishing individual or subgroup profiles, we hope to establish the groundwork for future means of intervention and support that are tailored to the profiles of individuals or groups.

Intended Degree: Dr. rer. nat.

Type of PhD Study: Full-time doctoral research, with an intended duration of 48 months.

Required Degrees and Qualifications: A master's degree in psychology, cognitive science, or a closely related field

Language Requirements: Meet one of the CSC-recognized English-language proficiency criteria, Minimum test-score benchmarks: IELTS (Academic) 6.5 overall; TOEFL-iBT 95.

Notes: An interest in mathematical cognition, giftedness, and individual differences is desirable. Programming and statistical analysis skills, particularly in R or Python, are desirable. Willingness to collaborate internationally and contribute to cross-cultural data collection is expected.