



Dr. Nikol Figalová

Experimental Psychologist |
Social Gaze, Eye Tracking
& Neuroergonomics

Contact

@ nikol.figalova@uni-wuerzburg.de
www.nikolfigalova.com
<https://github.com/nikol-figalova/>

Professional Summary

Postdoctoral researcher studying how gaze conveys social meaning across contexts. My work combines experimental psychology, eye tracking, EEG/ERP, and multimodal data analysis in laboratory, simulated, and naturalistic environments. I currently work on the DFG-funded UGaze project at Julius-Maximilians-Universität Würzburg, building on a PhD in neuroergonomics and human-computer interaction.

Research Interests

- Social gaze, gaze semantics, and nonverbal communication
- Eye movements in social interaction
- Visual attention and social cognition
- Eye-tracking methodology and multimodal data analysis
- Experimental psychology and cognitive neuroscience
- Replicability and open science

Research Experience

- Postdoctoral Researcher** Feb 2026- present
Institute of Psychology, Julius-Maximilians-Universität Würzburg, DE
Investigating how gaze behaviour is interpreted across social contexts; conducting systematic evidence synthesis, developing experimental eye-tracking paradigms and data-analysis workflows, and contributing to publications, project coordination, teaching, and student supervision.
- Research Assistant** 2023-2024
Dept. Human Factors, Ulm University, DE
Developing, implementing, and conducting user studies using EEG/ERP and other psychophysiological measures; supporting grant writing and acquisition of external funding; thesis supervision and teaching.
- MSCA Early Stage Researcher** 2020-2023
Dept. Clinical and Health Psychology, Ulm University, DE
Designing, implementing, and managing experimental studies in neuroergonomics and human-computer interaction, with a focus on mental workload in driver-automated vehicle interaction, using EEG/ERP methods; leading data collection, analysis, publication, and project coordination; supervising students, teaching, and contributing to scientific outreach.
- UX & System Interaction Intern** 2022
Dept. Software Engineering and User Experience, Robert Bosch GmbH, DE
Independently designing and managing a full-cycle research project in an industry-academia collaboration, conducting real-world experiments with a vehicle prototype on a test track.
- Research Assistant** 2022
Leibniz Research Centre for Working Environment and Human Factors, DE
Gaining hands-on experience in study implementation, physiological data acquisition, signal processing, and data analysis workflows.
- Junior Research Assistant** 2019-2020
Voice, Emotion & Speech Neuroscience Lab, University of Lisbon, PT
Supporting study design, experimental planning, and data collection in ERP studies focused on emotional processing.

Education

- Dr. phil. in Neuroergonomics** 2020-2024
Dept. Clinical and Health Psychology, Ulm University, DE
Marie Skłodowska-Curie Innovative Training Network (H2020)
Thesis: *From Driver to Supervisor: Cognitive Implications of Increasing Vehicle Automation* (Grade: Magna cum Laude)
<https://doi.org/10.18725/OPARU-53154>
- B.Sc. & M.Sc. in Psychology** 2013-2019
Dept. of Psychology, Palacký University Olomouc, CZ
M.Sc. Thesis: *Translation and Psychometric Properties of Czech Version of the Perceived Stress Scale* (Grade: Excellent)
- B.Sc. Thesis:** *Stress and Health in Demanding Occupation* (Grade: Very Good)

Selected Publications

Figalová, N., Böckler-Raettig, A., & Huestegge, L. (2026). *Gaze semantics: A scoping review of how gaze conveys and constrains meaning in social contexts*. PsyArXiv Preprint.
https://doi.org/10.31234/osf.io/58hdw_v2

Figalová, N., Bieg, H.-J., Reiser, J. E., Liu, Y.-C., Baumann, M., Chuang, L., & Pollatos, O. (2024). From driver to supervisor: Comparing cognitive load and EEG-based attentional resource allocation across automation levels. *International Journal of Human-Computer Studies*.
<https://doi.org/10.1016/j.ijhcs.2023.103169>

Figalová, N., & Charvát, M. (2021). The Perceived Stress Scale: Reliability and validity study in the Czech Republic. *Ceskoslovenska Psychologie*, 65(1), 46–59.
<https://doi.org/10.51561/cspsych.65.1.46>

[View full publication list →](#)

Languages

- **Czech** – Native
- **English** – Fluent (near-native)
- **German** – Upper-intermediate (B2, actively progressing toward C1)
- **Portuguese, Russian** – Basic

Selected Conference Presentations

- 67th International Annual meeting Human factors and Ergonomics Society, Lübeck, Germany (2024)
- 15th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, Ingolstadt, Germany (2023)
- 28th International Conference on Intelligent User Interfaces, Sydney, Australia (2023)
- 7th International conference on traffic and transport psychology, Göteborg, Sweden (2022)

Professional Skills & Competencies

Experimental Design & Data Collection

- Developing eye-tracking study design and gaze-data analysis workflows for current UGaze experiments
- EEG/ERP, simulation studies, mixed-methods design, psychophysiological methods
- User-centred design and human factors research in laboratory and real-world environments

Data Analysis & Statistics

- R, Python, MATLAB, SPSS, JASP for statistical modelling and multimodal data integration
- Signal processing and behavioural data analysis
- NVivo for qualitative data coding and analysis

Programming & Tools

- PsychoPy, SILAB, JavaScript, web programming for experiment design
- Development of AI-powered workflows and data pipelines
- Documentation and version control (LaTeX, GitHub)

Visualisation & Communication

- Creation of dashboards and visualisations in R
- Media & Design: Unreal Engine, Canva, Adobe Suite, GIMP, DaVinci Resolve
- Academic writing, presentations at international conferences
- Event organisation - workshops, summer schools

Project & Research Management

- Grant writing and project deliverables within Horizon 2020 and DFG frameworks
- Organisation of department colloquia, seminars, and research meetings
- Experience in interdisciplinary and cross-sector collaborations

Teaching & Supervision

- Department Colloquia (Ulm University; Dept. Human Factors and Dept. Clinical and Health Psychology, 2020-2024)
- Driver-Vehicle Interaction Project Seminar (Ulm University; 2023–2024)
- Supervision of bachelor's and master's theses; mentoring student assistants and interns

Current Research Project

Decoding the Semantics of Basic Gaze Patterns

DFG Priority Programme 2481 “Understanding Gaze”

- Developing an evidence base on how gaze patterns convey social meaning across contexts.
- Designing controlled experiments with realistic avatars and naturalistic dyads, manipulating gaze direction, gaze-shift frequency, and blink frequency.
- Combining qualitative and quantitative methods with eye tracking to study gaze interpretation in controlled and real-time interactions.