

## Gökhan Aydogan, PhD

Zurich Center for Neuroeconomics (ZNE), University of Zurich

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**Research Interests:** *Neuroeconomics, Decision Neuroscience, Computational Modeling, Social Cognition, Theory of Mind, Artificial Intelligence, Mental Health*

### Education and Training

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<b>Zurich Center for Neuroeconomics (ZNE)</b> , University of Zurich Postdoctoral Fellow Department of Economics Advisor: Prof Christian C. Ruff	2018 – present
<b>Decision Neuroscience Lab</b> , Arizona State University Postdoctoral Fellow Department of Psychology Advisor: Prof Samuel M. McClure	2016 – 2018
<b>University of California, Berkeley</b> Department of Economics	2014
<b>University of Munich</b> PhD, Economics Advisor: Prof Martin G. Kocher	2011 – 2015

### Positions

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<b>Junior Data Analyst</b> at the CBR Management, Munich	2006 – 2011
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### Publications

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#### *Selected Work*

- Aydogan, G.\***, Buergi, N.\*, Konovalov, A., & Ruff, C. C. (2026). A neural fingerprint of adaptive mentalization. *Nature Neuroscience*.  
*\*equal contribution*
- Aydogan, G.** & Ruff, C. C. (2024). New Insights from Gene Expression Patterns on the Neurobiological Basis of Risky Behaviour. *Nature Mental Health*.
- Aydogan, G.**, Daviet, R., Linner, R. K., Hare, T. A., Kable, J. W., Kranzler, H. R., ... & Nave, G. (2021). Genetic Underpinnings of Risky Behavior Relate to Altered Neuroanatomy. *Nature Human Behaviour*, 1-8.
- Aydogan, G.**, Jobst, A., D'Ardenne, K., Müller, N., & Kocher, M. G. (2017). The detrimental effects of oxytocin-induced conformity on dishonesty in competition. *Psychological Science*, 28(6), 751-759.
- Aydogan, G.**, Furtner, N. C., Kern, B., Jobst, A., Müller, N., Kocher, M. G. (2017). Oxytocin Promotes Altruistic Punishment, *Social Cognitive and Affective Neuroscience*.

**Additional Work**

- Aydogan, G.**, Kollmorgen, S., Mante, V., Karlsson Linnér, R., Kleim, B., Nave, G., Ruff, C. (2025). War Trauma Impairs Prenatal Brain Development: Evidence from Genetically-Informed Brain Imaging. *Under review*.
- Wu, X., Fu, H., **Aydogan, G.**, Feng, C., Qin, S., & Liu, C. (2025). The Self-Interest of Adolescents Overrides Cooperation in Social Dilemmas. *eLife*, 14.
- Aydogan, G.**, Kretschmer, J., Brewer, G., & McClure, S. M. (2024). Decoding the influence of emotional and attentional states on self-control using facial analysis. *Scientific Reports*, 14(1), 25465.
- Buerger, N., Konovalov, A., Biegel, C., De Araujo, T., **Aydogan, G.**, & Ruff, C. C. (2024). Neurocomputational signatures of altered adaptive mentalization in autism. (*preprint*).
- Forbes, P., **Aydogan, G.**, Braunstein, J., Todorova, B., Wagner, I., Lockwood, P., ... & Lamm, C. (2024). Acute stress reduces effortful prosocial behaviour. *ELife*.
- Daviet, R., **Aydogan, G.**, Jagannathan, K., Spilka, N., Koellinger, P., Kranzler, H. R., ... & Wetherill, R. (2022). Associations between alcohol consumption and gray and white matter volumes in the UK Biobank. *Nature Communications* 13.
- Kweon, H., **Aydogan, G.**, Dagher, A., Bzdok, D., Ruff, C. C., Nave, G., ... & Koellinger, P. D. (2022). Human brain anatomy reflects separable genetic and environmental components of socioeconomic status. *Science Advances*, 8(20).
- Ballard, I. C., Kim, B., Liatsis, A., **Aydogan, G.**, Cohen, J. D., & McClure, S. M. (2017). More Is Meaningful: The Magnitude Effect in Intertemporal Choice Depends on Self-Control. *Psychological Science*.
- Aydogan, G.**, Flaig, N., Ravi, S. N., Large, E. W., McClure, S. M., & Margulis, E. H. (2018). Overcoming bias: Cognitive control reduces susceptibility to framing effects in evaluating musical performance. *Scientific Reports*, 8(1), 6229.
- Aydogan, G.**, Jobst, A., Loy, F., Dehning, S., Zill, P., Müller, N., & Kocher, M. (2018). The effect of oxytocin on group formation and strategic thinking in men. *Hormones and Behavior*, 100, 100-106.
- Ballard, I. C., **Aydogan, G.**, Kim, B., & McClure, S. M. (2018). Causal evidence for the dependence of the magnitude effect on dorsolateral prefrontal cortex. *Scientific Reports*, 8.

**Fellowships, Honors and Grants****Swiss National Science Foundation (SNSF) Project Grant:**

*Using Machine Learning to Reveal the Neurocomputational Architecture of Theory of Mind* (Co-authored with Prof. C. Ruff)

(CHF 997,200) 2025

University of Zurich Postdoctoral Researcher Grant (CHF 100,240) 2023

University Research Priority Program (URPP),  
Short Project Grant AdaBD (CHF 176,369) 2022

Project Grant University of Munich (€ 3,000) 2015

NYU Shanghai Neuroeconomics Summer School Fellow (\$ 2,000) 2015

Fellowship for abroad studies (UC Berkeley),

Friedrich-Ebert Foundation (€ 10,000)	2014
Friedrich-Ebert Foundation Research Fellowship Grant (€ 65,000)	2012
Research Grants, University of Munich (€ 4,000)	2012
Friedrich-Ebert Fellowship (€ 33,000)	2007

### Teaching/Mentoring Experience

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Lectures on <b>Research Methods in Cognitive Neuroscience</b>	2020 – 2025
Co-supervised several <b>PhD students</b> in decision neuroscience	2021 – 2025
Bachelor and Master Theses in Economics and Neuro-economics	2015 – 2021
Teaching Assistant for <b>Microeconomics I</b> (Prof. Martin Kocher)	2014
Evaluation: <i>very good</i>	

### Conferences and Invited Talks

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#### Invited Talks

<i>WASAD CONGRESS 2025</i> , Munich Germany	2025
<i>Max-Planck Institute Berlin (Adaptive Rationality)</i> , Germany	2024
<i>Psychology Seminar Series, Bilkent University</i> , Turkey	2024
<i>Geneva Finance Research Institute, University of Geneva</i> , Switzerland	2024
<i>Current Topics in Social, Economic and Decision Psychology</i> University of Basel, Switzerland	2019

#### Conference Talks

Matterhorn Symposium ( <i>Talk</i> )	2025
Experimental Finance Conference 2025 in Maastricht ( <i>Talk</i> )	2025
Matterhorn Symposium ( <i>Talk</i> )	2023
UEA's Behavioral Game Theory Workshop in Norwich ( <i>Talk</i> )	2023
ESA World Meeting in Lyon ( <i>Talk</i> )	2023
Society for Neuroeconomics in Dublin, Ireland ( <i>Poster Spotlight</i> )	2019
Consumer Neuroscience Satellite Symposium in Dublin, Ireland ( <i>Talk</i> )	2019
Society for Neuroeconomics in Toronto, Canada ( <i>Poster Spotlight</i> )	2017
ESA North America Conference in Tucson, Arizona ( <i>Talk</i> )	2016
Social and Biological Roots of Cooperation in Kiel, Germany ( <i>Talk</i> )	2015
IMEBESS in Toulouse, France ( <i>Talk</i> )	2015
ESA European Meeting in Prague, Czech Republic ( <i>Talk</i> )	2014
NeuroPsychoEconomics Conference in Munich, Germany ( <i>Talk</i> )	2014

### Spring and Summer Schools

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Analyzing Neural Time Series Data, ASU	2016
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Shanghai Neuroeconomics Collective Summer School, NYU

2015

## Technical Skills

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Programming & computational modelling:	MATLAB & Python (PyTorch, TensorFlow)
Data analysis, statistics, Machine Learning:	Python, MATLAB, STATA
Experimental design, stimuli presentation:	PsychToolBox, PsychoPy, z-Tree, E-Prime, EyeLink eye-tracking, BrainSight for rTMS and tFUS
Neural data analysis (fMRI/DTI/EEG):	SPM, FSL, ANTs, fmripreg, <i>ERPLAB</i> and <i>EEGLAB</i> .

## Ad-Hoc Reviewer

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BMC Neuroscience | Frontiers in Behavioral Neuroscience | Genes | Hormones and Behavior | International Journal of Neuropsychopharmacology | Journal of Experimental Behavioral Finance | Journal of Economic Psychology | Journal of Neuroscience | Journal of Neuroscience, Psychology, and Economics | Journal of Personality and Social Psychology | Nature Mental Health | PLOS ONE | PNAS Nexus | Psychoneuroendocrinology | Science Advances

## Community Services

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Program Committee: Society for Neuroeconomics Conference	2023 – 2024
Neuroeconomics Seminar, University of Zurich (organization)	2021 – 2022
Science Exhibition at the <i>Scientifica</i> and <i>BrainFair</i> in Zurich	2021 – 2023
Guest Lecturer at the SCNAT Summer School for Swiss High School Students	2019 & 2021

## References

### Professor Christian C. Ruff

University of Zurich  
 Department of Economics  
 Blümlisalpstrasse 10  
 8006 Zurich, Switzerland

### Professor Ernst Fehr

University of Zurich  
 Department of Economics  
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