Guillermo Hidalgo Gadea

Ph.D. student in Psychology

Experienced researcher with a background in psychology and animal behavior, with a strong focus on data analysis and machine learning. Skilled in experimental design and research software development, I have published in peer-reviewed journals and am actively engaged in scientific communication and outreach. As a strong advocate of open science, free education, and transparency in research, I actively contribute to the scientific community through my personal blog, social media channels, and participation in scientific conferences.

EDUCATION

06/2020 – present	Ph.D. in Psychology, Ruhr-Universität Bochum Topic: Embodied cognition and pigeon behavior **Prof. Dr. Onur Güntürkün**
09/2018 – 11/2019	M.Sc. in Psychological Research Methods, Stirling University Topic: Numerical cognition in Non-Human Primates **Dr. Gema Martin Ordas**
10/2013 – 09/2017	B.Sc. in Psychology, Bergische Universität Wuppertal Topic: Fatigue Detection and Biosignal Processing **Dr. Christian Vorstius**
10/2011 – 09/2013	B.Sc. in Physics, Technische Universität Dortmund Minoring in Chemistry and Philosophy Change in degree program
09/2009 – 05/2011	Abitur, Deutsche Schule Barcelona Majoring in Physics, Mathematics and German Language

RESEARCH EXPERIENCE

09/2019 – 01/2020	**Postgraduate Research Placement** Institute of Evolutionary Biology and Ecology University of Bonn, Germany Biostatistical analysis of cichlid fish behavior
11/2018 – 06/2019	**Postgraduate Research Placement** Department of Psychology University of Stirling, Scotland Research in cumulative culture in macaques
09/2014 – 11/2015	**Research Assistant** Schumpeter School of Business & Economics Bergische Universität Wuppertal, Germany Experimental Industrial and Organizational Psychology
04/2011 – 05/2011	**Student Work Placement** ALBA Synchrotron Light Facility, Barcelona, Spain Electron accelerator sensors and ionized plasma chambers

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Soft Skills

- Team and Project Management
- Online and Offline Teaching
- Student Supervision
- Science Communication

Hard Skills

- Statistical Analysis
- Experimental Design
- Software Development
- Python, R, C++, MATLAB

Languages

- English (professional)
- German (native)
- Spanish (native)
- Catalan (native)

Open Science

- Open Lab Notebook
- Computational Ethology
- Tracking Animal Behavior

Research Software

- PigeonSuperModel
- MotionPype
- TheBeeHive
- syncFLIR
- VideoPyToolbox

Ad hoc Reviewer

- Ecology, 2-year impact factor (2022): 6.433
- Scientific Reports, 2-year impact factor (2021): 4.996

PROFESSIONAL TRAINING

06/2023 **EU Function B Training for Animal Research**
Advanced course from the Federation of European Laboratory Animal Science Associations (FELASA)

05/2022 **Safety Officer in University Laboratories**
Advanced Seminar from the Accident Insurance NRW

04/2022 **Introduction to Leadership Skills**
Seminar from the University Bochum Research School

10/2021 **Communicating Science Online**
Seminar from the German National Institute for Science Communication

07/2021 **Computational Neuroscience**
Summer School Neuromatch Academy

PROFESSIONAL EXPERIENCE

06/2020 – present **Research Assistant**
Philosophy of the Mind, Faculty of Philosophy, Ruhr-Universität Bochum
DFG funded Research Training Group GRK 2185 Situated Cognition

01/2019 – present **Independent Scientific and Statistical Consultant**
Research methodology, study design and statistical analysis
Coaching for Businesses, Bachelor, Master, and PhD dissertations

01/2017 – 05/2018 **Project Manager**
Institute of Experimental Psychophysiology GmbH
Team management in public and industry funded research projects

07/2015 – 12/2016 **Research Assistant**
Institute of Experimental Psychophysiology GmbH
Computational models for microsleep and discomfort detection

09/2015 – 07/2018 **Fitness Instructor**
Certified by the German Fitness & Aerobic Association (DFAV)
Group fitness and obstacle course racing in university sports

07/2014 – 06/2015 **Student Assistant**
Faculty of Psychology, Bergische Universität Wuppertal
Department of Methodology and Psychological Diagnostics

ACADEMIC ACHIEVEMENTS

Awards, Grants and Memberships

- Contribution to the **DFG Evaluation** of the CRC 1372 Grant Period, 2022
- Contribution to the **DFG Evaluation** of the RTG 2185 Grant Period, 2021
- **External funding** from Kyoto University for Conference Contribution, 2019
- Best **Poster Award**, Behaviour and Evolution Research Group, University of Stirling, 2019
- **Scholarship** from the German Academic Exchange Service (DAAD), 2011

Teaching and Research Supervision

- **M.Sc. Thesis** Robert Willma (2023)
  Title: "Embodied cognition – Pigeons' pecking behavior is predictive of their upcoming choice."
- **B.Sc. Thesis** David Weyer (2023)
  Title: "Testing optimal foraging in pigeons using markerless pose tracking."
- **B.Sc. Thesis** Victor Ludwig (2023)
  Title: "Machine learning-based markerless behavior tracking: Investigating lateralization and 3D head direction in Pigeons during spatial orientation."
- **B.Sc. Thesis** Sarah M. Möser (2022)
  Title: "Characterizing stopping behavior in pigeons (Columba livia) using markerless pose estimation."
- **Undergraduate Seminar**
  Computational Ethology (5 credit points, 2021)
- **Postgraduate Seminar**
  Tracking Animal Behavior (3 credit points, 2021)

Invited Talks and Appearances

08/2022	Keynote **Chairmanship** at the second Avian Cognitive Neuroscience Conference Ruhr University Bochum
07/2022	**Speaker** at the Research Colloquium of the Neural Basis of Learning Unit of the Institute of Cognitive Neuroscience, Ruhr University Bochum
05/2022	**Speaker** at the Scientific Retreat of the Department of Biopsychology Hamburg Medical School
06/2020	**Speaker** at the Research Colloquium of the Department of Biopsychology Ruhr University Bochum
12/2019	**Speaker** at the Research Colloquium of the Institute of Evolutionary Biology and Ecology, University of Bonn

CONFERENCE CONTRIBUTIONS

- **Hidalgo-Gadea, G.**, Flaim, E.M., Güntürkün, O., & Anselme, P. (2023*). Tracking the cost of flight in optimal foraging theory: Investigating pigeon behavior between food patches. Poster at the CogEvo2023 Workshop on Cognition and Evolution, Rovereto.
- **Hidalgo-Gadea, G.**, Rook, N., Ludwig, V., Li, M., Inda, M., Tuff, J.M., Otto, T., Pusch, R., Güntürkün, O. (2022). 3D Tracking of freely moving pigeons reveals behavioral differences during space and color discrimination tasks. Poster presented at the 51st annual Meeting of the Society of Neuroscience, San Diego, CA, USA.
- **Hidalgo-Gadea, G.** (2019). Cognitive Magnitude Interferences in Spontaneous Food Choices. Talk at the International Student Symposion for the Study of Animal Behavior and Cognition, Kyoto University.
- **Hidalgo-Gadea, G.**, & Martin-Ordas, G. (2019). Spontaneous Numerical Cognition in human and non-human Primates. Talk at the Primate Society of Great Britain Spring Meeting.
- **Hidalgo-Gadea, G.** (2019). Human and Chimpanzee Strategies in Spontaneous Quantitative Cognition. Talk at the Scottish Primate Research Group Spring Meeting.
- **Hidalgo-Gadea, G.**, Kreuder, A., Stahlschmidt, C., Schnieder, S., & Krajewski, J. (2019). Brute Force ECG Feature Extraction Applied on Discomfort Detection. Talk at the 6th International Conference on Information Technologies in Biomedicine, Poland. https://doi.org/10.1007/978-3-319-91211-0_33
- **Hidalgo-Gadea, G.**, Schnieder, S., Roelen, S., Wiggerich, A. & Krajewski, J. (2016). Erfassung körperlicher Aktivität in der Selbstevaluation gesundheitsbezogenen Verhaltens: Validität und Usability von Wearables. Talk at the 58th Conference of Experimental Psychologists, University of Heidelberg.
- Schnieder, **Hidalgo-Gadea, G.**, S., Roelen, S., Wiggerich, A. & Krajewski, J. (2015). Validität und Usability von Wearables zur Erfassung körperlicher Aktivität in der Selbstevaluation gesundheitsbezogenen Verhaltens. Talk at the 11th Berlin Workshop on Human-Machine Systems of the Institute of Psychology and Ergonomics (IPA), Track: Trends in Neuroergonomics, Berlin-Brandenburg Academy of Sciences. http://dx.doi.org/10.14279/depositonce-4887

PUBLICATIONS

- Schildbach, V., Horn, S., **Hidalgo-Gadea, G.**, Johannis, W., Mauch, C., & Franklin, C. (2023). C-Reactive Protein and Lymphocyte-to-Monocyte Ratio Predict Recurrence in Stage III Melanoma Patients with Microscopic Sentinel Lymph Node Metastasis. Cancers, 15 (3), 702. https://doi.org/10.3390/cancers15030702
- Ocklenburg, S., Packheiser, J., & **Hidalgo-Gadea, G.** (2022). Social touch in the age of computational ethology: Embracing as a multidimensional and complex behaviour. Current Psychology, 1-10. https://doi.org/10.1007/s12144-022-03051-9
- **Hidalgo-Gadea, G.**, Kreuder, A., Krajewski, J., & Vorstius, C. (2021). Towards better microsleep predictions in fatigued drivers: exploring benefits of personality traits and IQ. Ergonomics, 64 (6), 778- 792. https://doi.org/10.1080/00140139.2021.1882707
- Jansen, M. T., Jansen, N. C., Weber, A., **Hidalgo-Gadea, G.**, Ansari, E., & Scheren, P. (2017). Semantic Priming with Homonymous Nouns: Hints of Clarifying the Issue of Selective vs. Non-Selective Priming. Journal of European Psychology Students, 8(1), 15–29. https://doi.org/10.5334/jeps.408
- Schuller, B., Steidl, S., Batliner, A., ... **Hidalgo-Gadea, G.**, … Zafeiriou, S. (2017). The INTERSPEECH 2017 Computational Paralinguistics Challenge: Addressee, Cold & Snoring. Interspeech 2017, 3442–3446. https://doi.org/10.21437/Interspeech.2017-43