Leon D. Lotter

Dr. med.

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Education

Sep 2022 – Ongoing | **PhD in neuroscience** *Clinician Scientist Program, Max Planck School of Cognition, Germany*
Institute of Systems Neuroscience, University Hospital HHU Duesseldorf, Germany
INM-7: Brain and Behaviour, Research Center Juelich, Germany

- Project: Multilevel brain systems underlying typical and atypical neurodevelopment
- Supervision: Juergen Dukart | Simon Eickhoff | Julian Koenig | Svenja Caspers
- 100% ("research associate") contract financed via Max Planck School of Cognition
- Collaborations:
  - *Biological Child and Adolescent Psychiatry, University Hospital Cologne* (J. Koenig)
  - *Max Planck Institute of Psychiatry, Munich* (E. Binder | V. Spoormaker)

Dec 2017 – Sep 2022 | **Doctor of medicine** *Child Neuropsychology, University Hospital RWTH Aachen, Germany*
INM-7: Brain and Behaviour, Research Center Juelich, Germany

- Project: Longitudinal development of resting-state fMRI alterations in Anorexia nervosa
- Supervision: Kerstin Konrad | Juergen Dukart | Jochen Seitz
- Grade: *summa cum laude* (With distinction)

Oct 2014 – Nov 2021 | **Medical studies** *RWTH Aachen University, Germany*

- Elective subject: Clinical neuroscience
- Clinical internships: Child and adolescent psychiatry (6 mos) | Adult psychiatry (1 mo) | Internal medicine (4 mos) | General surgery (4 mos)

Work Experience

Apr 2022 – Aug 2022 | **Research assistant** *INM-7: Brain and Behaviour, Research Center Juelich, Germany*

- Project: Linking cortical thickness development to multilevel brain systems

May 2019 – Jan 2022 | **Student research assistant** *Child Neuropsychology, University Hospital RWTH Aachen, Germany*

- Diverse projects involving neuroimaging, behavioral data analysis, and visualization

Sep 2013 – Aug 2014 | **Voluntary service** *Samuha Samarthya, India* | *Service Civil International, Germany*

- Program: *weltwärts*, German government-funded
- Project: Creating barrier-free environments for people with disabilities in rural South India

Academic Contributions, Skills, and Personal Interests

Extracurricular Activities | **Student Representative** of the Max Planck School of Cognition (since Sep 2022)
Organization of a Journal Club at the INM-7, Research Centre Juelich (since Oct 2023)

Software Tools | **NiSpace** NeuroImaging Spatial Colocalization Environment
ABAnnotate A toolbox for multimodal gene-category enrichment analysis of human neuroimaging data

Peer Reviews | *Journal of the American Academy of Child and Adolescent Psychiatry* | *Neuropsychopharmacology* | *Translational Psychiatry* | *Schizophrenia Bulletin* | *Neuroimage* | *Neuroimage Clinical* | *Cortex* | *Frontiers in Human Neuroscience* | *BMC Psychiatry* | *BMJ Open* | *European Journal of Neuroscience*

Programming | **Python** since 2021 (*example*) | **R** since 2020 | **Matlab** since 2019 (*example*)

Languages | **German** native speaker | **English** professional proficiency

Interests | **Academic** Developmental neuroscience & psychiatry | Open science | Science communication
Private Climbing | Cycling | Photography

Conference Presentations and Workshop Participation

April 2025 | **Society of Biological Psychiatry (SOBP)** *Toronto, Canada*
- Talk: Molecular imaging-informed biomarkers link typical and atypical functional brain synchronization to underlying neurotransmission

Dec 2024 | **Congress of the German Association for Psychiatry and Neurology (DGPPN)** *Berlin, Germany*
- Talk: Evidence of dopaminergic modulation of resting state functional connectivity alterations in psychosis

Aug 2024 | **Cologne Summer School in Biological Psychiatry** *Cologne, Germany*
- Participation in lectures and practical exercises on state-of-the-art methods in biological psychiatry

Jul 2024 | **Organization for Human Brain Mapping (OHBM) Annual Meeting** *Seoul, South Korea*
- Poster: NiSpace – Neuroimaging Spatial Colocalization Environment
- Poster: Neurotransmitter systems explain lifespan changes of human resting-state brain activity

Jul 2023 | **Organization for Human Brain Mapping (OHBM) Annual Meeting** *Montréal, Canada*
- Poster: Human cortex development is shaped by molecular and cellular brain systems

Mar 2023 | **Minerva Symposium: Interactive Brains - From Methods to Applications** *Tel Aviv, Israel*
- Invited talk: Revealing the neurobiology underlying interpersonal neural synchronization with multimodal data fusion

Mar 2023 | **Meeting of the German Association for Child and Adolescent Psychiatry (DGKJP)** *Essen, Germany*
- Poster: Linking cortical thickness development to molecular and cellular brain systems

Awards and Scholarships

April 2025 | **Heine Research Academies (HeRA) travel grant of the Heinrich Heine University**
- To present at SOBP 2026 in Toronto, Canada

Dec 2024 | **DDPPN 2024 "Best Free Talks Abstract" award**
- See conference section, awarded with 500€

Oct 2023 | **"Borchers Badge" for excellent dissertations at RWTH Aachen University**
- For the medical doctoral thesis "Recovery-associated resting-state activity and connectivity alterations in Anorexia nervosa" passed with distinction in 2022

Jul 2023 | **German Academic Exchange Service (DAAD) travel grand**
- To present at OHBM 2023 in Montréal, Canada

Jun 2023 | **72nd Lindau Nobel Laureate Meeting (Physiology and Medicine)** *Lindau, Germany*
- Participation as "Young Scientist", supported by Research Centre Juelich

Publications and Preprints

Preprint

Bamberger, R., **Lotter, L. D.**, Nieto, N., Poulain, T., Körner, A., Kiess, W., Fuchs, M., and von Polier, G. "Voices of change: Associations between vocal markers and symptoms of ADHD - Findings from the LIFE Child Study". In: *Research Square*.

2025

Saberi, A., Wischnewski, K. J., Jung, K., **Lotter, L. D.**, Schaare, H. L., ... IMAGEN-Consortium, Paus, T., Dukart, J., Bernhardt, B. C., Popovych, O. V., Eickhoff, S. B., and Valk, S. L. "Adolescent maturation of cortical excitation-inhibition ratio based on individualized biophysical network modeling". In: *Science Advances*.

Lotter, L. D. and Dukart, J. "Methodological Considerations: Integrating Measures Across Assessment Modalities". In: *Neurobehavioral Individual Differences: A Transdisciplinary Approach To Advancing Clinical Science*. Ed. by R. D. Latzman and C. J. Patrick. Springer Nature Switzerland.

2024

Dukart, J., **Lotter, L. D.**, and Eickhoff, S. B. "Moving towards precision psychiatry: the hard nut of depression". In: *Signal Transduction and Targeted Therapy*.

Lotter, L. D., Saberi, A., Hansen, J. Y., Misic, B., Paquola, C., ... IMAGEN-Consortium, Nees, F., Banaschewski, T., Eickhoff, S. B., and Dukart, J. "Regional patterns of human cortex development correlate with underlying neurobiology". In: *Nature Communications*.

Lotter, L. D., Nehls, S., Losse, E., Dukart, J., and Chechko, N. "Temporal dissociation between local and global functional adaptations of the maternal brain to childbirth: A longitudinal assessment". In: *Neuropsychopharmacology*.

Kasper, J., Caspers, S., **Lotter, L. D.**, Hoffstaedter, F., Eickhoff, S. B., and Dukart, J. "Resting state changes in aging and Parkinson's disease are shaped by underlying neurotransmission – a normative modeling study". In: *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

2023

Schloesser*, L., **Lotter*, L. D.**, Offermann, J., Borucki, K., Biemann, R., Seitz, J., Konrad, K., and Herpertz-Dahlmann, B. "Sex-dependent clinical presentation, body image, and endocrine status in long-term remitted anorexia nervosa". In: *European Eating Disorders Review*.

Corneille, O., Havemann, J., Henderson, E. L., IJzerman, H., Hussey, I., Orban de Xivry, J.-J., Jussim, L., Holmes, N. P., Pilacinski, A., Beffara, B., Carroll, H., Outa, N. O., Lush, P., and **Lotter, L. D.** "Beware 'persuasive communication devices' when writing and reading scientific articles". In: *eLife*.

Lotter, L. D., Kohl, S. H., Gerloff, C., Bell, L., Niephaus, A., Kruppa, J. A., Dukart, J., Schulte-Rüther, M., Reindl, V., and Konrad, K. "Revealing the neurobiology underlying interpersonal neural synchronization with multimodal data fusion". In: *Neuroscience and Biobehavioral Reviews*.

2021

Lotter, L. D., von Polier, G., Offermann, J., Buettgen, K., Stanetzky, L., Eickhoff, S. B., Konrad, K., Seitz*, J., and Dukart*, J. "Recovery-associated resting-state activity and connectivity alterations in anorexia nervosa". In: *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*.

2020

Pankert, K., Pankert, A., **Lotter, L. D.**, Herpertz-Dahlmann, B., and Konrad, K. "Autism spectrum symptoms in children with congenital blindness". In: *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*.

* Equal contributions