# Team members

## Prof. Joseph Kambeitz

Joseph Kambeitz is a psychologist, trained psychiatrist and mental health researcher. He is head of the KambeitzLab for Prevention and Prediction in Mental Health as well as the Early Recognition Service at the University of Cologne (<u>FETZ</u>). His main focus of research is the use of machine learning approaches to improve our understanding of the etiology of mental disorders and to generate tools the help clinicians provide efficient and personalised healthcare.

## Lana Kambeitz-Ilankovic

Lana Kambeitz-Ilankovic joined the team in September 2019 as a junior research group leader. She earned her PhD degree in 2013 at the Ludwig-Maximilian University in Munich in collaboration with the Institute of Psychiatry at King's College London, UK. She has spent most of her postdoc fellowship working on the multi-center EU project PRONIA (www.pronia.eu). Her research focuses on developing neuroimaging and neurocognitive biomarkers that (1) predict the onset of mental illness and patients' long-term social and occupational outcomes on individual level (2) predict response to non-pharmacological interventions using digital technology and computerized cognitive intervention by employing novel machine learning techniques and computational modelling. This line of research was supported by several research grants she received from 2015-2019 (NARSAD Young Investigator from the Brain & Behavior Foundation, DFG Co-Fund LMU excellent, Friedrich-Baur Foundation, etc). Her work has been published in over 25 highly cited papers that aim to improve diagnostic and therapeutic recommendations for patients with mental illness.

#### Theresa Liechtenstein

My enthusiasm for psychiatry started during my internship at the Department of Psychiatry and Psychotherapy at the University Hospital of Münster and continued through my dissertation in the field of psychosis research. Since 2013 I am working as a medical doctor at the Department of Psychiatry and Psychotherapy at the University Hospital Cologne. I am focused on the work in the Early Recognition an Intervention Centre for Psychiatric Disorders (FETZ) which is specialized in the early detection of individuals with a clinical high-risk for psychosis. I'm particularly interested in investigating the role of childhood adverse events as potential risk factors for the development of a later psychosis and poor functional outcome based on multivariate machine-learning approaches.

# **Carolin Doll**

I studied at the Maastricht University (the Netherlands), at the Dalhousie University (Canada) and at the Karl-Franzens-Universität Graz (Austria). From 2017 to 2019, I continued gaining scientific knowledge at the ESPRIT C4 and B1 Multi-Center study, which aims at the evaluation and investigation of novel psychotherapy manuals for schizophrenia and high-risk patients. During this time, I also worked on my qualification as a cognitive behavioral therapist. In January 2019, I joined Kambeitz Lab as a visiting scholar from the LVR clinic in Düsseldorf. Currently, I'm involved in a longitudinal project of the early detection of

psychosis. My doctoral project concerns the impact of mental health literacy and stigmatization on help-seeking behavior, which is supervised by Assist. Prof., Ph.D., Frauke Schultze-Lutter.

## Desirée Zeus

Desirée Zeus is clinical psychologist trained in cognitive-behavioural psychotherapy. Her interest include the prevention of psychotic disorders, particularly by psychotherapeutic interventions. In our FETZ unit, she is responsible for psychotherapy as part of the ESPRIT-Study that aims at the evaluation and investigation of a novel psychotherapy manuals for schizophrenia and high-risk patients.

## Julian Wenzel

Julian Wenzel is a PhD student with a background in neurocognitive psychology. He is focusing on the translational potential of neurocognitive and brain imaging findings for clinical practice. Using supervised and unsupervised machine learning, his research interests concern the investigation of neurocognitive heterogeneity in (transdiagnostic) psychiatric phenotypes to help personalize modern neurocognitive interventions.

## Linda Betz

I studied at University of Regensburg (Germany), University of the Incarnate Word in San Antonio (Texas, USA) and Ludwig-Maximilians-University Munich (Germany). During my master's degree from 2016 to 2018, I gained scientific knowledge at the Munich site of the PRONIA multicenter study. I joined Kambeitz Lab in February 2019 and currently, I'm involved in a PhD project at the intersection of psychiatry, epidemiology, and methodology, using data-driven statistical methods such as probabilistic graphical modelling, machine learning and meta-analysis to reveal complex patterns in behaviour and the environment.

#### **Marlene Rosen**

Marlene Rosen has worked parallel on her PhD thesis and her qualification as a psychotherapist. In her research, she developed a machine-learning model to predict psychosis in individuals at clinical high risk for psychosis with expressed emotion and sex effects. Currently, she is focusing on prediction of functioning, resilience and planning a grant for a project about a transdiagnostic risk syndrome of psychiatric disorders.

# Melanie Rohde

At early age I became passionate about psychology and psychotherapeutic interventions and completed a Bachelor's degree in Psychology at the University of Cologne before I continued studying medicine at the University of Cologne and finished in 2017. Since then, I have been working as a medical doctor at the Department of Psychiatry and Psychotherapy at the University Hospital Cologne. In 2019, I have taken over responsibility for the outpatient Service in our Early Recognition Centre of Cologne (FETZ) in the EU-funded "ESPRIT" study comprising multicentric intervention studies for patients with schizophrenia as well as a study for the prevention of psychosis and experimental tasks with schizophrenia patients.

#### Nora Penzel

Nora Penzel is a PhD-student with a strong background in neurocognitive psychology. Her main research interest is the neurobiological correlates of risk factors for psychosis. Specifically, she is investigating the role of cannabis on brain development using machinelearning models. Moreover, she is developing expertise in diffusion-imaging and generating a robust pipeline for harmonization and processing of DTI data in the PRONIA study.

#### Pedro Costa Klein

Originally from Brazil, I studied Computer Science at the University of Santa Cruz do Sul (Brazil) and at the Pontifical Catholic University of Rio Grande do Sul (PUCRS, Brazil). I started a Doctorate at Ludwig-Maximilians-University Munich (LMU, Germany) in 2017, and then moved to a PhD in the Interdisciplinary Program in Health Sciences at the University of Cologne in 2019. During my master's degree, from 2014 to 2016, I gained scientific knowledge at computer vision applied to medical imaging at the Virtual Reality Group, at PUCRS. After completing my master, from 2017 to 2018, I worked for prof. Kambeitz at the LMU studying the mechanisms underlying brain's functioning using neuronal simulation models, aiming at the mechanistic understanding of aberrant whole-brain functional connectivitiy observed in patients with schizophrenia. I joined Kambeitz Lab in April 2019 and currently, I'm involved in a PhD project following this line of research.

#### **Pilar Albert Pocar**

After completing my Medicine Studies 2019 in Valencia (Spain), I perceived an opportunity working in Germany, so I started working as a medical doctor at the Department of Psychiatry and Psychotherapy of the University Hospital of Cologne. Beside my clinical activity, I go along with clinical research, currently focusing on the field of metaanalysis; in this case, the impact of childhood trauma as a transdiagnostic risk factor for various major psychiatric disorders.