Dr. Lukas Kunz, CV

Working address

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Appointments

2018 – 2020	Postdoctoral Fellow at the Epilepsy Center, University Hospital of Freiburg, Freiburg, Germany (Dr. Andreas Schulze-Bonhage; in collaboration with Dr. Michael Kahana, Dr. Joshua Jacobs, and Dr. Richard Kempter)
▪ 11/2019-01/2020	Three-month research stay at Columbia University in the City of New York, New York, USA (Dr. Joshua Jacobs)

Education

2013 – 2017	M.D. Dissertation *Investigation of entorhinal grid-cell-like representations in adults at genetic risk for Alzheimer's disease* (summa cum laude) at the Department of Epileptology, University of Bonn, Bonn, Germany, and the German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany (Dr. Nikolai Axmacher and Dr. Jürgen Fell)
2011 – 2018	Philosophy and German studies (B.A.), University of Bonn, Bonn, Germany; thesis *Sartre's critique on Freud's psychoanalysis*
2010 – 2017	Medicine (state examination), University of Bonn, Bonn, Germany
2009 – 2010	Alternative civilian service, Institute of Cellular Neurosciences, University of Bonn, Bonn, Germany (Dr. Christian Steinhäuser)
2009	Abitur, Carl-von-Ossietzky-Gymnasium, Bonn, Germany

Scholarships and Awards

2019 – 2020	Boehringer Ingelheim Fonds travel grant for a three-month research stay at Columbia University in the City of New York (Dr. Joshua Jacobs)
2019	Poster Award of the Center for Basics in NeuroModulation of the University of Freiburg
2018	Trainee Professional Development Award for the Annual Meeting of the Society of Neuroscience (SfN) 2018
2018	Travel Award for the Grid Cell Meeting 2018 of the University College London
2011 – 2017	Stipend of the German National Academic Foundation (Studienstiftung des

	deutschen Volkes)
2016	BONFOR Research Prize of the BONFOR Research Commission of the Medical Faculty of the University of Bonn
2013 – 2015	BONFOR dissertation stipend of the Medical Faculty of the University of Bonn
2010	Beethoven Bonnensis Prize of the City of Bonn

Publications – Journal articles

	Cumulative impact factor	**78.4**
6	Kunz L, Wang L, Lachner-Piza D, Zhang H, Brandt A, Dümpelmann M, Reinacher PC, Coenen VA, Chen D, Wang W, Zhou W, Liang S, Grewe P, Bien CG, Bierbrauer A, Schröder TN, Schulze-Bonhage A, Axmacher N. Hippocampal theta phases organize the reactivation of large-scale electrophysiological representations during goal-directed navigation. **Science Advances**; *5*, eaav8192 (2019).	12.8
5	Kunz L*, Maidenbaum S*, Chen D*, Wang L, Jacobs J, Axmacher N. Mesoscopic neural representations in spatial navigation. **Trends in Cognitive Sciences**; *23*, 95-110 (2019). (*shared first-author)	15.4
4	Chen D*, Kunz L*, Wang W, Zhang H, Wang W, Schulze-Bonhage A, Reinacher PC, Zhou W, Liang S, Axmacher N, Wang L. Hexadirectional modulation of theta power in human entorhinal cortex during spatial navigation. **Current Biology**; *28*, 3310-3315 (2018). (*shared first-author)	9.3
3	Kunz L, Reuter M, Axmacher N, Montag C. Conscientiousness is negatively associated with grey matter volume in young *APOE* ε4-carriers. **J Alzheimers Dis**; *56*, 1135-1144 (2017).	3.5
2	Kunz L, Schröder TN, Lee H, Montag C, Lachmann B, Sariyska R, Reuter M, Stirnberg R, Stöcker T, Messing-Floeter PC, Fell J, Doeller CF, Axmacher N. Reduced grid-cell-like representations in adults at genetic risk for Alzheimer's disease. **Science**; *350*, 430-433 (2015).	34.7
1	Montag C, Kunz L, Axmacher N, Sariyska R, Lachmann B, Reuter M. Common genetic variation of the APOE gene and personality. **BMC Neurosci**; *15*, 64 (2014).	2.7

Publications – Book chapters

1 Kunz L, Deuker L, Zhang H, Axmacher N (2019). Tracking Human Engrams Using Multivariate Analysis Techniques. In *Handbook of Behavioral Neuroscience* (Vol. 28, pp. 481-508). Elsevier.

Conferences and courses

2020	Cognitive Neuroscience Society (CNS) Virtual Meeting 2020; poster *A neural code for egocentric spatial maps in the human medial temporal lobe*
2020	Neuromatch Conference 2020, organized by Imperial College London, UK, and the University of Pennsylvania, USA
2019	Annual Meeting of the Society of Neuroscience (SfN) 2019, Chicago, USA; presentation

Two senses of direction in human medial temporal lobe.

2019 Bernstein Conference 2019, Berlin, Germany; organization of the workshop *Neural oscillations in memory and navigation*.

2019 Spring Hippocampal Research Conference, Taormina, Italy; presentation *Single neuron representations of place and direction in human medial temporal lobe*.

2018 Annual Meeting of the Society of Neuroscience (SfN) 2018, San Diego, USA; presentation *Cortico-hippocampal communication during goal-directed navigation: evidence from functional magnetic resonance imaging and intracranial electroencephalography*.

2018 Human Single Neuron Conference at the California Institute of Technology, Pasadena, USA; poster *Head direction cells in human medial temporal lobe during virtual navigation*.

2018 Grid Cell Meeting 2018 of the University College London, London, UK; poster *Path integration and genetic risk for Alzheimer's disease*.

2018 Advanced MEG/EEG toolkit at the Donders Institute for Brain, Cognition, and Behaviour, Nijmegen, The Netherlands.

2017 BCF/NWG Course: Analysis and Models in Neurophysiology, Freiburg, Germany.

2016 International Conference On Memory (ICOM), Budapest, Hungary; poster *Stimulus specific similarity of neural activity at encoding and retrieval supports memory formation*.

2014 2nd international Functional Architecture of Memory (FAM) conference, Bochum, Germany.

2014 Organization for Human Brain Mapping (OHBM) Annual Meeting, Hamburg, Germany; poster *Effects of ApoE polymorphisms on grid like representations in the human entorhinal cortex*.

Ad-hoc reviewer – Journals

Nature Communications; Neuropsychopharmacology; Frontiers in Human Neuroscience.

Memberships

Federation of European Neuroscience Societies (since 2019); German Neuroscience Society (since 2019); Society for Neuroscience (2018-2019).

Freiburg, April 8, 2020