

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)

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

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

Publications – Journal articles

	Cumulative impact factor	77.1
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).	11.5
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

- 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*.



Freiburg, July 11, 2019