



Position available for a PhD student (23.02.2021)

The research group of Dr. Kevin Allen is seeking a Ph.D. student to work on the neuronal basis of spatial behavior. The group is located within the Department of Clinical Neurobiology, Medical Faculty Heidelberg and DKFZ.

Our research group is interested in the spatial representations generated within the mammalian brain and their contributions to spatial behavior and memory. The spatial representations generated by grid cells in the medial entorhinal cortex are a prominent example. The student will use various techniques to study system neuroscience, including in vivo recordings from modern electrode arrays in mice, optogenetics, behavioral testing, analysis of large databases.

Ideally, the candidate should hold a master's degree in a related field (Neuroscience, Psychology, Biology, etc.), have laboratory experience, be able to communicate in English and be ready to work in a team with other lab members. Some experience with data analysis is a plus. Previous experience with animal handling (FELASA) would be an advantage.

Applicants should send their CV to Dr. Kevin Allen via email (allen@uni-heidelberg.de). The selected candidate can start as soon as possible.

References

- Non-rhythmic head-direction cells in the parahippocampal region are not constrained by attractor network dynamics. 2018. O Kornienko, P Latuske, M Bassler, L Kohler, K Allen. *ELife* 7, e35949
- Impaired path integration in mice with disrupted grid cell firing. 2018. M Gil, M Ancau, MI Schlesiger, A Neitz, K Allen, RJ De Marco, H Monyer. *Nature neuroscience* 21 (1), 81-91
- Visual landmarks sharpen grid cell metric and confer context specificity to neurons of the medial entorhinal cortex. 2016. JA Perez-Escobar, O Kornienko, P Latuske, L Kohler, K Allen. *Elife* 5, e16937
- Interspike intervals reveal functionally distinct cell populations in the medial entorhinal cortex. 2015. P Latuske, O Toader, K Allen. *Journal of Neuroscience* 35 (31), 10963-10976
- Parvalbumin interneurons provide grid cell-driven recurrent inhibition in the medial entorhinal cortex. 2014. C Buetfering, K Allen, H Monyer. *Nature neuroscience* 17 (5), 710-718, 2014.