

Publication List: Dr. rer. nat. M. Jerome Beetz

- Total Citations: 314
- h-index: 12
- i10-index: 13

2022

Flight-induced compass representation in the monarch butterfly heading network. **Beetz MJ**, Kraus C, Franzke M, Dreyer D, Strube-Bloss MF, Rössler W, Warrant EJ, Merlin C, el Jundi B 2022, *Curr Biol* 32, 1-12.

Neural processing of naturalistic echolocation signals in bats. **Beetz MJ**, Hechavarría JC. *Front. Neural Circuits* 2022

Weighting of celestial and terrestrial cues in the monarch butterfly central complex. Thi Nguyen TA, **Beetz MJ**, Merlin C, Pfeiffer K., el Jundi B. *Front. Neural Circuits in press*

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The frugivorous bat *Carollia perspicillata* dynamically changes echolocation parameters in response to acoustic playback. **Beetz MJ**, Kössl M, Hechavarría JC. *J Exp Biol.* 2021, 224:jeb234245

Sun compass neurons are tuned to migratory orientation in monarch butterflies. Thi Nguyen TA, **Beetz MJ**, Merlin C, el Jundi B. *Proc Biol Sci.* 2021, 288:20202988

2020

Anatomical and ultrastructural analysis of the posterior optic tubercle in the locust *Schistocerca gregaria*. Held M, Le K, Pegel U, Dersch F, **Beetz MJ**, Pfeiffer K, Homberg U. *Arthropod Struct Dev.* 2020, 58:100971

Spatial orientation based on multiple visual cues in non-migratory monarch butterflies. Franzke M, Kraus C, Dreyer D, Pfeiffer K, **Beetz MJ**, Stöckl AL, Foster, JJ, Warrant EJ, el Jundi B. *J Exp Biol.* 2020, 223:jeb223800

Bats distress vocalizations carry fast amplitude modulations that could represent an acoustic correlate of roughness. Hechavarría JC, **Beetz MJ**, García-Rosales F, Kössl M. *Sci Rep.* 2020,10:1-20

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Low frequency spike-field coherence is a fingerprint of periodicity coding in the auditory cortex. García-Rosales F, Martin LM, **Beetz MJ**, Cabral-Calderin Y, Kössl M, Hechavarría JC. *iScience* 2018, 9:47-62

Insect Orientation: Stay on Course with the Sun. **Beetz MJ**, El Jundi B. *Curr Biol.* 2018 28:R933-R936.

Robustness of cortical and subcortical processing in the presence of natural masking sounds. **Beetz MJ**, García-Rosales F, Kössl M, Hechavarría JC. *Sci Rep.* 2018 8:6863.

2017

Processing of natural echolocation sequences in the inferior colliculus of Seba's fruit eating bat, *Carollia perspicillata*. **Beetz MJ**, Kordes S, García-Rosales F, Kössl M, Hechavarría JC. *eNeuro* 2017 4:ENEURO.0314-17.

Processing of temporally patterned sounds in the auditory cortex of Seba's short-tailed bat, *Carollia perspicillata*. Martin LM, García-Rosales F, **Beetz MJ**, Hechavarría JC. *Eur J Neurosci.* 2017, 46:2365-2379.

Activity monitoring of bats in a laboratory flight tunnel using a 24 GHz FMCW radar system. Moll J, Malzer M, Krozer V, Pozdniakov D, Salman R, **Beetz MJ**, Kössl M. 11th European Conference on Antennas and Propagation (EuCAP) 2017

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Vocal sequences suppress spiking in the bat auditory cortex while evoking concomitant steady-state local field potentials. Hechavarría JC, **Beetz MJ**, Macias S, Kössl M. *Sci Rep.* 2016, 6:39226.

Cortical neurons of bats respond best to echoes from nearest targets when listening to natural biosonar multi-echo streams.

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Temporal tuning in the bat auditory cortex is sharper when studied with natural echolocation sequences. **Beetz MJ**, Hechavarría JC, Kössl M, *Sci Rep.* 2016, 6:29102.

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Radar-based detection of bats: Experiments in a laboratory flight tunnel. Moll J, Malzer M, Scholz N, Krozer V, Pozdniakov D, Salman R, Zimmermann R, Hechavarría JC, **Beetz MJ**, Kössl M. 10th European Conference on Antennas and Propagation (EuCAP) 2016

2015

Topographic organization and possible function of the posterior optic tubercles in the brain of the desert locust *Schistocerca gregaria*. **Beetz MJ**, El Jundi B, Heinze S, Homberg U. *J Comp Neurol.* 2015, 523:1589-607.