

## Publications

### **2019**

Adaptations in the call emission pattern of frugivorous bats when orienting under challenging conditions. **Beetz MJ**, Kössl M, Hechavarría JC. *J Comp Physiol A* 2019, 205:457-467.

### **2018**

Neuronal coding of multiscale temporal features in communication sequences within the bat auditory cortex. García-Rosales F, **Beetz MJ**, Cabral-Calderin Y, Kössl M, Hechavarría JC. *Commun Biol* 2018, 1:200

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

### **2016**

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.

**Beetz MJ**, Hechavarría JC, Kössl M, *Sci Rep*. 2016, 6:35991.

Neurons in the brain of the desert locust *Schistocerca gregaria* sensitive to polarized light at low stimulus elevations. **Beetz MJ**, Pfeiffer K, Homberg U. *J Comp Physiol A*. 2016, 202:759-781.

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.

Distress vocalization sequences broadcasted by bats carry redundant information. Hechavarría JC, **Beetz MJ**, Macias S, Kössl M. J Comp Physiol A 2016, 202:503-15.

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.