

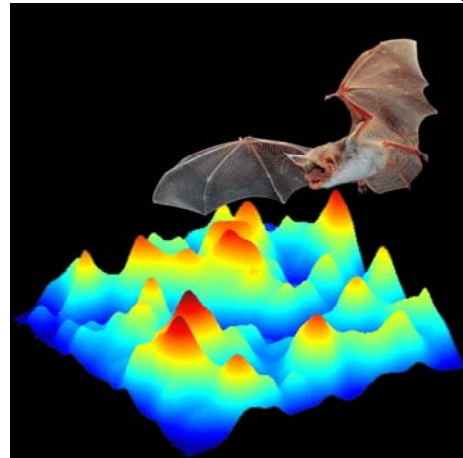


Ben-Gurion University of the Negev
Jacob Blaustein Institutes for Desert Research
The Swiss Institute for Dryland Environmental and Energy Research
Mitrani Department of Desert Ecology

Seminar

Yossi Yovel

Department of Zoology,
Tel-Aviv University



Tuesday, December 19, 2017, 12:00

Seminar Room, Old Administration Building

Participants are invited to meet the seminar speaker at the MDDE meeting room immediately after the seminar (~ 13:00). Please bring your lunch; snacks will be provided.

**From Sensory Perception to Foraging
Decision Making - the Bat's Point of View**

Bats are extreme aviators and amazing navigators. Many bat species nightly commute dozens of kilometres in search of food, and some bat species annually migrate over thousands of kilometres. Studying bats in their natural environment has always been extremely challenging because of their small size (mostly <50 gr) and agile nature. In the past four years, we have developed novel miniature technology to GPS-tag small bats, thus opening a new window to document their behaviour in the wild. However, the movement of an animal alone is not sufficient for studying its decision processes. We therefore equipped our miniature GPS devices with an ultrasonic microphone which allows monitoring the sonar and social communication of freely behaving bats. Because echolocating bats rely on sound emission to perceive their environment, on-board recordings enable us to tap into their sensory 'point of view' and to monitor fundamental aspects of their behaviour such as attacks on prey and interactions with conspecifics. This intimate description of behaviour allows us to examine bat decision making under natural conditions. I will present several projects that examined how bats combine sensory information with social information in order to improve foraging. Finally I will also present our current effort to include more on-board sensors for the study of bat neuro-ecology including acceleration, EEG and physiology sensors.