

**Ben-Gurion University of the Negev
Blaustein Institutes for Desert Research**

The Swiss Institute for Dryland Environmental and Energy Research
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What can a small fish teach us about visual processing?

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Abstract

Vision can be defined as the process of acquiring knowledge about the environment by extracting information from the light that the objects emit or reflect. To achieve this goal, numerous different visual systems have evolved in the animal kingdom. This brings up the question whether there are universal features to the visual processing solutions we can find in nature. To address this question we use the archer fish as an animal model to study different aspect of visual processing. The selection of this fish species as model animal stems from its remarkable ability to shoot down insects settling on the foliage above the water level, and its ability to learn to distinguish between artificial targets presented on a computer monitor. Thus, the archer fish can provide the fish equivalent of a monkey or a human that can report psychophysical decisions and make controlled and complex experimental procedures possible, yet with a very different brain anatomy. I will review our recent findings that show remarkable similarities between the functionality of the visual system of the archer fish and visual systems in mammals and try to argue that it reflects universal features of visual processing across vertebrates.

Date & Location:

Tuesday, May 14, 2019, 11:00

Lecture room, Physics Building (ground floor)

