BeeTracked: High-performance and robust outdoor insect tracking for all

Initiative: Momentum - Förderung für Erstberufene

Bewilligung: 23.03.2021

Laufzeit: 5 Jahre

Projekt-Website: https://strawlab.org/

Currently, no technologies exist that can track insects in their natural environment with sufficient resolution to resolve interactions of these animals with their environment. It is known from laboratory studies that the visual appearance of landmarks is important for memory-based navigation for species such as bees, wasps, and ants. Field studies have shown that bees learn routes and visit the same flowers over and over, improving their performance over time. The implications of these findings for real-world problems, such as the potential effects of insecticides on bee navigation, can only be understood with new technology. Therefore, the aim of the concept is to develop an outdoor computer-based insect tracking system and to bring it into nature. This system should be capable of tracking insects in their natural habitat with millimeter and millisecond resolution over spatial scales of tens, hundreds, and perhaps thousands of meters. This is envisioned to be a breakthrough technology for the fields of ecology and ethology. In addition, an exhibit will be developed in which children and adults are informed and entertained by live insect tracking showing animal trajectories and a simulation of its visual experience as it moves through its environment.

Projektbeteiligte

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Open Access-Publikationen

High Resolution Outdoor Videography of Insects Using Fast Lock-On Tracking

Es werden die Institutionen genannt, an denen das Vorhaben durchgeführt wurde, und nicht die aktuelle Adresse.

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