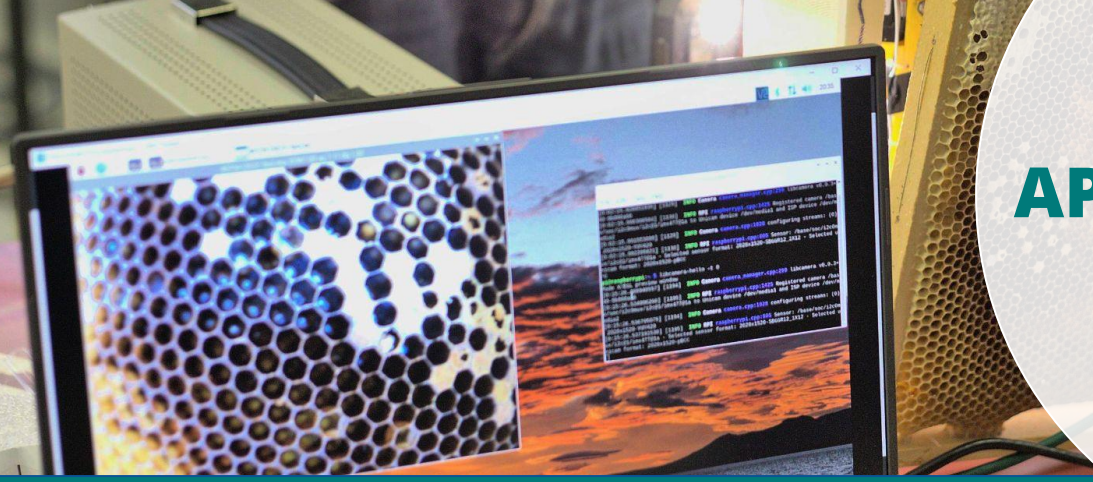

CALL FOR APPLICATIONS

Deadline:
20 November 2023

WINTER SCHOOL

on **Modelling and Measuring Biohybrid Multi-Level Complex Systems**

20 - 23 February 2024

University of Graz, Austria

The goal of this winter school is to teach state-of-the-art methods to study bio-hybrid systems that are composed of technological agents and living agents which both interact with each other and across the aisle.

In these bio-hybrid systems, the living component is comprised of social organisms which can be humans, social insects, swarm-forming organisms or even plant or bacterial communities. It is pivotal to study such dense systems from a connectivity-oriented perspective as often emergent properties arise from non-linear interactions that create pattern-forming feedback loops within the overall system.

In order to sufficiently model and comprehensively measure such systems the perspective to be taken is a multi-level one: observations and modelling both have to consider the individual behaviours, the resulting global collective behaviours and potentially also diverse group behaviour between those system layers.

In this winter school we will study systems that are comprised of technology and honeybees, technology and plants and technology and humans and investigate technology that observes aquatic organisms that respond to changes in the quality of their habitat. The program will be completed by an opening keynote talk, a discussion round, thematically connected lectures given by selected researchers and a networking event.

This winter school will give an opportunity to interested students and young researchers to widen their knowledge in the field of bio-hybrid systems and multi-level modelling.

We foresee that participants especially from the field of bio-robotics, swarm-robotics, swarm biology, ethology, ecological modelling and modelling of swarm-intelligent systems/algorithms will benefit from attending this winter school.

Further details and program:
https://alife.uni-graz.at/winterschool/

Contact:
winterschool@uni-graz.at

UNI GRAZ artificial life lab · HIVEOPOLIS · Robocoenosis · WATCHPLANT · RoboRoyale

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