



**University of  
Zurich**<sup>UZH</sup>

Department of Evolutionary Biology  
and Environmental Studies

## **SEBES Seminar for Evolutionary Biology and Environmental Studies**

*Behavioural profiling of mice living in groups - Applications to strain comparison and  
mouse models of autism*

**Speaker:** **Dr. Elodie Ey and Dr. Fabrice de Chaumont**  
Bio Image Analysis, Institut Pasteur, Paris, France  
<https://research.pasteur.fr/en/member/elodie-ey/>

**Date/Time:** Thursday, 2018-10-11  
15:00 to 16:00

**Place:** Y24-G-55/UZH Irchel  
Winterthurerstr. 190; 8057 Zürich

**Access:** only intern

**Host:** Prof. Dr. Barbara König

### **Abstract:**

Understanding complex behavioral traits such as decision-making or social interactions in mice requires high precision long-term individual following of mice. We present a real-time method for behavior analysis of mice housed in groups gathering computer vision, machine learning and Triggered-RFID identification to track and monitor animals over several days in enriched environments. This system - Live Mouse Tracker (LMT) - extracts a thorough list of individual and collective behavioral traits and provides a unique phenotypic profile for each animal. We applied LMT to build quantitative behavioral profiles of a large panel of mouse strains from the Collaborative Cross and of various mouse models carrying mutations associated with autism. Article and videos available as a pre-print on BioRxiv: <https://doi.org/10.1101/345132>

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