VISITING PROGRAM

# TSVP TALK

# Mechanical Problem Solving in Mice

2025 THU. **May 22**

**15:00–16:00**

**HYBRID** | L5D23, ZOOM |

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In animals, mechanical problem solving and tool use are often used as proxies for higher cognitive abilities and intelligence. Most studies of such behaviors are performed on species like monkeys or birds, for which access to modern genetic tools is often limited. To address this challenge, we transferred an established complex mechanical task — the lockbox — to mice. We show that mice learn the task very rapidly, within a few trials. Using video tracking tools and computational modeling, we decompose their learning process and show that it is initially dominated by motor skill acquisition before a high-level cognitive strategy emerges later.

**Technische Universität Berlin**

# Henning Sprekeler

Henning Sprekeler is a professor for computational neuroscience at Technische Universität Berlin. He obtained a PhD at Humboldt-Universität zu Berlin. After postdocs at EPFL (Switzerland) and in Berlin, he held a faculty position at Cambridge University (UK) before returning to Berlin in 2014 for his current position. He is interested in the neurobiological foundations of behavior and learning and in the computations performed by neural circuits.

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