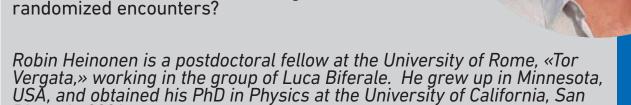


Colloquium Thermo- and Fluid Dynamics

Bayesian olfactory search in realistic turbulent flows Dr. Robin Heinonen University of Rome, "Tor Vergata"

Source-tracking using chemical cues is an important search paradigm in biological and robotics applications. In many settings, the search takes place in a turbulent flow, which mixes the cues into a complex, stochastic landscape. Here, spatiotemporal intermittency means cue encounters can be rare, and typically local gradients are absent or otherwise unhelpful. How can one craft a search policy which effectively exploits the limited information which can be gleaned from rare, randomized encounters? Source-tracking using chemical cues is an important search paradigm in biological and robotics applications. In many settings, the search takes place in a turbulent flow, which mixes the cues into a complex, stochastic landscape. Here, spatiotemporal intermittency means cue encounters can be rare, and typically local gradients are absent or otherwise unhelpful. How can one



Date: Wednesday, 19 June 2024

Further information: https://ifd.ethz.ch/events/ktf.html

craft a search policy which effectively exploits the limited information which can be gleaned from rare,

Time: 16:00 - 17:00h

Diego, in 2021.

Place: ETH Zurich, LEE E 101 Host: Prof. George Haller

