

MaLGA COLLOQUIA

Monday 20th February, 16:00
Room 704 @ DIMA, Via Dodecaneso 35

The Uses of Memory in Olfactory Search



Abstract

Many organisms, from insects to mammals, have developed exquisite skills in searching for sources of odor, from huge distances, and in turbulent atmospheric conditions. How are sequences of very sparse odor detections encoded in the memory of the searcher? And how are these translated into effective strategies to reach the source in the shortest time? In this talk I will review some attempts at answering these questions from an algorithmic viewpoint, and in particular through the lens of reinforcement learning.

Speaker

Antonio Celani

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Antonio Celani earned his PhD at Politecnico di Torino, Italy in 1998. After post-doctoral fellowships at Max Planck Institute in Munich and at the Observatoire de la Côte d'Azur he became researcher for the French National Research Council (CNRS) in 2000. In 2007 he joined the Institut Pasteur Paris as a research director where he started working at the interface between physics and biology. Since 2014 he also is research scientist at The Abdus Salam International Center for Theoretical Physics - ICTP where he works on subjects at the interface between physics, biology, and artificial intelligence

