Contribution ID: **40** Type: **Invited Talk**

Creating community driven challenges to advance Science

Monday, 19 September 2022 14:45 (45 minutes)

In this talk, I will present the Anomalous Diffusion (AnDi) challenge, a community driven event aimed at pushing our understanding of diffusion phenomena. Deviations from Brownian motion leading to anomalous diffusion are found in transport dynamics from quantum physics to life sciences. The characterization of anomalous diffusion from the measurement of an individual trajectory is a challenging task. Recently, several new approaches have been proposed, mostly building on the ongoing machine-learning revolution. To perform an objective comparison of methods, we gathered the community and organized an open competition, the AnDi challenge (AnDi). Participating teams applied their algorithms to a commonly-defined dataset including diverse conditions. Although no single method performed best across all scenarios, machine-learning-based approaches achieved superior performance for all tasks. The discussion of the challenge results provides practical advice for users and a benchmark for developers.

Presenter: Dr MUÑOZ-GIL, Gorka (University of Innsbruck)

Session Classification: Community Competitions