Contribution ID: **4**   Type: **not specified**

Tracking of objects: from one to many

Thursday 25 September 2025 10:00 (1h 30m)

I will talk about two separate research areas for tracking objects over time and instances. The first applies to the scenario of tracking an object over time, e.g. a known 3D rigid model. I will introduce Bayesian and particle filters and explain some technical ideas to make them fast and accurate. In the second part of the lecture I will introduce the field of tracking a large set of objects (e.g. cells) over time, and also instances. Since the objects typically do not move randomly, it makes sense to formalize their "structured motion" and formulate this task as a structured prediction problem. To this end, I will introduce efficient solvers for this problem.

Presenter: ROTHER, Carsten (Heidelberg University)