Dynamical approximation and sensor placement for the state estimation of conservative dynamics

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This talk focuses on the inverse problem of reconstructing an unknown function from a finite set of measurements, under the assumption that such function is the output of a parametric evolution equation with unknown input parameters. In this talk we will discuss how to address this inverse problem for transport and wave phenomena by a reconstruction method that combines symplectic dynamical approximation with a dynamic strategy to position sensors. This talk is based on joint work with Olga Mula (University of Vienna) and Federico Vismara (RWTH Aachen).

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