



Seminar/Talk

Geometric Fluid Dynamics

Albert Chern

TU Berlin

Host: Chris Wojtan

In this talk I will present a modern geometric formulation of 19th century fluid dynamics. Beyond the topological insights to Helmholtz, Kelvin and Clebsch's vortex theory, I present a natural generalization to the Clebsch representation. In this new description, fluid states are encoded in Clebsch variables taking value in a prequantum bundle, a type of space introduced in geometric quantum mechanics. Through this formalism, we find a straightforward link between the Euler equations and the Schrödinger equation. In the talk I will also demonstrate that Schrödinger-based numerical solver is attractive in fluid simulations.

Thursday, June 28, 2018 11:00am - 12:00pm

Meeting room 2nd floor / Office Bldg West (I21.01.132)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.

www.ista.ac.at | Institute of Science and Technology Austria | Am Campus 1 | 3400 Klosterneuburg