Seminar/Talk

Grand-canonical optimal transport and a counterexample to the convexity conjecture in quantum mechanics

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Host: Robert Seiringer

For a given one-particle density, we consider the distribution of classical electrons that reproduces this density and minimizes the Coulomb energy. This is an optimal transport problem. In this talk we ask whether we can do better by allowing the number of electrons to fluctuate (grand-canonical problem) and, if so, what is the optimal range of fluctuation. An answer to these questions gives a counterexample to a famous conjecture for quantum electrons. Collaboration with Simone Di Marino (Genova) and Luca Nenna (Paris-Saclay).

Tuesday, May 20, 2025 04:15pm - 05:15pm
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

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