Contribution ID: 1 Contribution code: Viklund-1

Type: Scheduled Talks

Free energy of confined planar Coulomb gases

Monday, May 19, 2025 9:20 AM (1 hour)

Consider a Coulomb gas of charged particles confined to a set in the complex plane. I will discuss the following question:

How does the asymptotic expansion of the free energy depend on the geometry of the set, as the number of particles tends to infinity? When the set is a Jordan domain, curve or arc, this problem is related to Grunsky-operators associated to the set, revealing a close connection to the Loewner energy and other interesting domain functionals.

Based joint works with K. Courteaut (NYU) and K. Johansson (KTH).

Author: Prof. VIKLUND, Fredrik (KTH)

Presenter: Prof. VIKLUND, Fredrik (KTH)