universität wien

Fakultät für Mathematik

ANTRITTSVORLESUNG
Mathematisches Kolloquium

Mittwoch, 09. März 2022
Sky Lounge

EINLADUNG

José Luis Romero
(Universität Wien)

"Sampling, interpolation, and repulsive point processes"

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Abstract:
The problems of sampling and interpolation concern the relation between functions in a given class and their values on a distinguished set (samples). The two main questions are: Is every function determined by its samples? Can a function with prescribed samples be found?
A random point process is repulsive if the statistics of disjoint observation regions are negatively correlated. As a consequence of repulsion, a typical realization of such a process is better distributed than a Poissonian one.
I will present classical and recent results on sampling and interpolation, and discuss why repulsive point processes are often good candidates to solve both problems. As a case in point, I will focus on the planar Coulomb gas (Boltzmann-Gibbs distribution) and investigate its statistics at low temperatures by means of sampling and interpolation properties for weighted polynomials.

15.45 Uhr: Kaffeejause

16.15 Uhr: Vortrag

Kleines Buffet im Anschluss

Radu Ioan Bot