



**UNIVERSITÀ  
DI PARMA**

**DIPARTIMENTO DI SCIENZE MATEMATICHE, FISICHE E INFORMATICHE**

<http://smfi.unipr.it>

## **Seminari di Fisica Matematica**

**Dr. Thomas Borsoni** (Sorbonne Université, Paris, France)

**Mercoledì 4 settembre 2024 ore 11:00**

Aula B, Plesso di Matematica

### **“Transfer of entropy inequalities from the classical to the fermionic Boltzmann operator”**

**Abstract:** In the context of the Boltzmann equation, functional inequalities relating entropy dissipation and relative entropy to equilibrium are fundamental to obtaining explicit rates of relaxation to equilibrium.

In this talk, I present a method of transfer of inequalities, which establishes an (almost) equivalence, regarding entropy inequalities, between the classical and the fermionic Boltzmann cases. We thus obtain a large class of such inequalities in the fermionic case, and therefore, quantitative relaxation rates towards equilibrium for solutions to the (homogeneous cut-off hard potentials) Boltzmann-Fermi-Dirac equation.

Organizzatore: Maria Groppi