## Seminar/Talk

# Kinetic theory for oscillator chains

**Pierre Germain**
University of Vienna

Host: Laszlo Erdös

A chain of oscillators is a Hamiltonian model set on the 1D lattice (Z), which should be thought as a model of a crystal: particles can interact with their neighbors, linearly and nonlinearly. The most prominent examples are the Fermi-Pasta-Ulam and the Toda equations. I will present the kinetic (Boltzmann-type) equation which can be derived from this model as well as its hydrodynamic limits. I will try to give an overview of the - mostly not rigorous - theory, but also emphasize recent mathematical progress.

**Tuesday, April 21, 2026 04:15pm - 05:15pm**
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

---

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.