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**UNIVERSITÄT
BERN**

Philosophisch-
naturwissenschaftliche Fakultät

Departement Mathematik und Statistik

Mathematisches Institut

Mathematical Colloquia

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Monday, 27 February 2023

17:15 h, lecture room B6 (ExWi)

Prof. Dr. Martin Grothaus, TU Kaiserslautern

Industrial Mathematics, Hypocoercivity and SPDEs

Abstract :   Motivated by problems from Industrial Mathematics we further developed the concepts of hypocoercivity. The original concepts needed Poincaré inequalities and were applied to equations in linear finite dimensional spaces. Meanwhile we can treat equations in manifolds or even infinite dimensional spaces. The condition giving micro- and macroscopic coercivity we could relax from Poincaré to weak Poincaré inequalities. In this talk an overview and many examples are given.