

**Programme on  
“Nonlinear Flows”**

**May 30 – July 15, 2016**

**organized by**

**Eduard Feireisl (Czech Academy of Sciences, Prague), Ansgar Jüngel (TU Vienna), Alexander Mielke (WIAS, Berlin), Giuseppe Savaré (U Pavia), Ulisse Stefanelli (U Vienna)**

**Mini-Course 1**

**“Functional inequalities and evolution equations”**

**June 1 – 2, 2016**

- **Wednesday, June 1, 2016**

10:00 – 12:00 **Eric Carlen**

*Functional inequalities and evolution equations: Lecture 1*

- **Thursday, June 2, 2016**

10:00 – 12:00 **Eric Carlen**

*Functional inequalities and evolution equations: Lecture 2*

**All talks take place at the ESI, Boltzmann Lecture Hall!**

**Abstract:** Functional inequalities are an essential tool for understanding the behavior of solutions of PDE's and other sorts of evolution equations. At the same time, monotonicity along various evolution processes can often be used to prove functional inequalities. This course will focus on some recent examples in which this interplay between evolution processes and functional inequalities has been fruitful, and it will also introduce some open problems in the field. There will a special emphasis on stability results for sharp inequalities.