



Institut für  
Angewandte Mathematik



Leibniz  
Universität  
Hannover

Institut für Angewandte Mathematik  
13.04.2015

## Oberseminar Analysis und Theoretische Physik

**Dr. Tomasz Cieslak  
(IMPAN Warschau)**

### **Dissipative solutions of the Hunter-Saxton equation dissipate the energy at the maximal rate**

#### **Abstract:**

In my talk I will review our recent results with G. Jamroz showing the Zhang-Zheng conjecture in full details. The conjecture was proved for nondecreasing initial data by Constantine Dafermos in 2012. I will show the proof for any initial data with bounded energy. To this end I will show some results concerning the evolution of energy along any weak solution of the Hunter-Saxton equation and compare it to the evolution of energy along the (unique) dissipative solution. As a corollary we shall see that the maximal dissipation rule picks up a unique solution out of a set of weak solutions in the case of the Hunter-Saxton equation.

**Dienstag, 21. April, 16:00 Uhr, Raum g005  
Hauptgebäude der Universität**

Über Ihren Besuch würden sich freuen:

Prof. Dr. Wolfram Bauer  
Prof. Dr. Joachim Escher  
Prof. Dr. Olaf Lechtenfeld  
Prof. Dr. Elmar Schrohe  
Prof. Dr. Christoph Walker