



Institut für  
Angewandte Mathematik



Leibniz  
Universität  
Hannover

Institut für Angewandte Mathematik  
15.11.2017

## Oberseminar Analysis und Theoretische Physik

**Prof. Dr. Christian Seis  
(Universität Münster)**

### **The vortex filament conjecture for Euler flows**

We study the evolution of vortex filaments in ideal fluids. A conjecture, dating back to da Rios in 1906, states that if the vorticity is initially concentrated around a closed curve, it remains concentrated for some time and the evolution of the curve is geometrically described by the binormal curvature flow. In a joint work with Bob Jared we focus on the second part of this conjecture and derive the binormal curvature flow under a weak vorticity concentration condition. Our proof relies on estimates for the underlying Hamiltonian structures.

**Dienstag, 05. Dezember 2017, 15:00 Uhr, Raum c311  
Hauptgebäude der Universität**

Über Ihren Besuch würden sich freuen:

Prof. Dr. Wolfram Bauer  
Prof. Dr. Joachim Escher  
Prof. Dr. Elmar Schrohe  
Prof. Dr. Christoph Walker  
Prof. Dr. E. Wiedemann