



Institut für
Angewandte Mathematik



Leibniz
Universität
Hannover

Oberseminar Analysis und Theoretische Physik

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Existence of a Global Attractor for Living Fluids

Self-sustained turbulent motion in microbiological suspensions present an intriguing example of collective dynamical behavior among the simplest forms of life and is important for fluid mixing and molecular transport on the microscale. This type so-called active or living fluids display turbulent behavior at low Reynolds regimes, a phenomenon that cannot be captured by classical fluid models. In a paper of Wensink et. al. a generalized Version of the Navier-Stokes equations is proposed to describe this so-called 'active turbulence'. The purpose of the talk is to analyze the active turbulence from an analytical point of view. We will discuss (in-) stability of relevant equilibria and prove the existence of a global attractor.

**Dienstag, 07.05.2024, 15:00 Uhr, Raum c311
Hauptgebäude der Universität**

Veranstalter: Prof. Dr. Wolfram Bauer, Prof. Dr. Joachim Escher,
Prof. Dr. Johannes Lankeit, Prof. Dr. Elmar Schrohe, Prof. Dr. Alexander
Strohmaier, Prof. Dr. Christoph Walker, Dr. Alden Waters