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## OBERSEMINAR IM INSTITUT FÜR ANGEWANDTE ANALYSIS Sommersemester 2026

Im Rahmen des Oberseminars spricht am Montag, den **15. Juni 2026**:

**ARLÚCIO DA CRUZ VIANA**

### **A Boussinesq system with memory**

The Boussinesq system is known for modeling the heat transport inside a viscous fluid. In this talk, by using a generalized Fourier law, we introduce a memory effect in the temperature and discuss the existence of solutions for the resulting system in two different frameworks. First, we present results on the local and global existence of solutions in pseudo-measure spaces. In this case, we are able to prove the existence of self-similar solutions under very special conditions. Second, we show the existence of weak solutions in the  $L^2$ -setting. In this case, we compare how the memory effect also affects the spatial regularity of the solution.

Der Vortrag findet in **Raum E60, Helmholtzstr. 18** statt.

**Beginn: 16 Uhr (c.t.)**. Alle Interessierten sind herzlich eingeladen.

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