



Institut für
Angewandte Mathematik



Leibniz
Universität
Hannover

Institut für Angewandte Mathematik
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Oberseminar Analysis und Theoretische Physik

**Prof. Dr. Jürgen Saal
(Universität Düsseldorf)**

Some interesting behavior of the Stokes operator in L^1 and L^∞ spaces

The L^q -Theory, $1 < q < \infty$, for the Stokes operator is well-established, starting from the pioneering works of Solonnikov and Giga in the seventies and eighties. In the limit values $p=1$ and $p=\infty$, however, the situation is much more delicate and can even be pretty surprising. In fact, in contrast to the situation for $1 < q < \infty$, the existence of a Stokes semigroup in L^1 and L^∞ , and hence well-posedness of the Stokes equations, substantially depends on the geometry of the domain under consideration, on the imposed boundary conditions and on the space dimension. The purpose of my talk is to summarize well-known and recently obtained results, and to present some new results in this direction.

**Dienstag, 30. Januar 2018, 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