



Im

Oberseminar Partielle Differentialgleichungen

gibt es am

Donnerstag, dem 29. Juni 2017,

einen Vortrag von Herrn

Dr. Jairo Hernández Monzón

(Universidad del Norte, Barranquilla-Colombia)

“Generation of semigroups for operator-valued pseudodifferential operators on the Torus”

Beginn: **15.15 Uhr**

Raum: **F426**

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

Abstract: We consider toroidal pseudodifferential operators with operator-valued symbols, their mapping properties and the generation of analytic semigroups on vector-valued toroidal Besov and Sobolev spaces. Here we restrict ourselves to pseudodifferential operators with x -independent symbols. We show that a parabolic toroidal pseudodifferential operator generates an analytic semigroup on the Besov space $B_{pq}^s(\mathbb{T}^n, E)$ and on the Sobolev space $W_p^k(\mathbb{T}^n, E)$, where E is an arbitrary Banach space, $1 \leq p, q \leq \infty$, $s \in \mathbb{R}$ and $k \in \mathbb{N}_0$. For the proof of the Sobolev space result, we establish a uniform estimate on the kernel which is given as an infinite parameter-dependent sum. Furthermore, we will present some remarks about x -dependent toroidal operator-valued pseudodifferential operators and their mapping properties on toroidal vector-valued Besov and Sobolev spaces.

Joint work with B. Barraza Martínez, R. Denk, and T. Nau