

TECHNISCHE UNIVERSITÄT DORTMUND

INSTITUT FÜR ANGEWANDTE MATHEMATIK

LEHRSTUHL FÜR APPROXIMATIONSTHEORIE

## Oberseminar Rhein-Ruhr

SS 2015

Im Rahmen des Oberseminars spricht:

**Prof. Silvia Romanelli**

Universita' degli Studi di Bari Aldo Moro

über das Thema:

**Self-adjoint operators, analytic semigroups and continuous dependence**

**Abstract:**

The notion of analytic semigroup on a Banach space will be given. One of the main classes of generators on a Hilbert space consists of the self-adjoint operators which are bounded above. In particular, we will focus on the Wentzell-Laplacian operator, i.e. the Laplacian operator equipped with the so-called Wentzell boundary conditions, acting on a suitable Hilbert space. We will show that the Wentzell-Laplacian operator generates an analytic semigroup. Moreover, the Trotter-Kato theorem allows to state the continuous dependence of the solutions of the associated Cauchy problems on the coefficients of the boundary conditions.

**Termin:** Freitag, den 10.07.2015  
14.15 Uhr , Raum M 511

**Ort:** Mathematikgebäude

gez. Prof. Dr. J. Stöckler