i(f)m
Institut für Mathematik

From Operators and Function Theory to Parabolic Problems: Semigroups everywhere

Institute colloquium

Universität Potsdam 25 JAHRE

17.01.2018

Campus
Golm

Building 9

Room 2.22

14:00   **Isabelle CHALENDAR (University Paris Est)**

" Composition operators on spaces of analytic functions: universality and asymptotics "

Composition operators, namely linear operators acting on a space of holomorphic functions obtained by composing with a fixed function, have attracted attention for many years. One reason is the interesting interplay between the theory of holomorphic functions and operator theory, another is the universal character of composition operators.

One operator theoretical topic which seems to be neglected so far is the asymptotic behaviour of the powers T^n of a composition operator T. This is the subject of this talk, where we will also give an outlook on semigroups of composition operators induced by analytic semiflows.

15:00   **15:30**   **Wolfgang ARENDT (University of Ulm)**

" One-parameter semigroups: spectrum and asymptotics "

Einar Hille's monograph "Functional Analysis and Semigroups" came out 70 years ago and with it were born the foundations of a theory which has since then seen a spectacular development.

We will give an overview concentrating on spectral theory and asymptotic behaviour with emphasis on positive semigroups (Perron Frobenius Theory). Here kernels, irreducibility and principal eigenvalues play a particular role. Applications are given to new results on parabolic problems with diverse boundary conditions.