



# Semi-classical analysis for Schroedinger with magnetic field

**ZEIT:**

24.4.2013, 16:30 Uhr - 17:30 Uhr

**ORT:**

Humboldt-Universität zu Berlin  
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Raum 1.013  
Rudower Chaussee 25  
12489 Berlin

**PROGRAMM:**

16:30 - 17:30 **Prof. Dr. Bernard Helffer**

**Semi-classical analysis for Schroedinger with magnetic field**

In the last 30 years, the specialists in semi-classical analysis get new spectral questions for the Schroedinger operator with magnetic field coming from Physics. Some of them are also related to geometry, complex analysis and optimal control.

We would like to present some of these problems and their solutions. This involves mathematically a fine analysis of the bottom of the spectrum for Schroedinger operators with magnetic fields.

The boundary condition (namely the Neumann condition) could play a basic role.

Many results are presented in the books of Helffer (1988) and Fournais-Helffer (2010). The results discussed today were obtained in collaboration with J. Sjostrand, A. Morame, and for the most recent Y. Kordyukov and Y. Almog.

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