MATH 85600  *Functional Analysis*  Spring 2015
Friday 2:00 – 4:00 PM

Instructor: Prof. Radosław (Radek) Wojciechowski
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**Course Description:** This will be a one semester introduction to functional analysis. The goal will be to cover several aspects of spectral theory. The prerequisites consists of basics of real and complex analysis and basic topology. Hopefully students will have some familiarity with Hilbert and Banach spaces though most important topics will be reviewed at the beginning.

Topics include:

- Hilbert and Banach spaces
- Basics of operator theory
- Open mapping and closed graph theorem
- Compact operators
- Spectrum and the spectral theorem
- Unbounded operators

Classic applications and examples will be discussed as well as the case of the Laplacian on infinite graphs.

**Grading:** Homework problems will be assigned throughout the semester. These will give a basis for the grade.

**Suggested Textbooks:**


