

# 1. Spectral theory for selfadjoint <sup>compact</sup> operators (from the previous lecture)

- Structure of the spectrum
- Orthogonality of eigenvectors
- Diagonalization.

## 2. Polynomials of operators

- Definition
- Algebraic property
- Spectral mapping theorem for polynomials
- Norm evaluation for polynomial of selfadjoint operator

## 3. Continuous functions of selfadjoint operators

- Reminder: Weierstrass approximation theorem
- Definition of  $f(T)$ ,  $T = T^*$ ,  
 $f \in C[\sigma(T), M(T)]$
- Spectral mapping theorem.