



Course on

Homogenization of elliptic equations François Murat (Paris)

November 19 – 23, 2012 at TU Berlin

Contents:

- Motivation
- The case of dimension one and layered materials
- The main theorem: from any sequence of equi-coercive and equi-bounded matrices, one can extract a subsequence which H-converges
- Compensated compactness
- The corrector result; applications
- The linearized elasticity system
- The periodic case
- The monotone case
- Perforated domains with periodic Neumann or Dirichlet boundary condition
- Perforated domains with periodic or small holes and Dirichlet boundary condition

The course will not require anything but the standard knowledge of the basis objects used to solve elliptic boundary value problems using Lax-Milgram lemma, Sobolev spaces and weak convergence. All the proofs will be given in detail.

Lectures will take place every day from 10:15 to 12:45 in room MA 415 at TU Berlin (Mathematics Building, Straße des 17. Juni 136, 10623 Berlin).

Everybody is welcome to attend.

Organization: Etienne Emmrich (TU Berlin). Contact: Robin Beier (rbeier@math.tu-berlin.de)

