Homogenisation and the Weak Operator Topology
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It is well-known that the description of one-dimensional elliptic homogenisation problems is parallel to the study of weak* convergence for the considered inverses of the $L_\infty$-coefficients. In an operator framework this is equivalent to the convergence of the inverses in the weak operator topology. In the talk we provide a higher-dimensional version of this perspective. More precisely, we characterise the convergence of the coefficients for elliptic homogenisation problems in terms of certain weak-type topologies. The approach is based on complexes of densely defined and closed operators in Hilbert spaces. The thus introduced topology is not comparable to the weak operator topology but strictly weaker than the strong operator or norm topology.

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