

Contribution Title: FROM FDE THROUGH ODE TO PDE: UNIFORM  
EXISTENCE OF THE IDS  
Authors: M. J. Gruber, D. Lenz, I. Veselic  
Presenting author: Gruber M. J.  
Affiliation: TU Clausthal  
E-mail: gruber@math.tu-clausthal.de  
Invited speaker:  
YRS seminar: NO

The integrated density of states (IDS) is an important characteristic of random operators. It is often defined by a limiting process, although typically the limit exists only almost surely and only for certain values of the spectral parameter (points of continuity of the IDS). We show that for a specific class of random models the IDS exists as a uniform limit, where the notion of uniformity depends on the type of random operator: finite difference operator (combinatorial graph), ordinary differential operator (metric graph), and partial differential operator (on  $\mathbb{R}^d$ ), leading to globally uniform, weighted globally or locally uniform, and locally averaged uniform convergence. Applications include various flavours of percolation models.

This is joint work with D. Lenz (Jena) and I. Veselić (Chemnitz)