

Contribution Title:	LOCALIZATION IN MULTIPARTICLE SYSTEMS
Authors:	M. Aizenman, S. Warzel
Presenting author:	Warzel S.
Affiliation:	TU Munich
E-mail:	warzel@ma.tum.de
Invited speaker:	Topical session
YRS seminar:	NO

We discuss the spectral and dynamical properties of quantum systems of N particles on the lattice of arbitrary dimension, with a Hamiltonian which in addition to the kinetic term includes a random potential with parameters of the model are the strength of the disorder and the strength of the interparticle interaction. We present a proof that for all N there are regimes of high disorder, and/or weak enough interactions, for which the system exhibits spectral and dynamical localization. The results are derived through the analysis of fractional moments of the N -particle Green function, and related bounds on the eigenfunction correlators. (Joint work with Michael Aizenman).