Titel: Complete localization for disordered chiral chains

Speaker: Jacob Shapiro (ETH Zürich)

Abstract:
Using the fractional-moments method (FMM) and Furstenberg's theorem we prove that a disordered-analog of the SSH model exhibits complete dynamical localization at all energies except for the special energy value zero, if the probability measures defining the model are sufficiently rich and regular. If furthermore they are properly tuned so that the Lyapunov spectrum at zero energy doesn't contain zero, then the system exhibits localization also at zero energy, which is important for topological reasons. Our method also applies to the usual Anderson model on the strip, showing the proof of complete 1D dynamical localization using the FMM, previously available using the multi-scale analysis.
(Joint with G. M. Graf)