KATJA VASSILEV, University of Chicago
Derivations of one-dimensional kinetic equations

Wave kinetic equations give an effective description of dispersive systems. In this talk, we look at various 1D dispersive systems and show how a diagrammatic expansion of the solution to the dispersive system gives a framework for these derivations. In particular, we discuss the features of these dispersive systems which restrict the timescale to which these derivations can currently be done. Such features include the dimension of the system, resonances in the nonlinearity, and lack of invariances.