1163-35-1101   **Zaher Hani***, Mathematics Department, University of Michigan, 530 Church Street, Ann Arbor, MI 48109. *On the derivation of the wave kinetic equation for nonlinear dispersive equations.*

Wave turbulence theory conjectures that the long time behavior of (suitably) generic solutions of nonlinear dispersive PDE is governed by a kinetic equation (called the wave kinetic equation) in a similar fashion to how Boltzmann's equation describes the long time effective dynamics of a particle gas. We will survey some recent progress on this topic starting with a joint work with Yu Deng (USC), and touching on recent progress with J. Shatah and S. Rydin Myerson. (Received September 14, 2020)