

Title: The global behavior of solutions to critical nonlinear dispersive and wave equations.

Carlos E.Kenig, University of Chicago

Abstract: We describe a method (which I call the concentration-compactness/rigidity theorem method) which Frank Merle and I have developed to study global well-posedness and scattering for critical non-linear dispersive and wave equations. Such problems are natural extensions of non-linear elliptic problems which were studied earlier, for instance in the context of the Yamabe problem and of harmonic maps. We illustrate the method with some concrete examples and also mention other applications of these ideas.