MELISSA TACY, Institute for Advanced Study
Classical flow and semiclassical eigenfunction estimates

To understand their concentration phenomena we study the L^p norms of eigenfunctions (or approximate eigenfunctions) restricted to hypersurfaces. Of particular interest are possible concentrations for values of p near $p = 2$. From our intuitive expectation that, in the high energy limit, quantum mechanics converges to classical mechanics we expect that properties of the classical flow should be evident in these estimates. In this talk I will introduce the semiclassical framework in which we study approximate eigenfunctions and discuss some results relating classical flow to eigenfunction concentration.