The orbit method, microlocal analysis and applications to $L$-functions

Abstract:

I will describe how the orbit method can be developed in a quantitative form, along the lines of microlocal analysis, and applied to local problems in representation theory and global problems concerning automorphic forms. The local applications include asymptotic expansions of relative characters. The global applications include moment estimates and subconvex bounds for $L$-functions. These results are the subject of two papers, the first joint with Akshay Venkatesh: