Theta representations and their wavefront sets

Abstract:

For a linear algebraic group, a theta representation is just a character of the group; for a central covering group, it is the Langlands quotient of a certain regular genuine principal series, and is (hypothetically) the lift of a character on a certain linear endoscopic group. In this talk, we will explain a conjectural formula on the leading wavefront set (and thus the Gelfand-Kirillov dimension) of a theta representation. We also discuss about some evidence for its validity, including compatibility with works in the literature. The talk is based on a joint work with Wan-Yu Tsai.