Title:
p-adic interpolation of automorphic periods and nontriviality

Abstract:
Starting with the setting of self-dual Rankin-Selberg L-functions for GL(2), I will explain the close connection between the construction of "natural" p-adic interpolation series and nonvanishing of central critical values in families, as well as important arithmetical applications (such as bounding Mordell-Weil ranks of abelian varieties in abelian CM towers). I will then present some conjectures and partial results for higher-rank groups, including some work in progress for compact unitary groups, as well as a more analytic description of the inherent averaging problems (at least for GL(2)).