Liang Xiao (University of Chicago). " Global triangulation over eigenvarieties."'

Abstract: In Coleman and Mazur's ground breaking paper, they introduced a rigid analytic curve, called the eigencurve, parametrizing the p-adic overconvergent modular forms. The associated family of Galois representations is crystalline at p for a Zariski dense subset of points on the eigencurve. It was first observed by Kisin that the crystalline periods of this family of Galois representations vary continuously; this fact is one of the crucial ingredients of his proof of Fontaine-Mazur conjecture. Following Colmez, one may interpret Kisin's construction as the existence of a triangulation for the associated family of (phi, Gamma)-modules. We will prove that such triangulation extends to the whole eigencurve, generalizing Kisin's result on local affinoid neighborhoods of classical points. We will show that the same argument generalizes for eigenvarieties. This is a joint work with Jay Pottharst and Kiran Kedlaya.