Title:

From Diamond-Serre weights to $GL_2(F)$

Abstract:

Let p be a prime number, $K/\mathbb{Q}$ a totally real extension of $\mathbb{Q}$ and $\bar{\rho} : \mathrm{Gal}(\overline{\mathbb{Q}}/K) \to GL_2(\bar{F}_p)$ a continuous irreducible totally odd representation. Let ν be a place of K above p and $F := K_\nu$, the associated completion. On March 17, 2005, Fred Diamond explained in this seminar how one can associate to the restriction of $\bar{\rho}$ to $\mathrm{Gal}(\overline{\mathbb{Q}}_p/F)$ a list of weights, that is of irreducible representations of $GL_2(O_F)$ over $\bar{F}_p$. We explain a way to "extend" this list of weights into smooth admissible representations of $GL_2(F)$ over $\bar{F}_p$ (joint work with V. Paskunas).