Name: Pierre Dèbes

Title: ℓ-adic points on Hurwitz Towers

Abstract. Inspired by Inverse Galois Theory, the talk will articulate around a joint result with M. Emsalem about ℓ-adic points on profinite towers of Hurwitz moduli spaces. We will show the way to this result through its several aspects: Harbater's patching methods over ℓ-adic fields, profinite constructions, Hurwitz moduli spaces, deformation and degeneration of covers (a second talk by Michel Emsalem will cover the last two in more detail). We will then focus on Modular Towers for which there is still another fruitful connection: with torsion on abelian varieties. We will then investigate the gap between the ℓ-adic situation and the main program of Modular Towers over number fields.

References:

P. Dèbes and B. Deschamps, "Corps ψ-libres et théorie inverse de Galois infinie", *J. fur die reine und angew. Math.*, **574**, (2004), 197–218.

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M. Fried, *Introduction to modular towers*, in *Recent Developments in the Inverse Galois Problem*, Contemporary Math., **186**, (1995), 111–171.

D. Harbater, *Galois coverings of the arithmetic line*, Lecture Notes in Math. **1240**, (1987), 165–195.