
FLORIAN HERZIG, University of Toronto

On de Rham lifts of local mod p Galois representations

It is an open problem to show that a given n -dimensional mod p local Galois representation ρ has a lift to a p -adic Galois representation. One even hopes that a de Rham lift exists. We discuss results concerning the existence of de Rham lifts of ρ with prescribed properties, assuming that ρ admits a “nice” lift to start with. Our arguments combine local and global methods. This is joint work with T. Gee, T. Liu, and D. Savitt.