

Séminaire d'Algèbre, Topologie et Géométrie

Jeudi 9 décembre à 13h45

Salle II

Armin Rainer

Vienne (Autriche)

Title : *Lifting quasianalytic mappings over invariants.*

Abstract : The problem of choosing the roots of a polynomial depending on parameters in a regular way has important applications in the perturbation theory for linear operators. It can be seen as a particular instance of a general lifting problem, where one studies the possibility of lifting mappings over the invariants of a reductive group representation. I will explain this connection and I will show that a mapping belonging to a quasianalytic subclass \mathcal{C} of C^∞ admits a lifting in the same class \mathcal{C} after desingularization by local blow-ups and local power substitutions, provided that \mathcal{C} satisfies some mild closedness properties (i.e. $\mathcal{C} = C^\omega$). As a consequence we obtain that the mapping itself can be lifted with locally bounded variation.