Séminaire d'algèbre, topologie et géométrie
Jeudi 24 avril à 15h 30
Salle I

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On the regularity of roots of polynomials

We show that the roots of a smooth curve of monic polynomials admit parameterizations that are locally absolutely continuous. More precisely, any continuous choice of the roots is locally absolutely continuous with p-integrable derivatives, uniformly with respect to the coefficients, where $p > 1$ depends only on the degree of the polynomial.
This solves a problem posed by S. Spagnolo over one decade ago in connection with the solvability of certain systems of partial differential equations.
Joint work with Adam Parusinski.