

Séminaire d'Algèbre, Topologie et Géométrie

Mardi 5 Juillet à 14h30

Salle I

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Titre : *Les matrices nilpotentes qui commutent avec une matrice nilpotente donnée*

Abstract : Consider the family N_B of nilpotent $n \times n$ matrices with entries in a field k , commuting with a given nilpotent matrix B of Jordan block partition P . A result of J. Briançon was used by V. Baranovsky to show the irreducibility of the family $C(n) \subset \text{Mat}_n(k) \times \text{Mat}_n(k)$ of all commuting pairs (B, A) of nilpotent matrices. We are concerned here with the fibre $N_B = \pi_1^{-1}(B)$ of $C(n)$ over a specific nilpotent matrix B . What is the Jordan block partition $Q(P)$ of a generic element A of N_B ? We discuss recent results of several working on this problem including T. Košir and P. Oblak, D.I. Panyushev.