Ypatia 2022 - June 8-10, 2022

mercredi 8 juin 2022

Abstract: The Tits alternative, initially proven by Jacques Tits around 1972, concerns the structure of groups of matrices, more precisely of subgroups of GL(V) for any finite dimensional vector space V . As we shall see, there are three interacting perspectives in the Tits alternative, coming from algebra, geometry, and dynamics. What is the precise statement and the meaning of this alternative? How is it proven? Does it hold in other groups, for instance in groups of diffeomorphisms of compact manifolds, or in groups of algebraic transformations? I will discuss these questions at an elementary level, with a focus on explicit examples and an emphasis on the dynamical systems viewpoint. **(09:30 - 10:30)**