Frédéric LE ROUX (Sorbonne Université)

Title: *The group of diffeomorphisms of the two-torus and the fine curve graph*

Abstract: The fine curve graph has been introduced recently by Bowden, Hensel and Webb to answer a question from Burago, Ivanov and Polterovich, showing the unboundedness of the commutator length on groups of surface diffeomorphisms. Subsequent works by Bowden-Hensel-Mann-Militon-Webb and Guihéneuf-Militon suggest the possibility of a rich dictionary between the fine curve graph and the rotation set. In this joint work with Sebastian Hensel we enlarge the dictionary and derive an explicit criterion which implies that two torus maps generate a free group.