Algebraic periods of surface homeomorphisms

Łukasz Patryk Michalak
Institute of Mathematics, Physics and Mechanics,
Ljubljana, Slovenia,
Adam Mickiewicz University, Poznań, Poland
lukasz.michalak@amu.edu.pl

A self-map $f\colon M \to M$ of a compact manifold determines the sequence $\{L(f^n)\}$, $n \geq 1$, of the Lefschetz numbers of its iterations. We consider its dual sequence $\{a_n(f)\}_{n=1}^{\infty}$ given by the Möbius inversion formula. The set $\mathcal{AP}(f) = \{n : a_n(f) \neq 0\}$ is called the set of algebraic periods of f. During the talk we describe finite sets of algebraic periods of homeomorphisms of an orientable surface, especially of Morse–Smale diffeomorphisms.

The talk is based on the joint project with G. Graff, W. Marzantowicz and A. Myszkowski.