

## A DYNAMICAL ZETA FUNCTION FOR GROUP ACTIONS”

RICHARD MILES (UNIVERSITY OF EAST ANGLIA)

Abstract: In their influential 1965 article, Artin and Mazur introduced a dynamical zeta function that can be used to encode the periodic point data of a discrete time dynamical system. This is now an intensely studied function and diverse generalisations and analogues have been developed. In this talk, I will discuss such a generalisation for dynamical systems arising from group actions. The case for this generalised function is made more compelling by its relationship with the zeta function of the acting group, as the latter function is of independent interest to group theorists. I will also consider some examples and natural questions in the setting of actions by compact abelian group automorphisms. For example, in this context, when is the dynamical zeta function of a group action rational?