PAWEL GORA, Concordia University
Consecutive maxima maps

τ is a continuous map on a metric compact space X. For a continuous function $\phi : X \to \mathbb{R}$ we consider a 1-dimensional map T (possibly multi-valued) which sends a local ϕ-maximum on τ trajectory to the next one: consecutive maxima map. The idea originated with famous Lorenz's paper. We prove that if T has a horseshoe disjoint from fixed points, then τ is in some sense chaotic, i.e., it has a turbulent trajectory and thus a continuous invariant measure.