

Seminário de sistemas dinâmicos e estocásticos

Departamento de Matemática - IMECC - UNICAMP

Topological conjugation of one-dimensional unimodal maps of interval

Makar Plakhotnyk
USP

Resumo:

We study dynamical systems, which are generated by a continuous map of interval $[0, 1]$ into itself. We will discuss different corollaries of ideas, which come from the collaboration of S. Ulam and J. von Neumann in 1950-th - 1960-th, where the conjugacy of the Logistic map $x \rightarrow 4x(1-x)$ and the symmetric tent map $x \rightarrow 1 - |1 - 2x|$ was established. We pay especial attention to the topological conjugation of the tent map and non-symmetric piecewise linear unimodal map, which is consisted of two parts of linearity. We will consider: the existence and differentiability of conjugacy; the length of the graph of the conjugacy; the convexity preserving under conjugation and some examples of non-conjugated maps; the attempts of the use of the techniques of solving the linear functional equations in the study of the conjugation of symmetric and non-symmetric tent map; the self semi conjugacy of tent map, precisely, the possibility of the continuation of the self semi conjugation of the symmetric tent map from the finite preimage of 0 to the entire $[0, 1]$.

Data: Sexta-feira, 3 de junho de 2016, 14hs.

Local: Sala 321 do IMECC.

Consulte a programação em [www.ime.unicamp.br/ssde]