E. Vargas

Title:

Metric aspects of the dynamics of covering maps of the circle

Abstract:

In a joint work with E. Colli and M. L. do Nascimento we consider a covering map of the circle of degree \$d \geq 2\$ which has a critical point of order \$\ell >1\$ and the Fibonacci combinatorics. Then we study the growth of the derivative of the iterates of this map on the critical value and related measure-theoretical properties. The main issue is to control the lack of natural symmetries around the critical point without using complex analysis . The main tool is the expansion of cross ratios under an additional hypothesis of negative Schwarzian to get 2 difference equations involving the derivatives mentioned above.