McMaster University   University of Toronto   University of Waterloo

THE FIELDS INSTITUTE FOR RESEARCH IN MATHEMATICAL SCIENCES

GENERAL RESEARCH SEMINARS IN DYNAMICAL SYSTEMS

SPEAKER:

BERND KRAUSKOPF
University of Groningen

On the Topic:

"Convergence of Julia-sets in the Approximation of λe^{z} by $\lambda(1 + z/d)^d$ "

The polynomials $P_{d,\lambda}(z) := \lambda(1 + \frac{z}{d})^d$ converge uniformly on compact sets to $E_\lambda(z) := \lambda e^z$. What this convergence means for the dynamics of these functions when iterated was first studied by Devaney, Goldberg and Hubbard. Here we show the convergence of the corresponding Julia-sets in the Hausdorff-metric for two cases. First for λ such that E_λ has an attracting periodic orbit, in wich case its Julia-set is a Cantor-set of curves, and secondly for λ such that the Julia-set of E_λ is the whole plane $\mathbb{C}$.

Thursday, November 12, 1992 at 1:30pm, room 3018

at

The Fields Institute