ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

9. Ordinary Differential Equations and Dynamical Systems

1991 MS Classification: 58F23
Sumi, Hiroki, Kyoto University, Japan

Dynamics of rational semigroups and Hausdorff dimension of the Julia sets

A *rational semigroup* is a semigroup generated by rational maps on the Riemann sphere. We will investigate about the dynamics of sub-hyperbolic and semi-hyperbolic rational semigroups. We discuss about when the Julia set of a rational semigroup has no interior points or the area is equal to 0. Considering (sub)conformal measures and the Brolin-Lyubich's invariant measures and using a method of thermodynamical formalism, we will also estimate Hausdorff dimension of the Julia sets.

Reference: H. Sumi, *Dynamics of Sub-hyperbolic and Semi-hyperbolic Rational Semigroups and Conformal Measures of Rational Semigroups,* In S. Morosawa, editor, *RIMS Kokyuroku: Complex Dynamics and Related Problems*, Kyoto Univ., (1998) to appear.