Cornell University Library

We gratefully acknowledge support from the Simons Foundation and member institutions

arXiv.org > math > arXiv:1107.1091

Search or Article-id

(Help | Advanced search)

All papers   Go!

Mathematics > Dynamical Systems

The classification of polynomial basins of infinity

Laura DeMarco, Kevin Pilgrim

(Submitted on 6 Jul 2011)

We consider the problem of classifying the dynamics of complex polynomials $f: \mathbb{C} \to \mathbb{C}$ restricted to their basins of infinity. We synthesize existing combinatorial tools --- tableaux, trees, and laminations --- into a new invariant of basin dynamics we call the pictograph. For polynomials with all critical points escaping to infinity, we obtain a complete description of the set of topological conjugacy classes. We give an algorithm for constructing abstract pictographs, and we provide an inductive algorithm for counting topological conjugacy classes with a given pictograph.

Submission history

From: Laura DeMarco [view email]

[v1] Wed, 6 Jul 2011 10:53:52 GMT (362kb,D)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- Other formats

Current browse context:
math.DS
< prev | **next >**
new | recent | 1107

Change to browse by:

math
　　math.CV

References & Citations

- NASA ADS

Bookmark (what is this?)

Science WISE