Complex dynamics and quasi-conformal geometry.



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The core entropy for polynomials of higher degree.

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The notion of topological entropy for real multimodal maps goes back to the work of Milnor and Thurston in the 1970s. In order to extend this definition from the world of real maps to complex polynomials, W. Thurston defined the core entropy as the entropy of the restriction of the polynomial to its Hubbard tree.

Together with Tan Lei, her students, and collaborators, a few years ago we set up to understand how this invariant works.

In this talk, I will discuss the notion of core entropy and their definition for polynomials of any degree. In particular, we will explore the space PM(d) of "primitive majors" which serves as a combinatorial model for the space of polynomials of degree d, see how to compute the core entropy

from the combinatorial data and prove it varies continuously on the parameter space. This is joint work with Gao Yan.

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