NCTS
National Center for Theoretical Sciences

Kleinian Groups and Rational Iteration

Time **2023/7/25, 26, 28** 9:10-12:00

Venue R. 440, Astronomy-Mathematics Building, NTU

Speaker

Russell Lodge

Indiana State University

Organizer

Chih-Hung Chang

National University of Kaohsiung

Course Background & Purposes

The pioneering work of Fatou revealed a meaningful analogy between Kleinian groups (discrete subgroups of the group of Mobius transformations) and the dynamics of rational maps. Abel prize laureate Dennis Sullivan used this analogy, or "dictionary", to great effect in proving his celebrated no-wandering domains theorem, and this dictionary has continued to be a source of inspiration for yet another generation of mathematicians.

Course Outline & Descriptions

This mini-course will begin with an introduction to Kleinian groups and single variable complex dynamics, emphasizing key examples. The last two days will focus on both classical and modern developments in the Fatou-Sullivan dictionary.

7/25 Introduction to Kleinian groups

Single variable complex dynamics (I)

7/26 Single variable complex dynamics (II)

Development of Fatou-Sullivan dictionary (I)

7/28 Development of Fatou-Sullivan dictionary (II)

Grading : Homework assigned in class

Registration

Contact

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