Dynamical Systems

School of Mathematics, IPM, Tehran

SCHEDULE:

February-May 2017



Mini Course

Prime ends and rotation numbers in two-dimensional dynamics

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Lecture 1: Tuesday, Feb. 28, 2017, 11:00–12:15

Lecture 2: Wednesday, March 1, 2017, 11:00–12:15 (Lecture Hall 1)

Lecture 3: Tuesday, March 7, 2017, 11:00–12:15 Lecture 4: Wednesday, March 8, 2017, 11:00-12:30

VENUE: Lecture Hall 2, IPM Niavaran Bldg., Niavaran Square, Tehran

Abstract. The aim of this minicourse is to give an overview of results and techniques in twodimensional dynamics from the topological viewpoint. Emphasis will be given to rotational invariants (rotation vectors and numbers) and their dynamical consequences.

The plan is to introduce the general results from Brouwer theory as well as Brouwer-Le Calvez foliations and their applications, and to make a survey of the results about rotation sets on the torus and annulus and their dynamical consequences.

We will also talk about prime ends rotation numbers, and their use in the study of the dynamics on the boundary of invariant sets. If time allows, we will discuss rotation numbers and intervals on more general invariant continua.

References.

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