

SF 2720: Chaotic Dynamical Systems

Fall 2016

Tuesdays 15:15 - 17:00 in room 3721
at the Department of Mathematics, KTH.

The course will provide an introduction into the theory of Dynamical systems through representative examples, and will introduce the main concepts and methods of topological dynamics. The emphasis will be on hyperbolic dynamics and chaotic systems.

- *Instructors:* Danijela Damjanović and Maria Saprykina.
- *Required Text:* Barreira, Valls: Dynamical Systems, an Introduction. Springer-Verlag London 2013.
- Additional useful text:
Katok, Hasselblatt, A First Course in Dynamics with a Panorama of Recent Developments, Cambridge University Press, 2003.
- *Topics* which will be covered are included in the required text from Chapter 2 - Chapter 7
- *Reading and Lectures.* Sometimes sections from the text or handouts will be assigned for reading, for the following class. Please read the assigned text before coming to class. Students are responsible for all topics covered in the readings and lectures. Lectures may go beyond the reading, and not every topic in the reading will be covered in class. The reading instructions will be posted on the home page.
- *Homework.* Homework will be assigned every other week. There will be 6 homework sets throughout the semester. Homework will be due at the beginning of the class. Late homework will not be accepted. The homework will be posted on the home page.
- *Examination.* There will be a written final exam at the end of the semester.
- *Grading.* To get grade E or Pass, it is enough to complete homework assignments. For those having grade E and aiming at a higher grade, the written final exam will be given.