

Instructor: Zoltán Buczolich

Class meetings: Tuesday 16:00-17:30, ELTE South Building (Déli Tömb) 4-713.

First class meeting: February 13.

The ELTE Spring Break is: March 27-April 2. This means that there will be class on March 26th but not on April 2nd.

Last class meeting is May 14th.

Office Hours: Mon. 14:00-15:00, Tue. 14:30-15:30 and by appointment. My office at the Eötvös University is in Room 3-305 in ELTE Déli Tömb.

My office phone number is: 372-2500 extension 8516,

email: zoltan.buczolich@ttk.elte.hu, web: <http://buczo.web.elte.hu/>

Detailed Syllabus: Topological transitivity and minimality. Omega limit sets. Symbolic Dynamics. Topological Bernoulli shift. Maps of the circle. The existence of the rotation number. Invariant measures. Krylov-Bogolubov theorem. Invariant measures and minimal homeomorphisms. Rotations of compact Abelian groups. Uniquely ergodic transformations and minimality. Unimodal maps. Kneading sequence. Eventually periodic symbolic itinerary implies convergence to periodic points. Ordering of the symbolic itineraries. Characterization of the set of the itineraries. Equivalent definitions of the topological entropy. Lap number of interval maps. Markov graphs. Sharkovskii's theorem. Foundations of the Ergodic theory. Maximal and Birkhoff ergodic theorem.

Exams: There will be oral exams in my office at the university.

Text: No official text. Recommended textbooks: A. Katok, B.Hasselblatt: Introduction to the modern theory of dynamical systems. Encyclopedia of Mathematics and its Applications, 54. Cambridge University Press, Cambridge, 1995. W. de Melo, S. van Strien, One-dimensional dynamics, Springer Verlag, New York (1993). I. P. Cornfeld, S. V. Fomin and Ya. G. Sinai, Ergodic Theory, Springer Verlag, New York, (1981).