Courses
Introduction to limit groups and JSJ-decompositions

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Friday May 11, 10 - 12, 14-16,
May 25, 10 - 12, 14- 16
and June 8, 10 - 12, 2012

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Abstract : A limit group is a finitely generated group which is model of the universal theory of a free group. These groups were introduced by Z. Sela in his study of the elementary theory of free groups and the solution of the famous problem of Tarski. They coincide with other groups previously studied which are known under the name of fully residually-free groups and which were independently studied by Baumslag, Miasnikov and Kharlampovich. They constitute the first step in understanding the elementary theory of free groups.

One of the important notions used in the study of the elementary theory of free groups is the notion of JSJ-decomposition. The objective of these minicourses is to give an introduction to limit groups and JSJ-decompositions.

Program : Actions on trees, Bass-Serre theory, Limit of actions, Limit groups, JSJ-decompositions, constructibility of limit groups.

Some references :

[1] Z. Sela. *Diophantine geometry over groups I : Makanin-Razborov diagrams.* Publications Mathematiques de l'IHES 93(2001), 31-105. Available at : http ://www.ma.huji.ac.il/˜zlil/.

[2] C. Champetier, V. Guirardel. *Limit groups as limits of free groups : compactifying the set of free groups.* Israel Journal of Mathematics, 146 (2005). Available at : http ://arxiv.org/abs/math/0401042.

[3] V. Guirardel, G. Levitt. *JSJ decompositions : definitions, existence, uniqueness. I : The JSJ deformation space.* Available at : http ://arxiv.org/abs/0911.3173.

[4] V. Guirardel, G. Levitt. *JSJ decompositions : definitions, existence, uniqueness. II. Compatibility and acylindricity.* Available at : http ://arxiv.org/abs/1002.4564.

Travel expenses can be reimbursed through SFB 878.
If you plan to participate please send an email to Prof. K. Tent (tent@wwu.de).