Proseminar
Gruppen, Graphen und Bäume

Liste der Vorträge

Thema	Richtung	Quelle	Termin Name	Bemerkung
ABK	Cayley graphs	1.{1,2,3,5,6}		eventuell, einige Beispiele Auslassen
GT	Fundamental domains, actions	1.{4,7,8,9}		
BG	Coxeter Groups	2		
KT	Free groups, presentations	3.{1,3}		
GT	Actions on trees	3.{4,5,6}		
BKT	Baumslag-Solitar groups	4,[2, IV.4.9],5.4		Beweis von 4.3 aus [2]
AK	Word problems	5 (ohne 5.4)		+Übungen
BKT	An infinite torsion group	6		
K	Regular languages, automata	7.{1–4}		
KGT	Subgroups of free groups	3.2,7.5		
BKT	Lamplighter groups	8,[5, §2]		+Übung 10
GT	Growth of groups	9.{1–3}		
GT	Fundamental groups of surfaces and their growth	[3, VI.A.8]		Fundamental group in [3, V.B.46]; see [4, Figure 109]
KT	Intermediate growth	[6]		

Literatur.

[1] John Meier, *Groups, graphs and trees*, London Mathematical Society Student Texts, vol. 73, Cambridge University Press, Cambridge, 2008. An introduction to the geometry of infinite groups. MR2498449 (2010e:20066)

[2] Roger C. Lyndon and Paul E. Schupp, *Combinatorial group theory*, Classics in Mathematics, Springer-Verlag, Berlin, 2001. Reprint of the 1977 edition. MR1812024 (2001i:20064)

[3] Pierre de la Harpe, *Topics in geometric group theory*, Chicago Lectures in Mathematics, University of Chicago Press, Chicago, IL, 2000. MR1786869 (2001i:20081)

[4] John Stillwell, *Classical topology and combinatorial group theory*, 2nd ed., Graduate Texts in Mathematics, vol. 72, Springer-Verlag, New York, 1993. MR1211642 (94a:57001)

[5] Laurent Bartholdi and Wolfgang Woess, *Spectral computations on lamplighter groups and Diestel-Leader graphs*, J. Fourier Anal. Appl. **11** (2005), no. 2, 175–202, DOI 10.1007/s00041-005-3079-0. MR2131635 (2006e:20052)

[6] Laurent Bartholdi, *The growth of Grigorchuk's torsion group*, Internat. Math. Res. Notices **20** (1998), 1049–1054, DOI 10.1155/S1073792898000622. MR1656258 (99i:20049)