

Geometric and Asymptotic Group Theory II

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<http://www.mat.univie.ac.at/~dosaj/GGTWien/Course.html>

Dienstag, 11:00–12:00, Raum D1.07 UZA 4

Blatt 5

- (1) Show that in the few relator model for random groups we have:

$$\lim_{t \rightarrow \infty} \frac{N_{C'(\lambda)}(m, n, t)}{N(m, n, t)} = 1.$$

- (2) Show that the algebra of bounded linear operators on a Hilbert space $\mathcal{B}(\mathcal{H})$ is a C^* -algebra.
- (3) Determine $C_{red}^*(G)$ for a group G being: a) finite group; b) \mathbb{Z} .
- (4) Show that for a subgroup $H \leq G$, there is a canonical embedding $C_{red}^*(H) \hookrightarrow C_{red}^*(G)$.
- (5) Show that the following groups satisfy the Følner condition: a) finite group; b) \mathbb{Z} . What about subgroups of groups satisfying the Følner condition?