

Amenability of Discrete Groups

Conditions and Applications

Avinash Iyer

19 September, 2024

Contents

1	Prelude	5
2	Paradoxical Decompositions	7
3	Tarski's Theorem	9
4	Følner Sequences and Haar Measures	11
5	Bounded Operators on Hilbert Spaces	13
6	Banach and C^*-Algebras	15
A	Group Theory	17
B	Measure Theory	19
C	Functional Analysis	21
D	Topology	23

Chapter 1

Prelude

Chapter 2

Paradoxical Decompositions

Chapter 3

Tarski's Theorem

Chapter 4

Følner Sequences and Haar Measures

Chapter 5

Bounded Operators on Hilbert Spaces

Chapter 6

Banach and C^* -Algebras

Appendix A

Group Theory

Appendix B

Measure Theory

Appendix C

Functional Analysis

Appendix D

Topology