

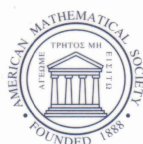
CONTEMPORARY MATHEMATICS

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Ergodic Theory and Related Fields

2004–2006 Chapel Hill Workshops
on Probability and Ergodic Theory
University of North Carolina
Chapel Hill, North Carolina

Idris Assani
Editor



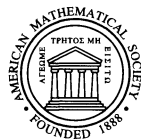
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Preface

The present volume contains contributions from participants to the 2004-2005 and 2006 Chapel Hill Ergodic Theory Workshops. These workshops were held in February 2004, 2005, and 2006 at Chapel Hill. They started in the summer of 2002 and now are a recurrent event. The 2007 workshop is scheduled for February 15-18, 2007. The list of participants outside Chapel Hill for these 2004-2006 workshops is the following: 2004: Zoltan Buczolich (Eötvös University - Hungary), Jean-Pierre Conze (University of Rennes1 - France), Christophe Cuny* (Ben-Gurion University, Israel), Geoffrey Goodson (Towson University), Nikos Frantzikinakis* (Penn State University), Ted Hill (Georgia Institute of Technology), Fern Hunt (National Institute of Standards and Technology), Michael Keane (Wesleyan University), Michael Lin (Ben-Gurion University, Israel), Jonathan C. Mattingly** (Duke University), Daniel Mauldin (University of North Texas), and Arkady Tempelman (Penn State University).

2005: Leonid Bunimovich (Georgia Institute of Technology), Mrinal Roychowdhury* (Wesleyan University), Miaohua Jiang (Wake Forest University), Michael Lin (Ben-Gurion University, Israel), William Massey (Princeton University), Arlie O. Petters (Duke University), and Kimberly Weems** (NC State University).

2006: Zoltan Buczolich (Eötvös University - Hungary), Alexander Bufetov* (University of Chicago), Guy Cohen* (Hebrew University of Jerusalem), Jean-Pierre Conze (University of Rennes1 - France), Rudy Horne* (University of Florida), Michael Lin (Ben-Gurion University, Israel), Jason Lucier* (Cent. Rech. Math.-Montreal), Daniel Mauldin (University of North Texas), Mrinal Roychowdhury* (Colorado State University), Ilya Shkredov** (Moscow State University), and Christoph Thiele (UCLA).

The participants' names with asterisks were younger researchers (graduate students, post-doctoral students or assistant professors**) at that time. The talks given by these outside participants covered a large range of topics in ergodic theory and related fields that include probability theory, combinatorics and harmonic analysis. A complete list of participants with the UNC senior and young researchers can be seen at the workshops' web sites: www.unc.edu/~assani/ErgWork04/, www.unc.edu/~assani/ErgWork05 and www.unc.edu/~assani/ErgWork06. Some open problems presented and discussed during the workshops are listed at the end of the volume.

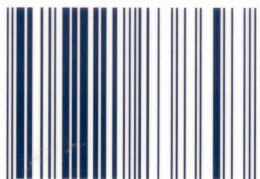
It is a pleasure to acknowledge the institutions whose support made these events possible. First we thank the National Science Foundation and the Mathematical Sciences Research Institute at Berkeley for their continued support. Thanks also to the Department of Mathematics, the Deans of the College of Arts and Sciences and the Vice Chancellor for research at the University of North Carolina at Chapel

Hill for their support. We have appreciated the energetic support of the staff and interested graduate students in the Department of Mathematics.

Finally we appreciate the support of the American Mathematical Society and its Contemporary Mathematics staff. A special thanks to Christine Thivierge for her guidance throughout the publication process.

The book contains papers by participants of the Chapel Hill Ergodic Theory Workshops organized in February 2004, 2005, and 2006. Topics covered by these papers illustrate the interaction between ergodic theory and related fields such as harmonic analysis, number theory, and probability theory.

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