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Preface

Since the mid-1980's the following volumes containing collections of papers reflecting the activity of the Israel Seminar in Geometric Aspects of Functional Analysis appeared:

- 1983-1984 Published privately by Tel Aviv University
- 1985-1986 Springer Lecture Notes, Vol. 1267
- 1986-1987 Springer Lecture Notes, Vol. 1317
- 1987-1988 Springer Lecture Notes, Vol. 1376
- 1989-1990 Springer Lecture Notes, Vol. 1469
- 1992-1994 Operator Theory: Advances and Applications, Vol. 77, Birkhauser
- 1994-1996 MSRI Publications, Vol. 34, Cambridge University Press
- 1996-2000 Springer Lecture Notes, Vol. 1745
- 2001-2002 Springer Lecture Notes, Vol. 1807
- 2002-2003 Springer Lecture Notes, Vol. 1850.

Of these, the first six were edited by Lindenstrauss and Milman, the seventh by Ball and Milman and the last three by the two of us.

As in the previous volumes, the current one reflects general trends of the Theory. Most of the papers deal with different aspects of Asymptotic Geometric Analysis, ranging from classical topics in the geometry of convex bodies, to inequalities involving volumes of such bodies or, more generally, log-concave measures, to the study of sections or projections of convex bodies. In many of the papers Probability Theory plays an important role; in some, limit laws for measures associated with convex bodies, resembling Central Limit Theorems, are derived and in others, probabilistic tools are used extensively. There are also papers on related subjects, including a survey on the behavior of the largest eigenvalue of random matrices and some topics in Number Theory.

All the papers here are original research papers (and one invited expository paper) and were subject to the usual standards of refereeing.

As in previous proceedings of the GAFA Seminar, we also list here all the talks given in the seminar as well as talks in related workshops and

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conferences. We believe this gives a sense of the main directions of research in our area.

We are grateful to Diana Yellin for taking excellent care of the typesetting aspects of this volume.

Vitali Milman
Gideon Schechtman

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