

Contents

Preface — v

List of contributing authors — vii

Paul Balister and Béla Bollobás

Random union-closed families — 1

J. Brian Conrey and Henryk Iwaniec

Small populations of zeros of L -functions — 11

George Csordas

Turán-type inequalities and the distribution of zeros of entire functions — 25

Peter D. T. A. Elliott

Paul Turán and Probabilistic Number Theory — 41

Jan-Hendrik Evertse and Kálmán Győry

Effective results for Diophantine equations over finitely generated domains: A survey — 63

Bálint Farkas, János Pintz, and Szilárd Révész

On the optimal weight function in the Goldston–Pintz–Yıldırım method for finding small gaps between consecutive primes — 75

John B. Friedlander and Henryk Iwaniec

Untangling upper-bound sieves — 105

Zoltán Füredi

On a theorem of Erdős and Simonovits on graphs not containing the cube — 113

Karl-Heinz Indlekofer

A survey of Turán’s equivalent power series — 127

Jerzy Kaczorowski and Alberto Perelli

Internal twists of L -functions — 145

Jean-Pierre Kahane

Turán’s new method and compressive sampling — 155

Gyula O. H. Katona

Turán's graph theorem, measures and probability theory — 167

Imre Kátai

On the Turán–Kubilius inequality — 177

Helmut Maier

Sums of a smooth number and a number with missing digits — 187

Hugh L. Montgomery

Turán's work in analytic number theory — 205

Yoichi Motohashi

On the irreducibility of basic automorphic representations — 221

Attila Pethő and Szabolcs Tengely

On composite rational functions — 241

János Pintz

Some new results on gaps between consecutive primes — 261

Mohammed A. Qazi and Qazi Ibadur Rahman

On some results of Turán about the local behavior of polynomials — 279

András Sárközy

On multiplicative decompositions of the set of the shifted quadratic residues modulo p — 295

Miklós Simonovits

Paul Turán's influence in combinatorics — 309

Péter Vértesi

On optimal interpolatory point systems — 393

Paul Turán – A Capsule Biography — 403