

CONTENTS

A Biographical Note by H. Halberstam	xiii
NUMBER THEORY by Wang Yuan	1
[24]* A Problem on the Additive Theory of Numbers of Several Variables	6
[28] A Problem in the Additive Theory of Numbers of Several Variables .	11
[30] On a Generalized Waring Problem	17
[36] On Waring's Problem	39
[37] On Tarry's Problem	43
[39] On the Representation of Numbers as the Sums of the Powers of Primes	49
[45] On a Generalized Waring Problem, II	61
[47] On Waring's Problem with Cubic Polynomial Summands	75
[48] On a Theorem due to Vinogradow	85
[49A] On an Exponential Sum	101
[60] On the Number of Partitions of a Number into Unequal Parts . . .	110
[62] On the Least Solution of Pell's Equation	119
[63] The Lattice-Points in a Circle	124
[64] On the Distribution of Quadratic Non-Residues and the Euclidean Algorithm in Real Quadratic Fields, I, II (II, <i>with</i> S. H. Min) . . .	137
[68] A Remark on a Result due to Blichfeldt.	171
[94] Improvement of a Result of Wright	175
[95] An Improvement of Vinogradov's Mean-Value Theorem and Several Applications	178
[100] On Exponential Sums over an Algebraic Number Field	192
[104] On the Number of Solutions of Tarry's Problem	201
[119] On Exponential Sums	277

*Numbers in brackets refer to bibliography pages 883-887.

ALGEBRA AND GEOMETRY by Z. X. Wan	281
[67] Geometries of Matrices, I, I_1	285
[76] Orthogonal Classification of Hermitian Matrices.	336
[77] Geometries of Matrices, II	353
[78] Geometries of Matrices, III	389
[81] Some "Anzahl" Theorems for Groups of Prime Power Orders	417
[85] On the Automorphisms of the Symplectic Group over any Field	433
[86] On the Existence of Solutions of Certain Equations in a Finite Field (with H. S. Vandiver)	454
[87] Characters over Certain Types of Rings with Applications to the Theory of Equations in a Finite Field (with H. S. Vandiver)	460
[88] On the Automorphisms of a Sfield	466
[89] On the Number of Solutions of Some Trinomial Equations in a Finite Field (with H. S. Vandiver)	471
[90] On the Nature of the Solutions of Certain Equations in a Finite Field.	477
[91] Some Properties of a Sfield	485
[92] On the Generators of the Symplectic Modular Group (with I. Reiner).	491
[93] Geometry of Symmetric Matrices over any Field with Character- istic Other Than Two	504
[99] A Theorem on Matrices over a Sfield and its Applications	528
[101] Supplement to the Paper of Dieudonné on the Automorphisms of Classical Groups	582
[102] Automorphisms of the Unimodular Group (with I. Reiner)	609
[106] Automorphisms of the Projective Unimodular Group (with I. Reiner).	627
FUNCTION THEORY By S. Kung and K. H. Look.	634
[66] On the Theory of Automorphic Functions of a Matrix Variable, I, II	636
[74] On the Theory of Fuchsian Functions of Several Variables	689
[75] On the Extended Space of Several Complex Variables, I	714
[122] On the Riemannian Curvature in the Space of Several Complex Variables	723
[129] Theory of Harmonic Functions in Classical Domains (with K. H. Look)	743
MISCELLANEOUS.	807
[27] On Fourier Transforms in L^p in the Complex Domain (with S. S. Shu)	809
[42] A Remark on the Moment Problem	824
[103] Estimation of an Integral.	827

CONTENTS

[133A]	On the Calculation of Mineral Reserves and Hillside Areas on Contour Maps 837
[148]	On Uniform Distribution and Numerical Analysis, I 853
APPLIED MATHEMATICS by Applied Mathematics Group, Academia Sinica 877
Loo-Keng Hua: Publications 883