

Contents

Preface	vii
Publications of Serge Lang: from 2000 and beyond	xiii
Introduction	xv
John Tate	
Raynaud’s group-scheme and reduction of coverings	1
Dan Abramovich with an Appendix by Jonathan Lubin	
The modular degree, congruence primes, and multiplicity one	19
Amod Agashe, Kenneth A. Ribet, and William A. Stein	
Le théorème de Siegel–Shidlovsky revisité	51
Daniel Bertrand	
Some aspects of harmonic analysis on locally symmetric spaces related to real-form embeddings	69
Eliot Brenner and Andrew Sinton	
Differential characters on curves	111
Alexandru Buium	
Weyl group multiple Dirichlet series of type A_2	125
Gautam Chinta and Paul E. Gunnells	
On the geometry of the diffeomorphism group of the circle	143
Adrian Constantin and Boris Kolev	
Harmonic representatives for cuspidal cohomology classes	161
Józef Dodziuk, Jeffrey McGowan, and Peter Perry	
About the ABC Conjecture and an alternative	169
Machiel van Frankenhuijsen	

Unifying themes suggested by Belyi’s Theorem 181
 Wushi Goldring

On the local divisibility of Heegner points 215
 Benedict H. Gross and James A. Parson

**Uniform estimates for primitive divisors in elliptic
 divisibility sequences** 243
 Patrick Ingram and Joseph H. Silverman

The heat kernel, theta inversion and zetas on $\Gamma \backslash G / K$ 273
 Jay Jorgenson and Serge Lang

**Applications of heat kernels on abelian groups: $\zeta(2n)$,
 quadratic reciprocity, Bessel integrals** 307
 Anders Karlsson

Report on the irreducibility of L -functions 321
 Nicholas M. Katz

**Remark on fundamental groups and effective Diophantine
 methods for hyperbolic curves** 355
 Minhyong Kim

Ranks of elliptic curves in cubic extensions 369
 Hershy Kisilevsky

**On effective equidistribution of expanding translates of certain
 orbits in the space of lattices** 385
 D. Y. Kleinbock and G. A. Margulis

Elliptic Eisenstein series for $\mathrm{PSL}_2(\mathbb{Z})$ 397
 Jürg Kramer and Anna-Maria von Pippich

**Consequences of the Gross–Zagier formulae: Stability of
 average L -values, subconvexity, and non-vanishing mod p** 437
 Philippe Michel and Dinakar Ramakrishnan

A variant of the Lang–Trotter conjecture 461
 M. Ram Murty and V. Kumar Murty

Multiplicity estimates, interpolation, and transcendence theory 475
 Michael Nakamaye

Sampling spaces and arithmetic dimension 499
 Catherine O’Neil

Recovering function fields from their decomposition graphs 519
 Florian Pop

Irreducible spaces of modular units 595
 David E. Rohrlich

Equidistribution and generalized Mahler measures 609
 L. Szpiro and T. J. Tucker

Représentations p -adiques de torsion admissibles 639
 Marie-France Vignéras

Multiplier ideal sheaves, Nevanlinna theory, and Diophantine approximation 647
 Paul Vojta

Recent advances in Diophantine approximation 659
 Michel Waldschmidt



<http://www.springer.com/978-1-4614-1259-5>

Number Theory, Analysis and Geometry

In Memory of Serge Lang

Goldfeld, D.; Jorgenson, J.; Jones, P.; Ramakrishnan, D.;

Ribet, K.; Tate, J.T. (Eds.)

2012, XX, 704 p., Hardcover

ISBN: 978-1-4614-1259-5