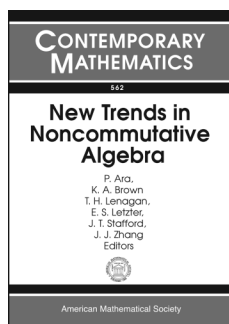


# New Publications Offered by the AMS

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## Algebra and Algebraic Geometry



### New Trends in Noncommutative Algebra

**P. Ara**, *University Autònoma de Barcelona, Spain*, **K. A. Brown**, *University of Glasgow, United Kingdom*, **T. H. Lenagan**, *University of Edinburgh, United Kingdom*, **E. S. Letzter**, *Temple University, Philadelphia, PA*, **J. T. Stafford**, *University of Manchester, United Kingdom*, and **J. J. Zhang**, *University of Washington, Seattle, WA*, Editors

This volume contains the proceedings of the conference “New Trends in Noncommutative Algebra”, held at the University of Washington, Seattle, in August 2010, in honor of Ken Goodearl’s 65th birthday.

The articles reflect the wide interests of Goodearl and will provide researchers and graduate students with an indispensable overview of topics of current interest. Specific fields covered include: noncommutative algebraic geometry, representation theory, Calabi-Yau algebras, quantum algebras and deformation quantization, Poisson algebras, growth of algebras, group algebras, and noncommutative Iwasawa algebras.

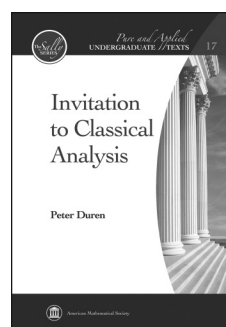
**Contents:** **G. Abrams** and **K. M. Rangaswamy**, Row-finite equivalents exist only for row-countable graphs; **K. Ardakov**, The controller subgroup of one-sided ideals in completed group rings; **J.P. Bell**, **K. Casteels**, and **S. Launois**, Enumeration of torus-invariant strata with respect to dimension in the big cell of the quantum minuscule Grassmannian of type  $B_n$ ; **J. P. Bell**, **L. W. Small**, and **A. Smoktunowicz**, Primitive algebraic algebras of polynomially bounded growth; **D. Chan** and **C. Ingalls**, Conic bundles and Clifford algebras; **M. Chlouveraki**, **I. Gordon**, and **S. Griffeth**, Cell modules and canonical basic sets for Hecke algebras from Cherednik algebras; **E. Coskun**, **R. S. Kulkarni**, and **Y. Mustopa**,

On representations of Clifford algebras of ternary cubic forms; **D. Goldstein** and **R. M. Guralnick**, Certain subgroups of Weyl groups are split; **K. R. Goodearl** and **T. H. Lenagan**, Primitive ideals in quantum  $SL_3$  and  $GL_3$ ; **B. Huisgen-Zimmermann** and **K. R. Goodearl**, Irreducible components of module varieties: Projective equations and rationality; **D. A. Jordan** and **S.-Q. Oh**, Poisson brackets and Poisson spectra in polynomial algebras; **L.-Y. Liu**, **Q.-S. Wu**, and **C. Zhu**, Hopf action on Calabi-Yau algebras; **M. Musson**, Finitely generated, non-Artinian monolithic modules; **D. Rogalski** and **J. J. Zhang**, Regular algebras of dimension 4 with 3 generators; **D. Izychev** and **O. Venjakob**, Galois invariants of  $K_1$ -groups of Iwasawa algebras; **M. Yakimov**, Strata of prime ideals of the De Concini-Kac-Procesi algebras and Poisson geometry; **A. Yekutieli**, Twisted deformation quantization of algebraic varieties.

**Contemporary Mathematics**, Volume 562

February 2012, 297 pages, Softcover, ISBN: 978-0-8218-5297-2, LC 2011041733, 2010 *Mathematics Subject Classification*: 16-XX; 17B37, 20C15, 20G42, **AMS members US\$79.20**, List US\$99, Order code CONM/562

## Analysis



### Invitation to Classical Analysis

**Peter Duren**, *University of Michigan, Ann Arbor, MI*

This book gives a rigorous treatment of selected topics in classical analysis, with many applications and examples. The exposition is at the undergraduate level, building on basic principles of advanced calculus without appeal to more

sophisticated techniques of complex analysis and Lebesgue integration.

Among the topics covered are Fourier series and integrals, approximation theory, Stirling’s formula, the gamma function, Bernoulli numbers and polynomials, the Riemann zeta function, Tauberian theorems, elliptic integrals, ramifications of the Cantor set, and a theoretical discussion of differential equations including power series solutions at regular singular points, Bessel functions, hypergeometric functions, and Sturm comparison

theory. Preliminary chapters offer rapid reviews of basic principles and further background material such as infinite products and commonly applied inequalities.

This book is designed for individual study but can also serve as a text for second-semester courses in advanced calculus. Each chapter concludes with an abundance of exercises. Historical notes discuss the evolution of mathematical ideas and their relevance to physical applications. Special features are capsule scientific biographies of the major players and a gallery of portraits.

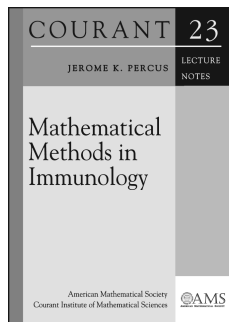
Although this book is designed for undergraduate students, others may find it an accessible source of information on classical topics that underlie modern developments in pure and applied mathematics.

**Contents:** Basic principles; Special sequences; Power series and related topics; Inequalities; Infinite products; Approximation by polynomials; Tauberian theorems; Fourier series; The gamma function; Two topics in number theory; Bernoulli numbers; The Cantor set; Differential equations; Elliptic integrals; Index.

**Pure and Applied Undergraduate Texts, Volume 17**

March 2012, approximately 388 pages, Hardcover, ISBN: 978-0-8218-6932-1, LC 2011045853, 2010 *Mathematics Subject Classification:* 26-01, 33-01, 34-01, 40-01, 41-01, 42-01, 11-01, 11B68, 40E05, **AMS members US\$59.20**, List US\$74, Order code AMSTEXT/17

## Applications



### Mathematical Methods in Immunology

**Jerome K. Percus, Courant Institute of Mathematics, New York, NY, and Department of Physics, New York University, NY**

Any organism, to survive, must use a variety of defense mechanisms. A relatively recent evolutionary development is that of the adaptive

immune system, carried to a quite sophisticated level by mammals. The complexity of this system calls for its encapsulation by mathematical models, and this book aims at the associated description and analysis. In the process, it introduces tools that should be in the armory of any current or aspiring applied mathematician, in the context of, arguably, the most effective system nature has devised to protect an organism from its manifold invisible enemies.

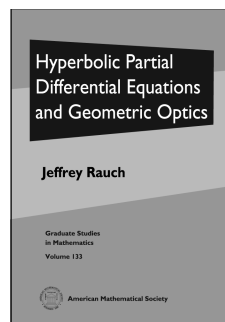
Titles in this series are co-published with the Courant Institute of Mathematical Sciences at New York University.

**Contents:** The HIV pandemic; Basic facts of immunology; Quantifying the immune response (assays); Modeling humoral immune responses; Modeling cell-mediated response; Control of immune response; Viewpoint of the virus; General references; Index.

**Courant Lecture Notes, Volume 23**

March 2012, 111 pages, Softcover, ISBN: 978-0-8218-7556-8, LC 2011045038, 2010 *Mathematics Subject Classification:* 92-XX, **AMS members US\$25.60**, List US\$32, Order code CLN/23

## Differential Equations



### Hyperbolic Partial Differential Equations and Geometric Optics

**Jeffrey Rauch, University of Michigan, Ann Arbor, MI**

This book introduces graduate students and researchers in mathematics and the sciences to the multifaceted subject of the equations of hyperbolic type, which are used, in particular, to describe

propagation of waves at finite speed.

Among the topics carefully presented in the book are nonlinear geometric optics, the asymptotic analysis of short wavelength solutions, and nonlinear interaction of such waves. Studied in detail are the damping of waves, resonance, dispersive decay, and solutions to the compressible Euler equations with dense oscillations created by resonant interactions. Many fundamental results are presented for the first time in a textbook format. In addition to dense oscillations, these include the treatment of precise speed of propagation and the existence and stability questions for the three wave interaction equations.

One of the strengths of this book is its careful motivation of ideas and proofs, showing how they evolve from related, simpler cases. This makes the book quite useful to both researchers and graduate students interested in hyperbolic partial differential equations. Numerous exercises encourage active participation of the reader.

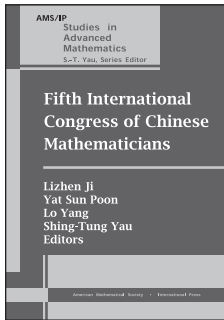
The author is a professor of mathematics at the University of Michigan. A recognized expert in partial differential equations, he has made important contributions to the transformation of three areas of hyperbolic partial differential equations: nonlinear microlocal analysis, the control of waves, and nonlinear geometric optics.

**Contents:** Simple examples of propagation; The linear Cauchy problem; Dispersive behavior; Linear elliptic geometric optics; Linear hyperbolic geometric optics; The nonlinear Cauchy problem; One phase nonlinear geometric optics; Stability for one phase nonlinear geometric optics; Resonant interaction and quasilinear systems; Examples of resonance in one dimensional space; Dense oscillations for the compressible Euler equations; Bibliography; Index.

**Graduate Studies in Mathematics, Volume 133**

April 2012, approximately 373 pages, Hardcover, ISBN: 978-0-8218-7291-8, 2010 *Mathematics Subject Classification:* 35A18, 35A21, 35A27, 35A30, 35Q31, 35Q60, 78A05, 78A60, 78M35, 93B07, **AMS members US\$51.20**, List US\$64, Order code GSM/133

# General Interest



## Fifth International Congress of Chinese Mathematicians

**Lizhen Ji**, *University of Michigan, Ann Arbor, MI*, **Yat Sun Poon**, *Tsinghua University, Beijing, China*, **Lo Yang**, *Chinese Academy of Sciences, Beijing, China*, and **Shing-Tung Yau**, *Harvard University, Cambridge, MA*, Editors

This two-part volume represents the proceedings of the Fifth International Congress of Chinese Mathematicians, held at Tsinghua University, Beijing, in December 2010. The Congress brought together eminent Chinese and overseas mathematicians to discuss the latest developments in pure and applied mathematics. Included are 60 papers based on lectures given at the conference.

Titles in this series are co-published with International Press, Cambridge, MA.

**Contents: Part 1:** **B. Andrews**, Gradient and oscillation estimates and their applications in geometric PDE; **J. A. Chen** and **M. Chen**, On canonical and explicit classification of algebraic threefolds; **C.-Y. Chi**, Canonical pseudonorms on pluricanonical spaces; **J. Coates**, The enigmatic Tate-Shafarevich group; **X. Dai**, Eta invariants for even dimensional manifolds; **F. Fang** and **Z. Zhang**, Ricci flow on 4-manifolds and Seiberg-witten equations; **L. Fargues** and **J.-M. Fontaine**, Vector bundles and  $p$ -adic Galois representations; **B. Fu**, Geometry of nilpotent orbits: Results and conjectures; **L. Fu**, Integrable connections and Galois representations; **A. Futaki**, Asymptotic Chow polystability in Kähler geometry; **W. T. Gan**, Representations of metaplectic groups; **C. Fang** and **X. He**, Notes on partial conjugation; **K.-W. Lan**, Geometric modular forms and the cohomology of torsion automorphic sheaves; **N. C. Leung**, SYZ transformations for toric varieties; **B. Guo** and **H. Li**, Some variational problems in conformal geometry; **T. Draghici**, **T.-J. Li**, and **W. Zhang**, Geometry of tamed almost complex structures on 4-dimensional manifolds; **W.-C. W. Li**, The arithmetic of noncongruence modular forms; **Y.-P. Lee**, **H.-W. Lin**, and **C.-L. Wang**, Analytic continuations of quantum cohomology; **K. Liu** and **P. Peng**, Mathematical aspects of string duality; **X. Guo** and **H. Qin**, The tame kernels of number fields; **B. Sun**, Notes on MVW-extensions; **F. Chen** and **S. Tan**, Vertex operator representations for a class of  $BC_\nu$ -graded Lie algebras; **H.-H. Tseng**, Notes on orbifold Gromov-Witten theory; **L.-S. Tseng**, Cohomologies and elliptic operators on symplectic manifolds; **M.-T. Wang**, Quasilocal mass from a mathematical perspective; **S. Wang**, On dimension data, local VS global conjugacy; **X.-J. Wang** and **B. Zhou**, Variational problems of Monge-Ampère type; **S. Wu**, Wellposedness of the two and three dimensional full water wave problem; **H.-W. Xu**, Recent developments in differentiable sphere theorems; **R. Du** and **S. Yau**, New invariants for complex manifolds, singularities, and CR manifolds with applications; **W. Zhang**, Gross-Zagier formula and arithmetic fundamental lemma; **J. Zhou**, Integrality properties of mirror maps; **X.-Y. Zhou** and **L. Zhu**, Ohsawa-Takegoshi  $L^2$  extension theorem: Revisited; **Part 2:** **B.-L. Chen**, Regularity of Einstein spacetimes; **K.-C. Chen**, A survey on

retrograde and prograde orbits of the three-body problem by variational methods; **D. X. Gu**, **W. Zeng**, **L. M. Lui**, **F. Luo**, and **S.-T. Yau**, Recent development of computational conformal geometry; **B.-Y. Guo**, **C. Zhang**, and **T. Sun**, Some developments in spectral methods; **L.-H. Huang**, On the center of mass in general relativity; **Z. Huang**, Tailored finite point method for numerical simulation of partial differential equations; **T. Lam**, Loop symmetric functions and factorizing matrix polynomials; **A. Laptev**, Spectral inequalities for partial differential equations and their applications; **E. K.-W. Chu**, **T.-S. Huang**, and **W.-W. Lin**, Structured doubling algorithms for solving  $g$ -palindromic quadratic eigenvalue problems; **Y. Lin**, Ricci curvature and functional inequalities on graphs; **P. Lu**, Complexity dichotomies of counting problems; **L. M. Lui**, **T. W. Wong**, **W. Zeng**, **X. Gu**, **P. M. Thompson**, **T. F. Chan**, and **S.-T. Yau**, A survey on recent development in computational quasi-conformal geometry and its applications; **T. Luo**, Dynamics of shock fronts for some hyperbolic systems; **L. Han** and **J.-S. Pang**, Time-stepping methods for linear complementarity systems; **C.-W. Shu**, A brief survey on high order accurate maximum principle satisfying and positivity preserving discontinuous Galerkin and finite volume schemes for conservation laws; **J. Smoller** and **B. Temple**, A one parameter family of expanding wave solutions of the Einstein equations that induces an anomalous acceleration into the standard model of cosmology; **G. Strang**, Banded matrices with banded inverses and  $A - LPU$ ; **G. Wahba**, Dissimilarity data in statistical model building and machine learning; **R.-H. Wang**, Some progress on computational geometry; **J. Wei**, Geometrization program of semilinear elliptic equations; **Z. Zhu**, **A. M.-C. So**, and **Y. Ye**, Fast and near-optimal matrix completion via randomized basis pursuit; **J. Yin**, Mathematical questions of quantum dilute gases; **X. Yuan**, Algebraic dynamics, canonical heights and Arakelov geometry; **B.-Y. Zhang**, Well-posedness and control of the Korteweg-de Vries equation on a bounded domain; **Y. Jiang**, **H. Zhang**, and **W. Zhu**, Statistical analysis in genetic association studies of mental illnesses; **H. Zhao**, Compressible Navier-Stokes equations with large density oscillation; **W. Zou**, Some results on variational and topological methods.

AMS/IP Studies in Advanced Mathematics, Volume 51

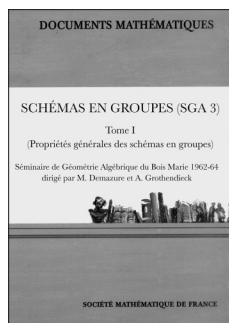
**Part 1:** March 2012, approximately 497 pages, Softcover, ISBN: 978-0-8218-7586-5, 2010 *Mathematics Subject Classification*: 05-XX, 08-XX, 11-XX, 14-XX, 22-XX, 35-XX, 37-XX, 53-XX, 58-XX, 62-XX, 65-XX, 20-XX, 30-XX, 80-XX, 83-XX, 90-XX, **AMS members US\$104**, List US\$130, Order code AMSIP 51.1

**Part 2:** March 2012, approximately 498 pages, Softcover, ISBN: 978-0-8218-7587-2, 2010 *Mathematics Subject Classification*: 05-XX, 08-XX, 11-XX, 14-XX, 22-XX, 35-XX, 37-XX, 53-XX, 58-XX, 62-XX, 65-XX, 20-XX, 30-XX, 80-XX, 83-XX, 90-XX, **AMS members US\$104**, List US\$130, Order code AMSIP 51.2

**Set:** March 2012, approximately 995 pages, Softcover, ISBN: 978-0-8218-7555-1, 2010 *Mathematics Subject Classification*: 05-XX, 08-XX, 11-XX, 14-XX, 22-XX, 35-XX, 37-XX, 53-XX, 58-XX, 62-XX, 65-XX, 20-XX, 30-XX, 80-XX, 83-XX, 90-XX, **AMS members US\$176**, List US\$220, Order code AMSIP/51

# New AMS-Distributed Publications

## Algebra and Algebraic Geometry



### Schémas en Groupes (SGA 3)

#### Volume I (Propriétés Générales des Schémas en Groupes)

Michel Demazure and Alexandre Grothendieck

This volume is an updated edition of “Schémas en Groupes (SGA 3), volume I (Propriétés Générales des Schémas en Groupes)”, Lecture Notes in Mathematics, 151, Springer-Verlag, Berlin-Heidelberg-New York, 1970, by Michel Demazure, Alexandre Grothendieck et al.

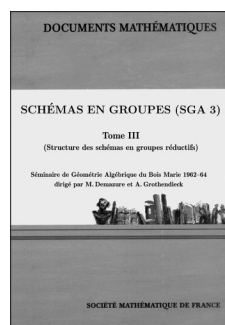
This volume introduces the language of representable functors and sheaves and proves general results about group schemes (Exp. I to VII<sub>A</sub>) and formal groups (Exp. VII<sub>B</sub>).

A publication of the Société Mathématique de France, Marseilles (SMF), distributed by the AMS in the U.S., Canada, and Mexico. Orders from other countries should be sent to the SMF. Members of the SMF receive a 30% discount from list.

**Contents:** M. Demazure, Structures algébriques. Cohomologie des groupes; M. Demazure, Fibrés tangents—Algèbres de Lie; M. Demazure, Extensions infinitésimales; M. Demazure, Topologies et faisceaux; P. Gabriel, Construction de schémas quotients; P. Gabriel, Généralités sur les groupes algébriques; J.-E. Bertin, Généralités sur les schémas en groupes; P. Gabriel, Étude infinitésimale des schémas en groupes; Index.

**Documents Mathématiques**, Number 7

October 2011, 638 pages, Hardcover, ISBN: 978-2-85629-323-2, 2010 *Mathematics Subject Classification*: 14A15, 14B12, 14D15, 14F20, 14F35, 14K99, 14L15, 14L30, 17B22, 20G10, 20G35, **Individual member US\$121.50**, List US\$135, Order code SMFDM/7



### Schémas en Groupes (SGA 3)

#### Volume III (Structure des Schémas en Groupes Réductifs)

Michel Demazure and Alexandre Grothendieck

This volume is an updated edition of “Schémas en Groupes (SGA 3), volume III (Structure des Schémas en Groupes Réductifs), Lecture Notes in Mathematics, 153, Springer-Verlag, Berlin-Heidelberg-New York, 1970, by Michel Demazure, Alexandre Grothendieck et al.

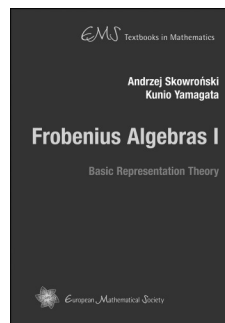
This volume gives the structure of reductive  $S$ -group schemes (Exp. XIX to XXV), and their parabolic subgroups (Exp. XXVI), over an arbitrary base scheme  $S$ .

A publication of the Société Mathématique de France, Marseilles (SMF), distributed by the AMS in the U.S., Canada, and Mexico. Orders from other countries should be sent to the SMF. Members of the SMF receive a 30% discount from list.

**Contents:** Groupes réductifs—Généralités; Groupes réductifs de rang semi-simple 1; Données radicielles; Groupes réductifs: déploiements, sous-groupes, groupes quotients; Groupes réductifs: unicité des groupes épinglés; Automorphismes des groupes réductifs; Le théorème d’existence; Sous-groupes paraboliques des groupes réductifs; Index.

**Documents Mathématiques**, Number 8

October 2011, 337 pages, Hardcover, ISBN: 978-2-85629-324-9, 2010 *Mathematics Subject Classification*: 14A15, 14B12, 14D15, 14F20, 14F35, 14K99, 14L15, 14L30, 17B22, 20G10, 20G35, **Individual member US\$81**, List US\$90, Order code SMFDM/8



### Frobenius Algebras I

#### Basic Representation Theory

Andrzej Skowroński, Nicolaus Copernicus University, Torun, Poland, and Kunio Yamagata, Tokyo University of Agriculture and Technology, Fuchu, Japan

This is the first of two volumes which will provide a comprehensive introduction to the modern representation theory of Frobenius algebras. The first part of the book serves as a general introduction to basic results and techniques of the modern representation theory of finite dimensional associative algebras over fields, including the Morita theory of equivalences and dualities and the Auslander–Reiten theory of irreducible morphisms and almost split sequences.

The second part is devoted to fundamental classical and recent results concerning the Frobenius algebras and their module categories. Moreover, the prominent classes of Frobenius algebras, the Hecke algebras of Coxeter groups, and the finite dimensional Hopf algebras over fields are exhibited.

This volume is self contained and the only prerequisite is a basic knowledge of linear algebra. It includes complete proofs of all

results presented and provides a rich supply of examples and exercises.

The text is primarily addressed to graduate students starting research in the representation theory of algebras as well as mathematicians working in other fields.

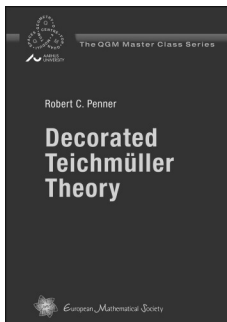
A publication of the European Mathematical Society (EMS). Distributed within the Americas by the American Mathematical Society.

**Contents:** Algebras and modules; Morita theory; Auslander–Reiten theory; Selfinjective algebras; Hecke algebras; Hopf algebras; Bibliography; Index.

**EMS Textbooks in Mathematics**, Volume 12

December 2011, 661 pages, Hardcover, ISBN: 978-3-03719-102-6, 2010 *Mathematics Subject Classification*: 16-01, 13E10, 15A63, 15A69, 16Dxx, 16E30, 16G10, 16G20, 16G70, 16K20, 16W30, 51F15, **AMS members US\$62.40**, List US\$78, Order code EMSTEXT/12

## Analysis



### Decorated Teichmüller Theory

**Robert C. Penner**, Aarhus University, Denmark, and California Institute of Technology, Pasadena, CA

There is an essentially “tinker-toy” model of a trivial bundle over the classical

Teichmüller space of a punctured surface, called the decorated Teichmüller space, where the fiber over a point is the space of all tuples of horocycles, one about each puncture. This model leads to an extension of the classical mapping class groups called the Ptolemy groupoids and to certain matrix models solving related enumerative problems, each of which has proved useful both in mathematics and in theoretical physics. These spaces enjoy several related parametrizations leading to a rich and intricate algebro-geometric structure tied to the already elaborate combinatorial structure of the tinker-toy model. Indeed, the natural coordinates give the prototypical examples not only of cluster algebras but also of tropicalization.

This interplay of combinatorics and coordinates admits further manifestations, for example, in a Lie theory for homeomorphisms of the circle, in the geometry underlying the Gauss product, in profinite and pronilpotent geometry, in the combinatorics underlying conformal and topological quantum field theories, and in the geometry and combinatorics of macromolecules.

This volume gives the story a wider context of these decorated Teichmüller spaces as developed by the author over the last two decades in a series of papers, some of them in collaboration. Sometimes correcting errors or typos, sometimes simplifying proofs, and sometimes articulating more general formulations than the original research papers, this volume is self contained and requires little formal background. Based on a master’s course at Aarhus University, it gives the first treatment of these works in monographic form.

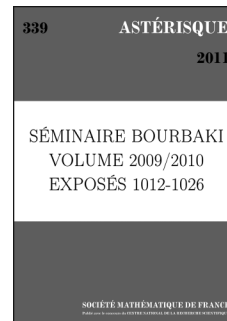
A publication of the European Mathematical Society (EMS). Distributed within the Americas by the American Mathematical Society.

**Contents:** The basics; Lambda lengths in finite dimensions; Lambda lengths in infinite dimensions; Decomposition of the decorated spaces; Mapping class groupoids and moduli spaces; Further applications; Epilogue; Appendix A. Geometry of Gauss product; Appendix B. Dual to the Kähler two form; Appendix C. Stable curves and screens; Bibliography; List of notation; Index.

**The QGM Master Class Series**, Volume 1

January 2012, 377 pages, Hardcover, ISBN: 978-3-03719-075-3, 2010 *Mathematics Subject Classification*: 30-02, 30F60, 32G15, 30F10, 30Fxx, **AMS members US\$62.40**, List US\$78, Order code EMSQGM/1

## General Interest



### Séminaire Bourbaki

Volume 2009/2010  
Exposés 1012–1026

As in the preceding volumes of this seminar, at which more than one thousand talks have been presented, this volume features fifteen survey lectures on topics of current interest: five lectures about group theory, three about mathematical physics, two related to Langlands’

program, two on algebraic geometry, one about differential geometry, one on clusters algebras, and one about random matrices. A publication of the Société Mathématique de France, Marseilles (SMF), distributed by the AMS in the U.S., Canada, and Mexico. Orders from other countries should be sent to the SMF. Members of the SMF receive a 30% discount from list.

**Contents:** *Novembre 2009:* J.-L. Colliot-Thélène, Groupe de Chow des zéro-cycles sur les variétés  $p$ -adiques; M. Emerton,  $p$ -adic families of modular forms; B. Keller, Algèbres amassées et applications; S. Klainerman, Linear stability of black holes; A. Kupiainen, Ergodicity of two dimensional turbulence; *Mars 2010:* L. Berger, La correspondance de Langlands locale  $p$ -adique pour  $GL_2(\mathbb{Q}_p)$ ; O. Biquard, Métriques kählériennes extrémales sur les surfaces toriques; A. Guionnet, Grandes matrices aléatoires et théorèmes d’universalité; B. Oliver, La classification des groupes  $p$ -compacts; B. Rémy, Groupes algébriques pseudo-réductifs et applications; *Juin 2010:* M. Burger, Fundamental groups of Kähler manifolds and geometric group theory; F. Paulin, Sur les automorphismes de groupes libres et de groupes de surface; S. Serfaty, Lois de conservation et régularité par compensation pour les systèmes antisymétriques et les surfaces de Willmore; B. Totaro, The ACC conjecture for log canonical thresholds; J. S. Wilson, Finite index subgroups and verbal subgroups in profinite groups.

**Astérisque**, Number 339

December 2011, 408 pages, Softcover, ISBN: 978-2-85629-326-3, 2010 *Mathematics Subject Classification*: 11G25, 14C25, 14G20, 14C35, 11F33, 11F80, 16S99, 05E15, 22E46, 16G20, 18E30, 35J10, 37A25, 37A60, 37N10, 37L55, 76F55, 76F20, 60H15, 60H07, 35R60, 60H30, 76B03, 35J60, 11Fxx, 11Sxx, 22Exx, 53C55, 32Q26, 15B52, 55R35, 55P35, 20F55, 20Gxx, 20G15, 14L15, 20G30, 20G35, 14F35, 20F65, 32J27, 20E08, 20E36, 20E05, 20F69, 20G20, 53C42, 35J40, 35D10, 58E20, 14B05, 14E30, 14E15, 20E18, 20F12, 20F10, 20D99, **Individual member US\$94.50**, List US\$105, Order code AST/339