forum of math sigma

forum of math sigma represents a dynamic and innovative platform dedicated to the advancement and discussion of mathematical concepts, theories, and applications. This specialized forum brings together mathematicians, researchers, educators, students, and enthusiasts from around the world to collaborate, share knowledge, and solve complex problems. Emphasizing a wide range of mathematical disciplines, the forum of math sigma fosters an environment conducive to learning, discovery, and intellectual exchange. This article explores the key features, benefits, and functionalities of the forum of math sigma, detailing how it serves as a pivotal resource in the global mathematics community. Additionally, it outlines the user experience, the types of discussions hosted, and the educational impact of the platform. The following sections will provide a comprehensive overview of the forum of math sigma, ensuring a thorough understanding of its role and significance in contemporary mathematics.

Overview of Forum of Math Sigma

The forum of math sigma is an online hub designed specifically for the mathematical community to engage in high-level discourse and problem-solving. Unlike general discussion boards, this forum targets topics spanning pure and applied mathematics, including algebra, calculus, number theory, statistics, and more. The platform's structure supports detailed mathematical notation, enabling users to present complex equations and proofs clearly and accurately. This precision makes the forum of math sigma indispensable for in-depth academic discussions and research collaboration.

Purpose and Mission

The primary mission of the forum of math sigma is to facilitate communication among mathematicians and learners by providing a space where ideas can be exchanged freely and rigorously. It aims to promote mathematical literacy and innovation by connecting experts with novices, fostering mentorship, and encouraging the dissemination of new findings. This mission underscores the forum's commitment to both educational enrichment and the advancement of mathematical sciences.

Target Audience

This forum caters to a diverse audience including professional mathematicians, university professors, graduate and undergraduate students, and independent researchers. Additionally, educators seeking resources and support in teaching mathematics find the forum valuable. The inclusive nature of the forum of math sigma ensures that users at varying levels of expertise can participate meaningfully.

Key Features and Functionalities

The forum of math sigma offers a range of features tailored to the needs of its specialized user base. These functionalities enhance user interaction, support detailed mathematical communication, and streamline the sharing of knowledge and resources.

Advanced Mathematical Typesetting

One of the standout functionalities of the forum of math sigma is its support for LaTeX, a typesetting system widely used for mathematical and scientific documents. This allows users to input complex formulas, symbols, and structured proofs in a format that is both visually clear and academically rigorous. The capability to accurately display mathematical notation is critical for facilitating precise communication.

Organized Discussion Threads

The forum is structured into thematic categories and subforums based on mathematical disciplines and topics. This organization helps users navigate discussions efficiently and locate relevant threads quickly. Each thread typically revolves around a specific problem, theorem, or concept, encouraging focused and in-depth discourse.

Reputation and Moderation System

To maintain high-quality discussions, the forum of math sigma implements a reputation system where users earn points and badges for valuable contributions. This system incentivizes expert participation and helps highlight authoritative answers. Moderators oversee the forum to ensure compliance with guidelines, preventing spam and maintaining respectful interactions.

Community and Collaboration

The strength of the forum of math sigma lies in its vibrant community, which actively contributes to knowledge-building and collaborative problem solving. The platform encourages networking and cooperative learning among its members.

Peer-to-Peer Support

Users frequently engage in peer-to-peer assistance, where experienced mathematicians provide guidance on challenging problems or clarify complex concepts. This collaborative environment nurtures a culture of mutual support and continuous learning.

Collaborative Projects and Research

Beyond discussion, the forum of math sigma often serves as a launching point for joint research projects and publications. Members coordinate efforts to tackle open problems or develop new mathematical models, leveraging the collective expertise of the community.

Networking Opportunities

Participation in the forum facilitates connections with professionals and academics worldwide. These relationships can lead to academic collaborations, conference invitations, and career opportunities within the mathematical sciences.

Educational Resources and Support

The forum of math sigma is not only a discussion platform but also a valuable educational resource. It offers a wealth of materials and support mechanisms designed to enhance mathematical understanding and instruction.

Problem Sets and Solutions

Members regularly share problem sets ranging from elementary exercises to advanced challenges. These problems come with detailed solutions and explanations, making the forum an effective tool for self-study and skill improvement.

Lecture Notes and Tutorials

The forum hosts an extensive collection of lecture notes, tutorials, and reference materials contributed by educators and researchers. These resources cover diverse topics and are accessible to users seeking to deepen their knowledge or prepare for examinations.

Workshops and Webinars

Occasionally, the forum of math sigma organizes online workshops and webinars featuring expert speakers. These events provide interactive learning experiences and updates on recent developments in various mathematical fields.

Impact on Mathematical Research and Learning

The forum of math sigma plays a significant role in advancing mathematical research and education by providing a collaborative and resource-rich environment. Its influence extends across academic, professional, and educational domains.

Accelerating Research Innovation

By enabling rapid exchange of ideas and peer review, the forum expedites the research process. It allows mathematicians to test hypotheses, receive feedback, and refine proofs in a timely manner, contributing to faster dissemination of new knowledge.

Enhancing Learning Outcomes

For students and educators, the forum offers a supplementary platform that supports active learning and problem-solving skills. Access to expert advice and diverse perspectives fosters deeper comprehension and academic success.

Global Mathematical Community Building

The forum of math sigma connects individuals across geographical and institutional boundaries, strengthening the global network of mathematicians. This connectivity promotes inclusivity and the sharing of diverse mathematical traditions and methodologies.

- Support for complex mathematical notation via LaTeX
- Structured categories facilitating topic-specific discussions
- Reputation system encouraging quality contributions
- Peer collaboration on research and problem-solving
- Extensive educational content including tutorials and problem sets
- Interactive learning events such as webinars and workshops

Frequently Asked Questions

What is Forum of Mathematics, Sigma?

Forum of Mathematics, Sigma is a peer-reviewed open-access mathematics journal published by Cambridge University Press, covering all areas of pure and applied mathematics.

How can I submit a paper to Forum of Mathematics, Sigma?

To submit a paper, authors need to prepare their manuscript following the journal's guidelines and submit it online through the Cambridge Core submission system.

Is Forum of Mathematics, Sigma an open-access journal?

Yes, Forum of Mathematics, Sigma is fully open access, allowing free and unrestricted access to all published articles.

What types of articles does Forum of Mathematics, Sigma publish?

The journal publishes high-quality original research articles, including long papers and comprehensive studies in all branches of mathematics.

What is the impact factor of Forum of Mathematics, Sigma?

As a relatively new journal, Forum of Mathematics, Sigma has been gaining recognition, but specific impact factor details can be found on official journal metrics websites or Cambridge University Press.

Who is the editor-in-chief of Forum of Mathematics, Sigma?

The editor-in-chief is a prominent mathematician appointed by Cambridge University Press; current details can be found on the journal’s official website.

Are articles in Forum of Mathematics, Sigma peer-reviewed?

Yes, all submissions undergo a rigorous peer-review process to ensure the quality and validity of the research published.

Can I access Forum of Mathematics, Sigma articles for free?

Yes, since it is an open-access journal, all articles published in Forum of Mathematics, Sigma are freely available online without subscription.

Additional Resources

1. *Advanced Topics in Mathematical Analysis*
This book delves into complex analysis, functional analysis, and harmonic analysis, providing a solid foundation for research in modern mathematical theories. It explores rigorous proofs and problem-solving techniques

essential for understanding advanced mathematical structures. Ideal for graduate students and researchers interested in theoretical and applied mathematics.

2. *Algebraic Structures and Their Applications*
Focusing on group theory, ring theory, and module theory, this text offers an in-depth study of algebraic systems and their roles in various branches of mathematics. The book includes numerous examples and exercises designed to build intuition and mastery. It is particularly useful for those studying abstract algebra in the context of mathematical research.

3. *Foundations of Probability and Stochastic Processes*
This volume introduces foundational concepts in probability theory with an emphasis on measure-theoretic approaches. It also covers stochastic processes, martingales, and their applications in mathematical finance and statistical mechanics. Suitable for advanced undergraduates and graduate students in mathematics and related fields.

4. *Differential Geometry and Topology in Modern Mathematics*
A comprehensive guide to the principles of differential geometry and topology, this book highlights their interplay and applications in contemporary mathematical research. Topics include manifolds, curvature, homotopy, and cohomology theories. It serves as a valuable resource for students and researchers exploring geometric aspects of mathematics.

5. *Combinatorics and Graph Theory: Methods and Applications*
This book presents essential techniques in combinatorics and graph theory, emphasizing problem-solving strategies and real-world applications. It covers topics such as enumeration, graph coloring, and network flows, providing both theoretical insights and practical exercises. The text is well-suited for those preparing for research or competitions in discrete mathematics.

6. *Partial Differential Equations: Theory and Methods*
Providing a detailed examination of PDEs, this book discusses classical and modern methods for solving linear and nonlinear equations. It includes topics like Sobolev spaces, elliptic and parabolic equations, and applications to physics and engineering. The material is designed for graduate students and researchers working in analysis and applied mathematics.

7. *Mathematical Logic and Model Theory*
This text explores the fundamentals of logic, proof theory, and model theory, with an emphasis on their implications in mathematics and computer science. It covers completeness, compactness, and decidability, offering rigorous treatment of these foundational topics. The book is essential for those interested in the logical underpinnings of mathematical structures.

8. *Number Theory: Advanced Concepts and Research Problems*
Covering classical and modern topics in number theory, this book discusses prime distribution, modular forms, and Diophantine equations. It also presents open problems and research directions to stimulate further study and exploration. Suitable for graduate students and researchers seeking a deeper understanding of number theory.

9. *Functional Analysis and Operator Theory*
This comprehensive text focuses on the theory of Banach and Hilbert spaces, spectral theory, and linear operators. It emphasizes applications to quantum mechanics and differential equations. The book is designed for advanced students and researchers aiming to build expertise in functional analysis and its diverse applications.

Forum Of Math Sigma

forum of math sigma: *Perturbation Theory* Giuseppe Gaeta, 2022-12-16 This volume in the Encyclopedia of Complexity and Systems Science, Second Edition, is devoted to the fundamentals of Perturbation Theory (PT) as well as key applications areas such as Classical and Quantum Mechanics, Celestial Mechanics, and Molecular Dynamics. Less traditional fields of application, such as Biological Evolution, are also discussed. Leading scientists in each area of the field provide a comprehensive picture of the landscape and the state of the art, with the specific goal of combining mathematical rigor, explicit computational methods, and relevance to concrete applications. New to this edition are chapters on Water Waves, Rogue Waves, Multiple Scales methods, legged locomotion, Condensed Matter among others, while all other contributions have been revised and updated. Coverage includes the theory of (Poincare'-Birkhoff) Normal Forms, aspects of PT in specific mathematical settings (Hamiltonian, KAM theory, Nekhoroshev theory, and symmetric systems), technical problems arising in PT with solutions, convergence of series expansions, diagrammatic methods, parametric resonance, systems with nilpotent real part, PT for non-smooth systems, and on PT for PDEs [write out this acronym partial differential equations]. Another group of papers is focused specifically on applications to Celestial Mechanics, Quantum Mechanics and the related semiclassical PT, Quantum Bifurcations, Molecular Dynamics, the so-called choreographies in the N-body problem, as well as Evolutionary Theory. Overall, this unique volume serves to demonstrate the wide utility of PT, while creating a foundation for innovations from a new generation of graduate students and professionals in Physics, Mathematics, Mechanics, Engineering and the Biological Sciences.

forum of math sigma: Dynamics in One Non-Archimedean Variable Robert L. Benedetto, 2019-03-05 The theory of complex dynamics in one variable, initiated by Fatou and Julia in the early twentieth century, concerns the iteration of a rational function acting on the Riemann sphere. Building on foundational investigations of p-adic dynamics in the late twentieth century, dynamics in one non-archimedean variable is the analogous theory over non-archimedean fields rather than over the complex numbers. It is also an essential component of the number-theoretic study of arithmetic dynamics. This textbook presents the fundamentals of non-archimedean dynamics, including a unified exposition of Rivera-Letelier's classification theorem, as well as results on wandering domains, repelling periodic points, and equilibrium measures. The Berkovich projective line, which is the appropriate setting for the associated Fatou and Julia sets, is developed from the ground up, as are relevant results in non-archimedean analysis. The presentation is accessible to graduate students with only first-year courses in algebra and analysis under their belts, although some previous exposure to non-archimedean fields, such as the p-adic numbers, is recommended. The book should also be a useful reference for more advanced students and researchers in arithmetic and non-archimedean dynamics.

forum of math sigma: *Mordell–Weil Lattices* Matthias Schütt, Tetsuji Shioda, 2019-10-17 This book lays out the theory of Mordell–Weil lattices, a very powerful and influential tool at the crossroads of algebraic geometry and number theory, which offers many fruitful connections to other areas of mathematics. The book presents all the ingredients entering into the theory of Mordell–Weil lattices in detail, notably, relevant portions of lattice theory, elliptic curves, and algebraic surfaces. After defining Mordell–Weil lattices, the authors provide several applications in depth. They start with the classification of rational elliptic surfaces. Then a useful connection with

Galois representations is discussed. By developing the notion of excellent families, the authors are able to design many Galois representations with given Galois groups such as the Weyl groups of E6, E7 and E8. They also explain a connection to the classical topic of the 27 lines on a cubic surface. Two chapters deal with elliptic K3 surfaces, a pulsating area of recent research activity which highlights many central properties of Mordell–Weil lattices. Finally, the book turns to the rank problem—one of the key motivations for the introduction of Mordell–Weil lattices. The authors present the state of the art of the rank problem for elliptic curves both over Q and over C(t) and work out applications to the sphere packing problem. Throughout, the book includes many instructive examples illustrating the theory.

forum of math sigma: Automorphic Forms Beyond $mathrm {GL}_2$ Ellen Elizabeth Eischen, Wee Teck Gan, Aaron Pollack, Zhiwei Yun, 2024-03-26 The Langlands program has been a very active and central field in mathematics ever since its conception over 50 years ago. It connects number theory, representation theory and arithmetic geometry, and other fields in a profound way. There are nevertheless very few expository accounts beyond the GL(2) case. This book features expository accounts of several topics on automorphic forms on higher rank groups, including rationality questions on unitary group, theta lifts and their applications to Arthur's conjectures, quaternionic modular forms, and automorphic forms over functions fields and their applications to inverse Galois problems. It is based on the lecture notes prepared for the twenty-fifth Arizona Winter School on “Automorphic Forms beyond GL(2)”, held March 5–9, 2022, at the University of Arizona in Tucson. The speakers were Ellen Eischen, Wee Teck Gan, Aaron Pollack, and Zhiwei Yun. The exposition of the book is in a style accessible to students entering the field. Advanced graduate students as well as researchers will find this a valuable introduction to various important and very active research areas.

forum of math sigma: Handbook of Homotopy Theory Haynes Miller, 2020-01-23 The Handbook of Homotopy Theory provides a panoramic view of an active area in mathematics that is currently seeing dramatic solutions to long-standing open problems, and is proving itself of increasing importance across many other mathematical disciplines. The origins of the subject date back to work of Henri Poincaré and Heinz Hopf in the early 20th century, but it has seen enormous progress in the 21st century. A highlight of this volume is an introduction to and diverse applications of the newly established foundational theory of ¥ -categories. The coverage is vast, ranging from axiomatic to applied, from foundational to computational, and includes surveys of applications both geometric and algebraic. The contributors are among the most active and creative researchers in the field. The 22 chapters by 31 contributors are designed to address novices, as well as established mathematicians, interested in learning the state of the art in this field, whose methods are of increasing importance in many other areas.

forum of math sigma: *On p-Adic L-Functions for Hilbert Modular Forms* John Bergdall, David Hansen, 2024-07-25 View the abstract.

forum of math sigma: Arithmetic Geometry, Number Theory, and Computation Jennifer S. Balakrishnan, Noam Elkies, Brendan Hassett, Bjorn Poonen, Andrew V. Sutherland, John Voight, 2022-03-15 This volume contains articles related to the work of the Simons Collaboration “Arithmetic Geometry, Number Theory, and Computation.” The papers present mathematical results and algorithms necessary for the development of large-scale databases like the L-functions and Modular Forms Database (LMFDB). The authors aim to develop systematic tools for analyzing Diophantine properties of curves, surfaces, and abelian varieties over number fields and finite fields. The articles also explore examples important for future research. Specific topics include● algebraic varieties over finite fields● the Chabauty-Coleman method● modular forms● rational points on curves of small genus● S-unit equations and integral points.

forum of math sigma: Tate Duality in Positive Dimension over Function Fields Zev Rosengarten, 2023-11-27 View the abstract.

forum of math sigma: Proceedings Of The International Congress Of Mathematicians 2018 (Icm 2018) (In 4 Volumes) Boyan Sirakov, Paulo Ney De Souza, Marcelo Viana, 2019-02-27 The

Proceedings of the ICM publishes the talks, by invited speakers, at the conference organized by the International Mathematical Union every 4 years. It covers several areas of Mathematics and it includes the Fields Medal and Nevanlinna, Gauss and Leelavati Prizes and the Chern Medal laudatios.

forum of math sigma: Moduli Spaces, Virtual Invariants and Shifted Symplectic Structures Young-Hoon Kiem, 2025-03-25 Enumerative geometry is a core area of algebraic geometry that dates back to Apollonius in the second century BCE. It asks for the number of geometric figures with desired properties and has many applications from classical geometry to modern physics. Typically, an enumerative geometry problem is solved by first constructing the space of all geometric figures of fixed type, called the moduli space, and then finding the subspace of objects satisfying the desired properties. Unfortunately, many moduli spaces from nature are highly singular, and an intersection theory is difficult to make sense of. However, they come with deeper structures, such as perfect obstruction theories, which enable us to define nice subsets, called virtual fundamental classes. Now, enumerative numbers, called virtual invariants, are defined as integrals against the virtual fundamental classes. Derived algebraic geometry is a relatively new area of algebraic geometry that is a natural generalization of Serre's intersection theory in the 1950s and Grothendieck's scheme theory in the 1960s. Many moduli spaces in enumerative geometry admit natural derived structures as well as shifted symplectic structures. The book covers foundations on derived algebraic and symplectic geometry. Then, it covers foundations on virtual fundamental classes and moduli spaces from a classical algebraic geometry point of view. Finally, it fuses derived algebraic geometry with enumerative geometry and covers the cutting-edge research topics about Donaldson–Thomas invariants in dimensions three and four.

forum of math sigma: Geometry and Topology of Aspherical Manifolds Luca F. Di Cerbo, Laurenţiu G. Maxim, 2025-03-31 This volume contains the proceedings of the AMS Special Session on Singer–Hopf Conjecture in Geometry and Topology, held from March 18–19, 2023, at Georgia Institute of Technology, Atlanta, Georgia. It presents a multidisciplinary point of view on the Singer conjecture, the Hopf conjecture, the study on normalized Betti numbers, and several other intriguing questions on the fundamental group and cohomology of aspherical manifolds. This volume highlights many interesting research directions in the study of aspherical manifolds and covers a large collection of problems and conjectures about L^2-invariants of aspherical manifolds. It provides a snapshot of contemporary research in mathematics at the interface of geometry and topology, as well as algebraic geometry. The problems are presented from several distinct points of view, and the articles in this volume suggest possible generalizations and bridge a gap with closely related problems in differential geometry, complex algebraic geometry, and geometric topology. The volume can play a role in focusing the attention of the mathematical community on these fascinating problems which continue to resist the siege of geometers and topologists. It is our hope that this volume will become a valuable resource for early career mathematicians interested in these deep and important questions.

forum of math sigma: *Recent Advances in Noncommutative Algebra and Geometry* K. A. Brown, T. J. Hodges, M. Vancliff, J. J. Zhang, 2024-05-30 This volume contains the proceedings of the conference Recent Advances and New Directions in the Interplay of Noncommutative Algebra and Geometry, held from June 20–24, 2022, at the University of Washington, Seattle, in honor of S. Paul Smith's 65th birthday. The articles reflect the wide interests of Smith and provide researchers and graduate students with an indispensable overview of topics of current interest. Specific fields covered include: noncommutative algebraic geometry, representation theory, Hopf algebras and quantum groups, the elliptic algebras of Feigin and Odesskii, Calabi-Yau algebras, Artin-Schelter regular algebras, deformation theory, and Lie theory. In addition to original research contributions the volume includes an introductory essay reviewing Smith's research contributions in these fields, and several survey articles.

forum of math sigma: Facets of Algebraic Geometry Paolo Aluffi, David Anderson, Milena Hering, Mircea Mustaţă, Sam Payne, 2022-04-07 Written to honor the enduring influence of William

Fulton, these articles present substantial contributions to algebraic geometry.

forum of math sigma: *Mathematics and Materials* Mark J. Bowick, David Kinderlehrer, Govind Menon, Charles Radin, 2017-08-25 A co-publication of the AMS, IAS/Park City Mathematics Institute, and Society for Industrial and Applied Mathematics Articles in this volume are based on lectures presented at the Park City summer school on “Mathematics and Materials” in July 2014. The central theme is a description of material behavior that is rooted in statistical mechanics. While many presentations of mathematical problems in materials science begin with continuum mechanics, this volume takes an alternate approach. All the lectures present unique pedagogical introductions to the rich variety of material behavior that emerges from the interplay of geometry and statistical mechanics. The topics include the order-disorder transition in many geometric models of materials including nonlinear elasticity, sphere packings, granular materials, liquid crystals, and the emerging field of synthetic self-assembly. Several lectures touch on discrete geometry (especially packing) and statistical mechanics. The problems discussed in this book have an immediate mathematical appeal and are of increasing importance in applications, but are not as widely known as they should be to mathematicians interested in materials science. The volume will be of interest to graduate students and researchers in analysis and partial differential equations, continuum mechanics, condensed matter physics, discrete geometry, and mathematical physics. Titles in this series are co-published with the Institute for Advanced Study/Park City Mathematics Institute. Members of the Mathematical Association of America (MAA) and the National Council of Teachers of Mathematics (NCTM) receive a 20% discount from list price. NOTE: This discount does not apply to volumes in this series co-published with the Society for Industrial and Applied Mathematics (SIAM).

forum of math sigma: Surveys on Recent Developments in Algebraic Geometry Izzet Coskun, Tommaso de Fernex, Angela Gibney, 2017-07-12 The algebraic geometry community has a tradition of running a summer research institute every ten years. During these influential meetings a large number of mathematicians from around the world convene to overview the developments of the past decade and to outline the most fundamental and far-reaching problems for the next. The meeting is preceded by a Bootcamp aimed at graduate students and young researchers. This volume collects ten surveys that grew out of the Bootcamp, held July 6–10, 2015, at University of Utah, Salt Lake City, Utah. These papers give succinct and thorough introductions to some of the most important and exciting developments in algebraic geometry in the last decade. Included are descriptions of the striking advances in the Minimal Model Program, moduli spaces, derived categories, Bridgeland stability, motivic homotopy theory, methods in characteristic and Hodge theory. Surveys contain many examples, exercises and open problems, which will make this volume an invaluable and enduring resource for researchers looking for new directions.

forum of math sigma: In the Tradition of Thurston II Ken’ichi Ohshika, Athanase Papadopoulos, 2022-08-02 The purpose of this volume and of the other volumes in the same series is to provide a collection of surveys that allows the reader to learn the important aspects of William Thurston’s heritage. Thurston’s ideas have altered the course of twentieth century mathematics, and they continue to have a significant influence on succeeding generations of mathematicians. The topics covered in the present volume include com-plex hyperbolic Kleinian groups, Möbius structures, hyperbolic ends, cone 3-manifolds, Thurston’s norm, surgeries in representation varieties, triangulations, spaces of polygo-nal decompositions and of singular flat structures on surfaces, combination theorems in the theories of Kleinian groups, hyperbolic groups and holomorphic dynamics, the dynamics and iteration of rational maps, automatic groups, and the combinatorics of right-angled Artin groups.

forum of math sigma: Arakelov Geometry and Diophantine Applications Emmanuel Peyre, Gaël Rémond, 2021-03-10 Bridging the gap between novice and expert, the aim of this book is to present in a self-contained way a number of striking examples of current diophantine problems to which Arakelov geometry has been or may be applied. Arakelov geometry can be seen as a link between algebraic geometry and diophantine geometry. Based on lectures from a summer school for graduate students, this volume consists of 12 different chapters, each written by a different author.

The first chapters provide some background and introduction to the subject. These are followed by a presentation of different applications to arithmetic geometry. The final part describes the recent application of Arakelov geometry to Shimura varieties and the proof of an averaged version of Colmez's conjecture. This book thus blends initiation to fundamental tools of Arakelov geometry with original material corresponding to current research. This book will be particularly useful for graduate students and researchers interested in the connections between algebraic geometry and number theory. The prerequisites are some knowledge of number theory and algebraic geometry.

forum of math sigma: Supersingular p-adic L-functions, Maass-Shimura Operators and Waldspurger Formulas Daniel Kriz, 2021-11-09 A groundbreaking contribution to number theory that unifies classical and modern results This book develops a new theory of p-adic modular forms on modular curves, extending Katz's classical theory to the supersingular locus. The main novelty is to move to infinite level and extend coefficients to period sheaves coming from relative p-adic Hodge theory. This makes it possible to trivialize the Hodge bundle on the infinite-level modular curve by a canonical differential that restricts to the Katz canonical differential on the ordinary Igusa tower. Daniel Kriz defines generalized p-adic modular forms as sections of relative period sheaves transforming under the Galois group of the modular curve by weight characters. He introduces the fundamental de Rham period, measuring the position of the Hodge filtration in relative de Rham cohomology. This period can be viewed as a counterpart to Scholze's Hodge-Tate period, and the two periods satisfy a Legendre-type relation. Using these periods, Kriz constructs splittings of the Hodge filtration on the infinite-level modular curve, defining p-adic Maass-Shimura operators that act on generalized p-adic modular forms as weight-raising operators. Through analysis of the p-adic properties of these Maass-Shimura operators, he constructs new p-adic L-functions interpolating central critical Rankin-Selberg L-values, giving analogues of the p-adic L-functions of Katz, Bertolini-Darmon-Prasanna, and Liu-Zhang-Zhang for imaginary quadratic fields in which p is inert or ramified. These p-adic L-functions yield new p-adic Waldspurger formulas at special values.

forum of math sigma: Explicit Arithmetic of Jacobians of Generalized Legendre Curves Over Global Function Fields Lisa Berger, Chris Hall, Rene Pannekoek, Rachel Pries, Shahed Sharif, 2020-09-28 The authors study the Jacobian J of the smooth projective curve C of genus $r-1$ with affine model $y^r = x^r-1(x + 1)(x + t)$ over the function field $mathbb F_p(t)$, when p is prime and $rge 2$ is an integer prime to p. When q is a power of p and d is a positive integer, the authors compute the L-function of J over $mathbb F_q(t^1/d)$ and show that the Birch and Swinnerton-Dyer conjecture holds for J over $mathbb F_q(t^1/d)$.

forum of math sigma: *Intersection Homology & Perverse Sheaves* Laurenţiu G. Maxim, 2019-11-30 This textbook provides a gentle introduction to intersection homology and perverse sheaves, where concrete examples and geometric applications motivate concepts throughout. By giving a taste of the main ideas in the field, the author welcomes new readers to this exciting area at the crossroads of topology, algebraic geometry, analysis, and differential equations. Those looking to delve further into the abstract theory will find ample references to facilitate navigation of both classic and recent literature. Beginning with an introduction to intersection homology from a geometric and topological viewpoint, the text goes on to develop the sheaf-theoretical perspective. Then algebraic geometry comes to the fore: a brief discussion of constructibility opens onto an in-depth exploration of perverse sheaves. Highlights from the following chapters include a detailed account of the proof of the Beilinson–Bernstein–Deligne–Gabber (BBDG) decomposition theorem, applications of perverse sheaves to hypersurface singularities, and a discussion of Hodge-theoretic aspects of intersection homology via Saito’s deep theory of mixed Hodge modules. An epilogue offers a succinct summary of the literature surrounding some recent applications. Intersection Homology & Perverse Sheaves is suitable for graduate students with a basic background in topology and algebraic geometry. By building context and familiarity with examples, the text offers an ideal starting point for those entering the field. This classroom-tested approach opens the door to further study and to current research.

Related to forum of math sigma

Personal and Business Banking | FORUM Credit Union FORUM is dedicated to helping members live their financial dreams. As a member-owned financial cooperative, our members benefit through higher savings rates and lower loan rates

Resources | FORUM Credit Union FORUM's secure, consumer online banking system helps you easily manage your accounts, pay bills, and receive account alerts

Contact Us | FORUM Credit Union Whether you prefer to call, stop by a branch, or chat online, we're always here to help. Find our contact information here

Rates | FORUM Credit Union Searching for a high checking account interest rate in Indianapolis and Central Indiana? Earn a competitive interest rate on your checking account with FORUM Credit Union's YOUR

Make a Payment | FORUM Credit Union Did You Get a Car Loan Through FORUM at a Dealership? If you recently purchased a car and financed it at the dealership, through FORUM Credit Union, you will receive a mailed letter with

Personal Savings | FORUM Credit Union FORUM offers many high rate interest savings options, including personal savings, money market, health savings accounts certificates and IRA s to help you reach your goals

Resources | FORUM Credit Union Here are some common questions and answers from the FORUM team

Business Digital Banking | FORUM Credit Union With FORUM's Business Digital Banking, you can easily manage your business accounts from anywhere, at any time. Access your accounts on the go, monitor transactions instantly, and

Branch and ATM Locations | FORUM Credit Union FORUM Credit Union members are automatically entered to win the Mastercard® Priceless Surprises Sweepstakes every time they use their FORUM Mastercard® credit or debit cards

Resources | FORUM Credit Union FORUM offers perks to our members, such as free credit checks and other discounted services! Check out our current services below. FORUM created Smarter Money Life to help us learn

Personal and Business Banking | FORUM Credit Union FORUM is dedicated to helping members live their financial dreams. As a member-owned financial cooperative, our members benefit through higher savings rates and lower loan rates

Resources | FORUM Credit Union FORUM's secure, consumer online banking system helps you easily manage your accounts, pay bills, and receive account alerts

Contact Us | FORUM Credit Union Whether you prefer to call, stop by a branch, or chat online, we're always here to help. Find our contact information here

Rates | FORUM Credit Union Searching for a high checking account interest rate in Indianapolis and Central Indiana? Earn a competitive interest rate on your checking account with FORUM Credit Union's YOUR

Make a Payment | FORUM Credit Union Did You Get a Car Loan Through FORUM at a Dealership? If you recently purchased a car and financed it at the dealership, through FORUM Credit Union, you will receive a mailed letter

Personal Savings | FORUM Credit Union FORUM offers many high rate interest savings options, including personal savings, money market, health savings accounts certificates and IRA s to help you reach your goals

Resources | FORUM Credit Union Here are some common questions and answers from the FORUM team

Business Digital Banking | FORUM Credit Union With FORUM's Business Digital Banking, you can easily manage your business accounts from anywhere, at any time. Access your accounts on the go, monitor transactions instantly, and

Branch and ATM Locations | FORUM Credit Union FORUM Credit Union members are

automatically entered to win the Mastercard® Priceless Surprises Sweepstakes every time they use their FORUM Mastercard® credit or debit cards

Resources | FORUM Credit Union FORUM offers perks to our members, such as free credit checks and other discounted services! Check out our current services below. FORUM created Smarter Money Life to help us learn

Personal and Business Banking | FORUM Credit Union FORUM is dedicated to helping members live their financial dreams. As a member-owned financial cooperative, our members benefit through higher savings rates and lower loan rates

Resources | FORUM Credit Union FORUM's secure, consumer online banking system helps you easily manage your accounts, pay bills, and receive account alerts

Contact Us | FORUM Credit Union Whether you prefer to call, stop by a branch, or chat online, we're always here to help. Find our contact information here

Rates | FORUM Credit Union Searching for a high checking account interest rate in Indianapolis and Central Indiana? Earn a competitive interest rate on your checking account with FORUM Credit Union's YOUR

Make a Payment | FORUM Credit Union Did You Get a Car Loan Through FORUM at a Dealership? If you recently purchased a car and financed it at the dealership, through FORUM Credit Union, you will receive a mailed letter with

Personal Savings | FORUM Credit Union FORUM offers many high rate interest savings options, including personal savings, money market, health savings accounts certificates and IRA s to help you reach your goals

Resources | FORUM Credit Union Here are some common questions and answers from the FORUM team

Business Digital Banking | FORUM Credit Union With FORUM's Business Digital Banking, you can easily manage your business accounts from anywhere, at any time. Access your accounts on the go, monitor transactions instantly, and

Branch and ATM Locations | FORUM Credit Union FORUM Credit Union members are automatically entered to win the Mastercard® Priceless Surprises Sweepstakes every time they use their FORUM Mastercard® credit or debit cards

Resources | FORUM Credit Union FORUM offers perks to our members, such as free credit checks and other discounted services! Check out our current services below. FORUM created Smarter Money Life to help us learn

Personal and Business Banking | FORUM Credit Union FORUM is dedicated to helping members live their financial dreams. As a member-owned financial cooperative, our members benefit through higher savings rates and lower loan rates

Resources | FORUM Credit Union FORUM's secure, consumer online banking system helps you easily manage your accounts, pay bills, and receive account alerts

Contact Us | FORUM Credit Union Whether you prefer to call, stop by a branch, or chat online, we're always here to help. Find our contact information here

Rates | FORUM Credit Union Searching for a high checking account interest rate in Indianapolis and Central Indiana? Earn a competitive interest rate on your checking account with FORUM Credit Union's YOUR

Make a Payment | FORUM Credit Union Did You Get a Car Loan Through FORUM at a Dealership? If you recently purchased a car and financed it at the dealership, through FORUM Credit Union, you will receive a mailed letter

Personal Savings | FORUM Credit Union FORUM offers many high rate interest savings options, including personal savings, money market, health savings accounts certificates and IRA s to help you reach your goals

Resources | FORUM Credit Union Here are some common questions and answers from the FORUM team

Business Digital Banking | FORUM Credit Union With FORUM's Business Digital Banking, you

can easily manage your business accounts from anywhere, at any time. Access your accounts on the go, monitor transactions instantly, and

Branch and ATM Locations | FORUM Credit Union FORUM Credit Union members are automatically entered to win the Mastercard® Priceless Surprises Sweepstakes every time they use their FORUM Mastercard® credit or debit cards

Resources | FORUM Credit Union FORUM offers perks to our members, such as free credit checks and other discounted services! Check out our current services below. FORUM created Smarter Money Life to help us learn

Back to Home: https://test.murphyjewelers.com