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**Automorphic Forms,
Automorphic
Representations,
and Arithmetic**

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Ze-Li Dou
George T. Gilbert
Editors**



American Mathematical Society

Automorphic Forms Automorphic Representations And Arithmetic

Robert S. Doran



Automorphic Forms Automorphic Representations And Arithmetic:

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Automorphic Forms, Automorphic Representations, and Arithmetic Robert S Doran Ze Li Dou George T Gilbert, 1999-06-22

Automorphic Forms and Applications Peter Sarnak, Freydoon Shahidi, 2007 The theory of automorphic forms has seen dramatic developments in recent years In particular important instances of Langlands functoriality have been established This volume presents three weeks of lectures from the IAS Park City Mathematics Institute Summer School on automorphic forms and their applications It addresses some of the general aspects of automorphic forms as well as certain recent advances in the field The book starts with the lectures of Borel on the basic theory of automorphic forms which lay the foundation for the lectures by Cogdell and Shahidi on converse theorems and the Langlands Shahidi method as well as those by Clozel and Li on the Ramanujan conjectures and graphs The analytic theory of GL 2 forms and L functions are the subject of Michel s lectures while Terras covers arithmetic quantum chaos The volume also includes a chapter by Vogan on isolated unitary representations which is related to the lectures by Clozel This volume is recommended for independent study or an advanced topics course It is suitable for graduate students and researchers interested in automorphic forms and number theory 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

Automorphic Forms, Automorphic Representations, and Arithmetic Robert S. Doran, Ze Li Dou, George T. Gilbert, 1999 The ten lectures by Goro Shimura that formed the core of the conference have been published separately Here 22 papers represent most of the other talks and additional contributions many by his students The topics include period torsors critical values of twisted tensor L functions over CM fields zeta functions formed with modular symbols Frobenius distributions and Galois representations metaplectic generating functions and Shimura integrals the Plancherel measure for the continuous spectrum of the modular group the Euler factorization of global integrals omega results for automorphic L series and truncated integrals and the Shintani zeta function for the space of binary quartic forms The two volumes are paged separately neither is indexed Annotation copyrighted by Book News Inc Portland OR

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Automorphic Forms Anton Deitmar, 2012-08-29 Automorphic forms are an important complex analytic tool in number theory and modern arithmetic geometry They played for example a vital role in Andrew Wiles s proof of Fermat s Last Theorem This text provides a concise introduction to the world of automorphic forms using two approaches the classic elementary theory and the modern point of view of adèles and representation theory The reader will learn the important aims and results of the theory by focussing on its essential aspects and restricting it to the base field of rational numbers Students interested for example in arithmetic geometry or number theory will find that this

book provides an optimal and easily accessible introduction into this topic

Automorphic Forms, Automorphic Representations, and Arithmetic, 1999 **Representation Theory and Automorphic Forms** Toshiyuki Kobayashi, Wilfried Schmid, Jae-Hyun Yang, 2007-10-10 This volume uses a unified approach to representation theory and automorphic forms It collects papers written by leading mathematicians that track recent progress in the expanding fields of representation theory and automorphic forms and their association with number theory and differential geometry Topics include Automorphic forms and distributions modular forms visible actions Dirac cohomology holomorphic forms harmonic analysis self dual representations and Langlands Functoriality Conjecture Both graduate students and researchers will find inspiration in this volume

Automorphic Forms, Automorphic Representations, and Arithmetic Robert S. Doran, 1999 **Automorphic Forms and Representations** Daniel Bump, 1998-11-28 This book takes advanced graduate students from the foundations to topics on the research frontier

Representation Theory and Automorphic Forms T. N. Bailey, Anthony W. Knap, This book is a course in representation theory of semisimple groups automorphic forms and the relations between these two subjects written by some of the world's leading experts in these fields It is based on the 1996 instructional conference of the International Centre for Mathematical Sciences in Edinburgh The book begins with an introductory treatment of structure theory and ends with an essay by Robert Langlands on the current status of functoriality All papers are intended to provide overviews of the topics they address and the authors have supplied extensive bibliographies to guide the reader who wants more detail The aim of the articles is to treat representation theory with two goals in mind i to help analysts make systematic use of Lie groups in work on harmonic analysis differential equations and mathematical physics and ii to provide number theorists with the representation theoretic input to Wiles's proof of Fermat's Last Theorem

Automorphic Forms, Representation Theory and Arithmetic G. Harder, K. Iwasawa, S. Gelbart, 2014-09-01 **Topics in Classical Automorphic Forms** Henryk Iwaniec, 1997 This book is based on the notes from the graduate course given by the author at Rutgers University in the fall of 1994 and the spring of 1995 The main goal of the book is to acquaint the reader with various perspectives of the theory of automorphic forms In addition to detailed and often nonstandard exposition of familiar topics of the theory particular attention is paid to such subjects as theta functions and representations by quadratic forms

Eisenstein Series and Automorphic Representations Philipp Fleig, Henrik P. A. Gustafsson, Axel Kleinschmidt, Daniel Persson, 2018-07-05 This introduction to automorphic forms on adelic groups G_A emphasises the role of representation theory The exposition is driven by examples and collects and extends many results scattered throughout the literature in particular the Langlands constant term formula for Eisenstein series on G_A as well as the Casselman-Shalika formula for the p -adic spherical Whittaker function This book also covers more advanced topics such as spherical Hecke algebras and automorphic L -functions Many of these mathematical results have natural interpretations in string theory and so some basic concepts of string theory are introduced with an emphasis on connections with automorphic

forms Throughout the book special attention is paid to small automorphic representations which are of particular importance in string theory but are also of independent mathematical interest Numerous open questions and conjectures partially motivated by physics are included to prompt the reader's own research

Contributions to Automorphic Forms, Geometry, and Number Theory Haruzo Hida, Dinakar Ramakrishnan, Freydoon Shahidi, 2004-03-11 In Contributions to Automorphic Forms Geometry and Number Theory Haruzo Hida Dinakar Ramakrishnan and Freydoon Shahidi bring together a distinguished group of experts to explore automorphic forms principally via the associated L functions representation theory and geometry Because these themes are at the cutting edge of a central area of modern mathematics and are related to the philosophical base of Wiles proof of Fermat's last theorem this book will be of interest to working mathematicians and students alike Never previously published the contributions to this volume expose the reader to a host of difficult and thought provoking problems Each of the extraordinary and noteworthy mathematicians in this volume makes a unique contribution to a field that is currently seeing explosive growth New and powerful results are being proved radically and continually changing the field's make up Contributions to Automorphic Forms Geometry and Number Theory will likely lead to vital interaction among researchers and also help prepare students and other young mathematicians to enter this exciting area of pure mathematics Contributors Jeffrey Adams Jeffrey D Adler James Arthur Don Blasius Siegfried Boecherer Daniel Bump William Casselmann Laurent Clozel James Cogdell Laurence Corwin Solomon Friedberg Masaaki Furusawa Benedict Gross Thomas Hales Joseph Harris Michael Harris Jeffrey Hoffstein Herv Jacquet Dihua Jiang Nicholas Katz Henry Kim Victor Kreiman Stephen Kudla Philip Kutzko V Lakshmi Bai Robert Langlands Erez Lapid Ilya Piatetski Shapiro Dipendra Prasad Stephen Rallis Dinakar Ramakrishnan Paul Sally Freydoon Shahidi Peter Sarnak Rainer Schulze Pillot Joseph Shalika David Soudry Ramin Takloo Bigash Yuri Tschinkel Emmanuel Ullmo Marie France Vigneras Jean Loup Waldspurger

Representation Theory and Automorphic Forms Paul Sally, Nolan R. Wallach, The eleven papers collected in this volume appeared in the Bulletin of the AMS during the years 1955 to 1984 and share the theme of the representation theory of locally compact groups and its numerous applications The papers provide a glimpse at the historical development of a subject which has expanded into many areas of mathematics during the past forty years In addition this volume provides easy access to a useful set of references Chronicling some of the most important developments in papers by some of the field's major figures this book will appeal to specialists in representation theory as well as to researchers in those areas of mathematics in which representation theory plays an important role

Automorphic Forms, Representations and L-Functions Armand Borel, W. Casselman, American Mathematical Society, 1979-06-30 Part 2 contains sections on Automorphic representations and L functions Arithmetical algebraic geometry and L functions

Automorphic Forms, Representation Theory and Arithmetic S. Gelbart, G. Harder, K. Iwasawa, H. Jacquet, N.M. Katz, I. Piatetski-Shapiro, S. Raghavan, T. Shintani, H.M. Stark, D. Zagier, 2013-12-01 International Colloquium on Automorphic Forms Representation Theory and Arithmetic Published for the

Tata Institute of Fundamental Research Bombay Families of Automorphic Forms and the Trace Formula Werner Müller, Sug Woo Shin, Nicolas Templier, 2016-09-20 Featuring the work of twenty three internationally recognized experts this volume explores the trace formula spectra of locally symmetric spaces p adic families and other recent techniques from harmonic analysis and representation theory Each peer reviewed submission in this volume based on the Simons Foundation symposium on families of automorphic forms and the trace formula held in Puerto Rico in January February 2014 is the product of intensive research collaboration by the participants over the course of the seven day workshop The goal of each session in the symposium was to bring together researchers with diverse specialties in order to identify key difficulties as well as fruitful approaches being explored in the field The respective themes were counting cohomological forms p adic trace formulas Hecke fields slopes of modular forms and orbital integrals

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