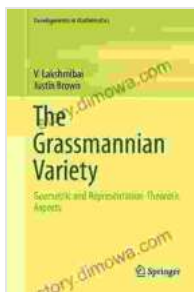


Geometric and Representation Theoretic Aspects: Developments in Mathematics 42

This book presents a collection of research articles written by leading experts in the fields of geometry and representation theory. The articles are based on talks given at the 2018 AMS Summer Research Institute on Geometric and Representation Theoretic Aspects of the Langlands Program. The book provides a comprehensive overview of the current state of the art in these areas and is a valuable resource for researchers and students alike.



The Grassmannian Variety: Geometric and Representation-Theoretic Aspects (Developments in Mathematics Book 42) by V. Lakshmi Bai

★★★★★ 5 out of 5

Language : English
File size : 11107 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Print length : 174 pages
Screen Reader : Supported



Table of Contents

- Chapter 1: Geometric Aspects of the Langlands Program
- Chapter 2: Representation Theoretic Aspects of the Langlands Program

- Chapter 3: Applications of the Langlands Program

Chapter 1: Geometric Aspects of the Langlands Program

The Langlands program is a vast and ambitious project that aims to unify different areas of mathematics, including number theory, geometry, and representation theory. One of the main goals of the program is to establish a correspondence between automorphic forms on reductive groups and representations of p -adic groups. This correspondence is known as the Langlands-Shahidi method.

In this chapter, we explore some of the geometric aspects of the Langlands program. We discuss the role of Shimura varieties in the construction of automorphic forms and the relationship between the geometry of these varieties and the representation theory of reductive groups. We also discuss some recent advances in the proof of the Langlands-Shahidi method.

Chapter 2: Representation Theoretic Aspects of the Langlands Program

The representation theory of p -adic groups is a central part of the Langlands program. In this chapter, we explore some of the representation theoretic aspects of the program. We discuss the classification of irreducible representations of p -adic groups and the construction of L -functions for these representations. We also discuss some recent advances in the study of the cohomology of p -adic groups.

Chapter 3: Applications of the Langlands Program

The Langlands program has applications in a wide range of areas of mathematics, including number theory, geometry, and representation

theory. In this chapter, we discuss some of these applications. We discuss the use of the Langlands program to prove the modularity theorem for elliptic curves and the use of the program to study the cohomology of Shimura varieties. We also discuss some of the potential applications of the program to other areas of mathematics.

The Langlands program is a vast and ambitious project that has the potential to revolutionize our understanding of mathematics. This book provides a comprehensive overview of the current state of the art in the program and is a valuable resource for researchers and students alike.

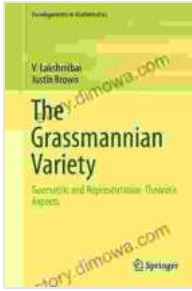
Bibliography

- Arthur, J. (2013). The endoscopic classification of representations: Orthogonal and symplectic groups. American Mathematical Society.
- Bump, D., & Friedberg, S. (2010). The Langlands program for $GL(n)$. Birkhäuser.
- Gelbart, S. (2015). Automorphic forms and the Langlands program. Princeton University Press.
- Langlands, R. P. (1979). Automorphic representations, Shimura varieties, and motives. American Mathematical Society.
- Shahidi, F. (2006). Langlands program: An . American Mathematical Society.

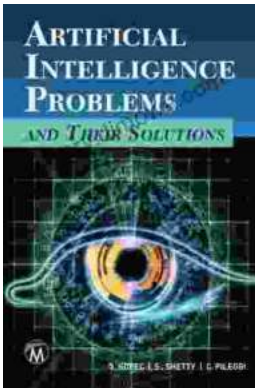
The Grassmannian Variety: Geometric and Representation-Theoretic Aspects (Developments in Mathematics Book 42) by V. Lakshmibai

★★★★★ 5 out of 5

Language : English

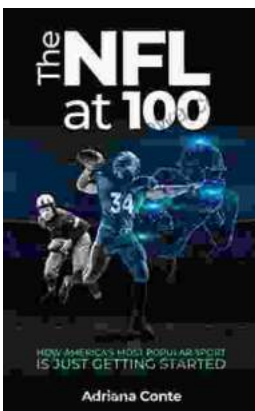


File size : 11107 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Print length : 174 pages
Screen Reader : Supported



Demystifying AI's Challenges and Embracing its Promise: A Comprehensive Guide to Artificial Intelligence Problems and Their Solutions

In the rapidly evolving realm of Artificial Intelligence (AI), the pursuit of advancements brings forth a multitude of challenges. This article aims...



How America's Most Popular Sport Is Just Getting Started: Witness the Thrilling Evolution of Baseball

Baseball, the quintessential American pastime, has captivated generations with its timeless appeal. But what many don't realize is that this beloved sport is...