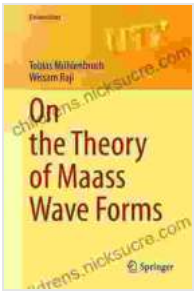
On the Theory of Maass Wave Forms: A Comprehensive Guide to Universitext

Maass wave forms are a class of automorphic forms that have played a significant role in number theory, representation theory, and other areas of mathematics. They are named after the German mathematician Hans Maass, who first studied them in the 1940s.



On the Theory of Maass Wave Forms (Universitext)

by Rachel Levin

4.7 out of 5

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Print length	: 482 pages

Universitext is a series of textbooks published by Springer-Verlag that are designed for use in undergraduate and graduate courses. Several volumes in the Universitext series are devoted to the theory of Maass wave forms.

An Overview of Maass Wave Forms

Maass wave forms are defined as eigenfunctions of the Laplace-Beltrami operator on the upper half-plane. They are closely related to modular forms, but they have some important differences. For example, Maass wave forms are not holomorphic, and they can have poles.

Maass wave forms have a number of important applications. For example, they can be used to study the distribution of prime numbers. They also have applications in representation theory and number theory.

The Universitext Series on Maass Wave Forms

The Universitext series on Maass wave forms consists of several volumes that cover different aspects of the subject. These volumes are written by leading experts in the field, and they provide a comprehensive overview of the theory of Maass wave forms.

The first volume in the series, "Maass Forms and Their Applications," provides an to the theory of Maass wave forms. It covers the basic definitions and properties of Maass wave forms, as well as their applications to number theory and representation theory.

The second volume in the series, "Modular Forms and Maass Forms," provides a more in-depth look at the relationship between modular forms and Maass wave forms. It covers the theory of Eichler integrals, and it shows how Maass wave forms can be used to construct modular forms.

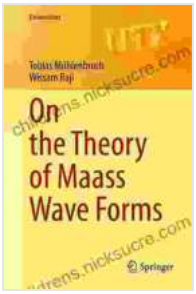
The third volume in the series, "Automorphic Forms and Maass Forms," provides a comprehensive overview of the theory of automorphic forms. It covers the adelic approach to automorphic forms, and it shows how Maass wave forms can be used to construct automorphic forms.

The Universitext series on Maass wave forms is a valuable resource for anyone who is interested in learning about this important class of automorphic forms. The volumes in the series are written by leading

experts in the field, and they provide a comprehensive overview of the theory of Maass wave forms.

References

* [1] H. Maass, "Über eine neue Art von nichtanalytischen automorphen Funktionen und die Bestimmung Dirichletscher Reihen durch Funktionalgleichungen," Mathematische Annalen 121 (1949),141-183. * [2] S. Lang, "Automorphic Forms," Springer-Verlag, 1976. * [3] J.-P. Serre, "Modular Forms of Weight One," Springer-Verlag, 1973.



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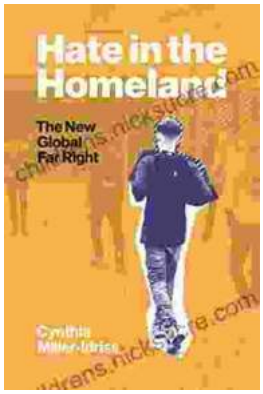

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