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t-Motives: Hodge Structures, Transcendence and Other Motivic Aspects

Gebhard Böckle
David Goss
Urs Hartl
Matthew Papanikolas
Editors

$$\tilde{\pi} := \theta^{q-1} \sqrt{-\theta} \prod_{i=1}^{\infty} (1 - \theta^{1-q^i})^{-1} = \theta^{q-1} \sqrt{-\theta} \sum_{n=0}^{\infty} \frac{\theta^{q^n-1} \dots \theta}{(\theta^{q^n} - \theta) \dots (\theta^q - \theta)}$$



European Mathematical Society

t-Motives: Hodge Structures, Transcendence and Other Motivic Aspects

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Editors

This volume contains research and survey articles on Drinfeld modules, Anderson *t*-modules and *t*-motives. Much material that had not been easily accessible in the literature is presented here, for example, the cohomology theories and Pink's theory of Hodge structures attached to Drinfeld modules and *t*-motives. Also included are survey articles on the function field analogue of Fontaine's theory of *p*-adic crystalline Galois representations and on transcendence methods over function fields, encompassing the theories of Frobenius difference equations, automata theory, and Mahler's method. In addition, this volume contains a small number of research articles on function field Iwasawa theory, 1-*t*-motifs, and multizeta values.

The book is a useful source for learning important techniques and an effective reference for all researchers working in or interested in the area of function field arithmetic, from graduate students to established experts.

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