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homological Selmer modules for SL_2 -augmented tautological representations of knot groups -- J. Ueki and A. Yasuda, A note on units and surfaces -- M. Wakui, p -deformed integers derived from pairs of coprime integers and its applications -- Z. Wojtkowiak, Canonical One-cocycle and Main Conjecture, I -- Hyuga Yoshizaki, Weber's class number problem and its variants.

Sommario/riassunto

This book is the result of research initiatives formed during the workshop "Low Dimensional Topology and Number Theory XIII" at Kyushu University in 2022. It is also dedicated to the memory of Professor Toshie Takata, who has been a main figure of the session chairs for the series of annual workshops since 2009. The activity was aimed at understanding and deepening recent developments of lively and fruitful interactions between low-dimensional topology and number theory over the past decades. In this volume of proceedings, the reader will find research papers as well as survey articles, including open problems, at the interface between classical and quantum topology, and algebraic and analytic number theory, written by leading experts and active researchers in the respective fields. Topics include, among others, the strong slope conjecture; Kashiwara–Vergne Lie algebra; braids and braid double branched covers of 3-manifolds; Temperley–Lieb–Jones category and conformal blocks; WRT invariants and false theta functions; the colored Jones polynomial of the figure-eight knot; potential functions and A -polynomials; l -adic Galois polylogarithms; Dijkgraaf–Witten invariants in Bloch groups; analogies between knots and primes in arithmetic topology; normalized Jones polynomials for rational links; Iwasawa main conjecture; Weber's class number problem. The book provides a valuable resource for researchers and graduate students interested in topics related to both low-dimensional topology and number theory.
