

# MATHEMATICAL QUANTUM FIELD THEORY AND RELATED TOPICS

Proceedings of the 1987 Montréal Conference held September 1-5, 1987

CMS CONFERENCE PROCEEDINGS
Volume 9

## **Mathematical Quantum Field Theory And Related Topics**

**Léo Pomar** 

#### **Mathematical Quantum Field Theory And Related Topics:**

Mathematical Quantum Field Theory and Related Topics Joel S. Feldman, Lon M. Rosen, Université de Montréal. Centre de recherches mathématiques, Natural Sciences and Engineering Research Council Canada, 1988 Suitable for researchers and advanced graduate students in mathematical physics this book constitutes the proceedings of a conference on mathematical quantum field theory and related topics The conference was held at the Centre de Recherches Mathematiques of the Universite de Montreal in September 1987 Mathematical Quantum Field Theory and Related Topics Joel S. Feldman, Lon M. Rosen, 1988 Mathematical Quantum Field Theory and Related Topics , 1988

Mathematical Quantum Field Theory and Related Topics Asao Arai, Izumi Ojima, Fumio Hiroshima, 2016 Quantum and Non-Commutative Analysis Huzihiro Araki, Keiichi R. Ito, Akitaka Kishimoto, Izumi Ojima, 2013-04-17 In the past decade there has been a sudden and vigorous development in a number of research areas in mathematics and mathematical physics such as theory of operator algebras knot theory theory of manifolds infinite dimensional Lie algebras and quantum groups as a new topics etc on the side of mathematics quantum field theory and statistical mechanics on the side of mathematical physics The new development is characterized by very strong relations and interactions between different research areas which were hitherto considered as remotely related Focussing on these new developments in mathematical physics and theory of operator algebras the International Oji Seminar on Quantum Analysis was held at the Kansai Seminar House Kyoto JAPAN during June 25 29 1992 by a generous sponsorship of the Japan Society for the Promotion of Science and the Fujihara Foundation of Science as a workshop of relatively small number of about 50 invited participants This was followed by an open Symposium at RIMS described below by its organizer A Kishimoto The Oji Seminar began with two key note addresses one by V F R Jones on Spin Models in Knot Theory and von Neumann Algebras and by A Jaffe on Where Quantum Field Theory Has Led Subsequently topics such as Subfactors and Sector Theory Solvable Models of Statistical Mechanics Quantum Field Theory Quantum Groups and Renormalization Group Ap proach are discussed Towards the end a panel discussion on Where Should Quantum Analysis Go was held Mathematical Perspectives on Theoretical Physics Nirmala Prakash, 2003 Readership Upper level undergraduates graduate students lecturers and researchers in theoretical mathematical and quantum physics **Periods in Quantum Field Theory and Arithmetic** José Ignacio Burgos Gil, Kurusch Ebrahimi-Fard, Herbert Gangl, 2020-03-14 This book is the outcome of research initiatives formed during the special Research Trimester on Multiple Zeta Values Multiple Polylogarithms and Quantum Field Theory at the ICMAT Instituto de Ciencias Matem ticas Madrid in 2014 The activity was aimed at understanding and deepening recent developments where Feynman and string amplitudes on the one hand and periods and multiple zeta values on the other have been at the heart of lively and fruitful interactions between theoretical physics and number theory over the past few decades In this book the reader will find research papers as well as survey articles including open problems on the interface between

number theory quantum field theory and string theory written by leading experts in the respective fields Topics include among others elliptic periods viewed from both a mathematical and a physical standpoint further relations between periods and high energy physics including cluster algebras and renormalisation theory multiple Eisenstein series and q analogues of multiple zeta values also in connection with renormalisation double shuffle and duality relations alternative presentations of multiple zeta values using Ecalle s theory of moulds and arborification a distribution formula for generalised complex and l adic polylogarithms Galois action on knots Given its scope the book offers a valuable resource for researchers and graduate students interested in topics related to both quantum field theory in particular scattering amplitudes and number theory

Canadian Journal of Mathematics ,1991-06 Algebras and Modules I Idun Reiten, Sverre O. Smalø, Øyvind Solberg, Canadian Mathematical Society, 1998 Surveys developments in the representation theory of finite dimensional algebras and related topics in seven papers illustrating different techniques developed over the recent years For graduate students and researchers with a background in commutative algebra including rings modules and homological algebra Suitable as a text for an advanced graduate course No index Member prices are 31 for institutions and 23 for individuals and are available to members of the Canadian Mathematical Society Annotation copyrighted by Book News Inc Portland OR

Canadian Mathematical Bulletin ,1992-03 Lie Algebras, Vertex Operator Algebras, and Related Topics Katrina Barron, Elizabeth Jurisich, Antun Milas, Kailash Misr, 2017-08-15 This volume contains the proceedings of the conference on Lie Algebras Vertex Operator Algebras and Related Topics celebrating the 70th birthday of James Lepowsky and Robert Wilson held from August 14 18 2015 at the University of Notre Dame Notre Dame Indiana Since their seminal work in the 1970s Lepowsky and Wilson their collaborators their students and those inspired by their work have developed an amazing body of work intertwining the fields of Lie algebras vertex algebras number theory theoretical physics quantum groups the representation theory of finite simple groups and more The papers presented here include recent results and descriptions of ongoing research initiatives representing the broad influence and deep connections brought about by the work of Lepowsky and Wilson and include a contribution by Yi Zhi Huang summarizing some major open problems in these areas in particular as they pertain to two dimensional conformal field theory Canadian Journal of Mathematics ,1992-02 Canadian Journal of Mathematics ,1991-02 Canadian Journal of Mathematics, 1992-06 Algebras and Modules II Idun Reiten, Sverre O. Smalø, Øyvind Solberg, Canadian Mathematical Society, 1998 The 43 research papers demonstrate the application of recent developments in the representation theory of artin algebras and related topics Among the algebras considered are tame by serial cellular factorial hereditary Hopf Koszul non polynomial growth pre projective Termperley Lieb tilted and quasi tilted Other topics include tilting and co tilting modules and generalizations as modules exceptional sequences of modules and vector bundles homological conjectives and vector space categories. The treatment assumes knowledge of non commutative algebra including rings modules and homological algebra at a graduate or professional level

No index Member prices are 79 for institutions and 59 for individuals which also apply to members of the Canadian Mathematical Society Annotation copyrighted by Book News Inc Portland OR Canadian Journal of Mathematics ,1991-04 Canadian Journal of Mathematics, 1990-08 String-Math 2022 Ron Donagi, Adrian Langer, Piotr Sułkowski, Katrin Wendland, 2024-04-18 This is a proceedings volume from the String Math conference which took place at the University of Warsaw in 2022 This 12th String Math conference focused on several research areas actively developing these days They included generalized categorical symmetries in quantum field theory and their relation to topological phases of matter formal aspects of quantum field theory in particular twisted holography various developments in supersymmetric gauge theories BPS counting and Donaldson Thomas invariants Other topics discussed at this conference included new advances in Gromov Witten theory curve counting and Calabi Yau manifolds Another broad topic concerned algebraic aspects of conformal field theory vertex operator algebras and quantum groups Furthermore several other recent developments were presented during the conference such as understanding the role of operator algebras in the presence of gravity derivation of gauge string duality complexity of black holes or mathematical aspects of the amplituhedron This proceedings volume contains articles summarizing 14 conference lectures devoted to the above topics Canadian Journal of Mathematics, 1990-06 Mathematical Methods of Physics Gerald Goertzel, Nunzio Tralli, 2014-06-18 Well rounded thorough treatment introduces basic concepts of mathematical physics involved in the study of linear systems with emphasis on eigenvalues eigenfunctions and Green's functions Topics include discrete and continuous systems and approximation methods 1960 edition

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