

Cambridge University Press

978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)

LONDON MATHEMATICAL SOCIETY LECTURE NOTE SERIES

Managing Editor: Professor J.W.S. Cassels, Department of Pure Mathematics and Mathematical Statistics,
University of Cambridge, 16 Mill Lane, Cambridge CB2 1SB, England

The titles below are available from booksellers, or, in case of difficulty, from Cambridge University Press.

- 34 Representation theory of Lie groups, M.F. ATIYAH *et al*
- 36 Homological group theory, C.T.C. WALL (ed)
- 39 Affine sets and affine groups, D.G. NORTHCOTT
- 46 p-adic analysis: a short course on recent work, N. KOBLITZ
- 50 Commutator calculus and groups of homotopy classes, H.J. BAUES
- 59 Applicable differential geometry, M. CRAMPIN & F.A.E. PIRANI
- 66 Several complex variables and complex manifolds II, M.J. FIELD
- 69 Representation theory, I.M. GELFAND *et al*
- 74 Symmetric designs: an algebraic approach, E.S. LANDER
- 76 Spectral theory of linear differential operators and comparison algebras, H.O. CORDES
- 77 Isolated singular points on complete intersections, E.J.N. LOOIJENGA
- 79 Probability, statistics and analysis, J.F.C. KINGMAN & G.E.H. REUTER (eds)
- 83 Homogeneous structures on Riemannian manifolds, F. TRICERRI & L. VANHECKE
- 86 Topological topics, I.M. JAMES (ed)
- 87 Surveys in set theory, A.R.D. MATHIAS (ed)
- 88 FPF ring theory, C. FAITH & S. PAGE
- 89 An F-space sampler, N.J. KALTON, N.T. PECK & J.W. ROBERTS
- 90 Polytopes and symmetry, S.A. ROBERTSON
- 91 Classgroups of group rings, M.J. TAYLOR
- 92 Representation of rings over skew fields, A.H. SCHOFIELD
- 93 Aspects of topology, I.M. JAMES & E.H. KRONHEIMER (eds)
- 94 Representations of general linear groups, G.D. JAMES
- 95 Low-dimensional topology 1982, R.A. FENN (ed)
- 96 Diophantine equations over function fields, R.C. MASON
- 97 Varieties of constructive mathematics, D.S. BRIDGES & F. RICHMAN
- 98 Localization in Noetherian rings, A.V. JATEGAONKAR
- 99 Methods of differential geometry in algebraic topology, M. KAROUBI & C. LERUSTE
- 100 Stopping time techniques for analysts and probabilists, L. EGGHE
- 101 Groups and geometry, ROGER C. LYNDON
- 103 Surveys in combinatorics 1985, I. ANDERSON (ed)
- 104 Elliptic structures on 3-manifolds, C.B. THOMAS
- 105 A local spectral theory for closed operators, I. ERDELYI & WANG SHENGWANG
- 106 Syzygies, E.G. EVANS & P. GRIFFITH
- 107 Compactification of Siegel moduli schemes, C-L. CHAI
- 108 Some topics in graph theory, H.P. YAP
- 109 Diophantine analysis, J. LOXTON & A. VAN DER POORTEN (eds)
- 110 An introduction to surreal numbers, H. GONSHOR
- 113 Lectures on the asymptotic theory of ideals, D. REES
- 114 Lectures on Bochner-Riesz means, K.M. DAVIS & Y-C. CHANG
- 115 An introduction to independence for analysts, H.G. DALES & W.H. WOODIN
- 116 Representations of algebras, P.J. WEBB (ed)
- 117 Homotopy theory, E. REES & J.D.S. JONES (eds)
- 118 Skew linear groups, M. SHIRVANI & B. WEHRFRITZ
- 119 Triangulated categories in the representation theory of finite-dimensional algebras, D. HAPPEL
- 121 Proceedings of *Groups - St Andrews 1985*, E. ROBERTSON & C. CAMPBELL (eds)
- 122 Non-classical continuum mechanics, R.J. KNOPS & A.A. LACEY (eds)
- 124 Lie groupoids and Lie algebroids in differential geometry, K. MACKENZIE
- 125 Commutator theory for congruence modular varieties, R. FREESE & R. MCKENZIE
- 126 Van der Corput's method of exponential sums, S.W. GRAHAM & G. KOLESNIK
- 127 New directions in dynamical systems, T.J. BEDFORD & J.W. SWIFT (eds)
- 128 Descriptive set theory and the structure of sets of uniqueness, A.S. KECHRIS & A. LOUVEAU
- 129 The subgroup structure of the finite classical groups, P.B. KLEIDMAN & M.W. LIEBECK
- 130 Model theory and modules, M. PREST
- 131 Algebraic, extremal & metric combinatorics, M-M. DEZA, P. FRANKL & I.G. ROSENBERG (eds)
- 132 Whitehead groups of finite groups, ROBERT OLIVER
- 133 Linear algebraic monoids, MOHAN S. PUTCHA
- 134 Number theory and dynamical systems, M. DODSON & J. VICKERS (eds)
- 135 Operator algebras and applications, 1, D. EVANS & M. TAKESAKI (eds)
- 136 Operator algebras and applications, 2, D. EVANS & M. TAKESAKI (eds)
- 137 Analysis at Urbana, I, E. BERKSON, T. PECK, & J. UHL (eds)

Cambridge University Press

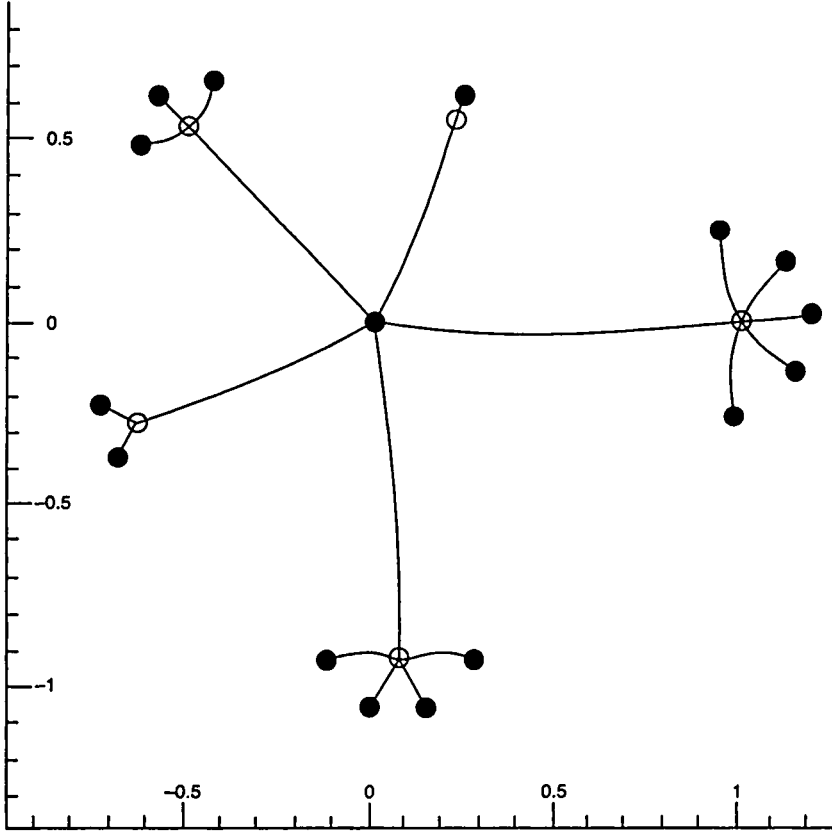
978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)

- 138 Analysis at Urbana, II, E. BERKSON, T. PECK, & J. UHL (eds)
 139 Advances in homotopy theory, S. SALAMON, B. STEER & W. SUTHERLAND (eds)
 140 Geometric aspects of Banach spaces, E.M. PEINADOR & A. RODES (eds)
 141 Surveys in combinatorics 1989, J. SIEMONS (ed)
 142 The geometry of jet bundles, D.J. SAUNDERS
 143 The ergodic theory of discrete groups, PETER J. NICHOLLS
 144 Introduction to uniform spaces, I.M. JAMES
 145 Homological questions in local algebra, JAN R. STROOKER
 146 Cohen-Macaulay modules over Cohen-Macaulay rings, Y. YOSHINO
 147 Continuous and discrete modules, S.H. MOHAMED & B.J. MÜLLER
 148 Helices and vector bundles, A.N. RUDAKOV *et al*
 149 Solitons, nonlinear evolution equations and inverse scattering, M. ABILOWITZ & P. CLARKSON
 150 Geometry of low-dimensional manifolds 1, S. DONALDSON & C.B. THOMAS (eds)
 151 Geometry of low-dimensional manifolds 2, S. DONALDSON & C.B. THOMAS (eds)
 152 Oligomorphic permutation groups, P. CAMERON
 153 L-functions and arithmetic, J. COATES & M.J. TAYLOR (eds)
 154 Number theory and cryptography, J. LOXTON (ed)
 155 Classification theories of polarized varieties, TAKAO FUJITA
 156 Twistors in mathematics and physics, T.N. BAILEY & R.J. BASTON (eds)
 157 Analytic pro- p groups, J.D. DIXON, M.P.F. DU SAUTOY, A. MANN & D. SEGAL
 158 Geometry of Banach spaces, P.F.X. MÜLLER & W. SCHACHERMAYER (eds)
 159 Groups St Andrews 1989 volume 1, C.M. CAMPBELL & E.F. ROBERTSON (eds)
 160 Groups St Andrews 1989 volume 2, C.M. CAMPBELL & E.F. ROBERTSON (eds)
 161 Lectures on block theory, BURKHARD KÜLSHAMMER
 162 Harmonic analysis and representation theory, A. FIGA-TALAMANCA & C. NEBBIA
 163 Topics in varieties of group representations, S.M. VOVS
 164 Quasi-symmetric designs, M.S. SHRIKANDE & S.S. SANE
 165 Groups, combinatorics & geometry, M.W. LIFBECK & J. SAXL (eds)
 166 Surveys in combinatorics, 1991, A.D. KEEDWELL (ed)
 167 Stochastic analysis, M.T. BARLOW & N.H. BINGHAM (eds)
 168 Representations of algebras, H. TACHIKAWA & S. BRENNER (eds)
 169 Boolean function complexity, M.S. PATERSON (ed)
 170 Manifolds with singularities and the Adams-Novikov spectral sequence, B. BOTVINNIK
 171 Squares, A.R. RAJWADE
 172 Algebraic varieties, GEORGE R. KEMPF
 173 Discrete groups and geometry, W.J. HARVEY & C. MACLACHLAN (eds)
 174 Lectures on mechanics, J.E. MARSDEN
 175 Adams memorial symposium on algebraic topology 1, N. RAY & G. WALKER (eds)
 176 Adams memorial symposium on algebraic topology 2, N. RAY & G. WALKER (eds)
 177 Applications of categories in computer science, M. FOURMAN, P. JOHNSTONE, & A. PITTS (ed)
 178 Lower K- and L-theory, A. RANICKI
 179 Complex projective geometry, G. ELLINGSRUUD *et al*
 180 Lectures on ergodic theory and Pesin theory on compact manifolds, M. POLLICOTT
 181 Geometric group theory I, G.A. NIBLO & M.A. ROLLER (eds)
 182 Geometric group theory II, G.A. NIBLO & M.A. ROLLER (eds)
 183 Shintani zeta functions, A. YUKIE
 184 Arithmetical functions, W. SCHWARZ & J. SPILKER
 185 Representations of solvable groups, O. MANZ & T.R. WOLF
 186 Complexity: knots, colourings and counting, D.J.A. WELSH
 187 Surveys in combinatorics, 1993, K. WALKER (ed)
 188 Local Analysis for the odd order theorem, H. BENDER & G. GLAUBERMAN
 189 Locally presentable and accessible categories, J. ADAMEK & J. ROSICKY
 190 Polynomial invariants of finite groups, D.J. BENSON
 191 Finite geometry and combinatorics, F. DE CLERCK *et al*
 192 Symplectic geometry, D. SALAMON (ed)
 193 Computer algebra and differential equations, E. TOURNIER (ed)
 194 Independent random variables and rearrangement invariant spaces, M. BRAVERMAN
 195 Arithmetic of blowup algebras, WOLMIER VASCONCELOS
 196 Microlocal analysis for differential operators, A. GRIGIS & J. SJÖSTRAND
 197 Two-dimensional homotopy and combinatorial group theory, C. HOG-ANGELONI, W. METZLER & A.J. SIERADSKI (eds)
 198 The algebraic characterization of geometric 4-manifolds, J.A. HILLMAN
 199 Invariant potential theory in the unit ball of \mathbb{C}^n , MANFRED STOLL
 200 The Grothendieck theory of dessins d'enfant, L. SCHNEPS (ed)
 201 Singularities, JEAN-PAUL BRASSELET (ed)
 202 The technique of pseudodifferential operators, H.O. CORDES



Courtesy of J. Béréma

Cambridge University Press

978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)

London Mathematical Society Lecture Note Series. 200

The Grothendieck theory of dessins d'enfants

Edited by

Leila Schneps
CNRS, France



Cambridge University Press

978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)

Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
40 West 20th Street, New York, NY 10011-4211, USA
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

© Cambridge University Press 1994

First published 1994

Library of Congress cataloguing in publication data available

British Library cataloguing in publication data available

ISBN 0 521 47821 9 paperback

Transferred to digital printing 1999

Cambridge University Press

978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)**Contents**

Introduction	1
Abstracts of the talks	17
Noncongruence Subgroups, Covers and Drawings <i>B. Birch</i>	25
Dessins d'enfants on the Riemann sphere <i>L. Schneps</i>	47
Dessins from a geometric point of view <i>J.-M. Couveignes and L. Granboulan</i>	79
Maps, Hypermaps and Triangle Groups <i>G. Jones and D. Singerman</i>	115
Fields of definition of some three point ramified field extensions <i>G. Malle</i>	147
On the classification of plane trees by their Galois orbit <i>G. Shabat</i>	169
Triangulations <i>M. Bauer and C. Itzykson</i>	179
Dessins d'enfant and Shimura varieties <i>P. Cohen</i>	237
Horizontal divisors on arithmetic surfaces associated with Belyi uniformizations <i>Y. Ihara</i>	245
Algebraic representation of the Teichmüller spaces <i>K. Saito</i>	255
On the embedding of $\text{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ into \widehat{GT} <i>Y. Ihara</i>	289
Appendix: The action of the absolute Galois group on the moduli spaces of spheres with four marked points <i>M. Emsalem and P. Lochak</i>	307
The Grothendieck-Teichmüller group and automorphisms of braid groups <i>P. Lochak and L. Schneps</i>	323
Moore and Seiberg equations, topological field theories and Galois theory <i>P. Degiovanni</i>	359

Cambridge University Press

978-0-521-47821-2 - The Grothendieck Theory of Dessins D'enfants

Edited by Leila Schneps

Frontmatter

[More information](#)

List of participants at the conference

Yves André
Jean Betréma
Bryan Birch
Bruno Chiarellotto
Henri Cohen
Paula Cohen
Robert Cori
Antoine Coste
Jean-Marc Couveignes
Pierre Dèbes
Pascal Degiovanni
Ralf Dentzer
Michel Emsalem
Mike Fried
Anna Helverson-Pasotto
Yasutaka Ihara
Claude Itzykson
Gareth Jones
Bruno Kahn
Pierre Lochak
Jean Malgoire
Gunter Malle
Georges Maltsiniotis
Alexis Marin
Joseph Oesterlé
Kyoji Saito
Leila Schneps
Jean-Pierre Serre
George Shabat
David Singerman
Gene Smith
Manfred Streit
Zdzislaw Wojtkowiak
Umberto Zannier
Alexandre Zvonkin
Dmitri Zvonkin