

THEORY AND APPLICATIONS OF CATEGORIES

Volume 10, 2002

A survey of definitions of n -category Tom Leinster	1
A homotopy double groupoid of a Hausdorff space Ronald Brown, Keith A. Hardie, Klaus Heiner Kamps, Timothy Porter	71
Entity-relationship-attribute designs and sketches Michael Johnson, Robert Rosebrugh and R.J. Wood	94
Homology of Lie algebras with $\Lambda/q\Lambda$ coefficients and exact sequences Emzar Khmaladze	113
Exponentiability of perfect maps: four approaches Susan Niefield	127
Coherence for factorization algebras Robert Rosebrugh and R.J. Wood	134
More on injectivity in locally presentable categories J. Rosický, J. Adámek and F. Borceux	148
Colocalizations and their realizations as spectra Friedrich W. Bauer	162

[©] The Editors of Theory and Applications of Categories 2002. Permission to copy for private use granted.

Theory and Applications of Categories, Vol. 10	ii
On some properties of pure morphisms of commutative rings Bachuki Mesablishvili	180
Change of base, Cauchy completeness and reversibility Anna Labella and Vincent Schmitt	187
Derived operations in Goguen categories Michael Winter	220
Sober spaces and continuations Paul Taylor	248
Subspaces in abstract Stone duality Paul Taylor	301
Directed homotopy theory, II. Homotopy constructs Marco Grandis	369
The cyclic spectrum of a Boolean flow John F. Kennison	392
Simultaneously reflective and coreflective subcategories of presheaves Robert El Bashir and Jiří Velebil	410
Entropic Hopf algebras and models of non-commutative logic Richard F. Blute, François Lamarche and Paul Ruet	424
HSP subcategories of Eilenberg-Moore algebras Michael Barr	461
Opmonoidal monads Paddy McCrudden	469
A duality relative to a limit doctrine C. Centazzo and E.M. Vitale	486

THEORY AND APPLICATIONS OF CATEGORIES (ISSN 1201-561X) will disseminate articles that significantly advance the study of categorical algebra or methods, or that make significant new contributions to mathematical science using categorical methods. The scope of the journal includes: all areas of pure category theory, including higher dimensional categories; applications of category theory to algebra, geometry and topology and other areas of mathematics; applications of category theory to computer science, physics and other mathematical sciences; contributions to scientific knowledge that make use of categorical methods.

Articles appearing in the journal have been carefully and critically refereed under the responsibility of members of the Editorial Board. Only papers judged to be both significant and excellent are accepted for publication.

The method of distribution of the journal is via the Internet tools WWW/ftp. The journal is archived electronically and in printed paper format.

Subscription information. Individual subscribers receive (by e-mail) abstracts of articles as they are published. Full text of published articles is available in .dvi, Postscript and PDF. Details will be e-mailed to new subscribers. To subscribe, send e-mail to tac@mta.ca including a full name and postal address. For institutional subscription, send enquiries to the Managing Editor, Robert Rosebrugh, rrosebrugh@mta.ca.

Information for authors. The typesetting language of the journal is TEX, and LATEX is the preferred flavour. TEX source of articles for publication should be submitted by e-mail directly to an appropriate Editor. They are listed below. Please obtain detailed information on submission format and style files from the journal's WWW server at http://www.tac.mta.ca/tac/. You may also write to tac@mta.ca to receive details by e-mail.

Editorial board.

John Baez, University of California, Riverside: baez@math.ucr.edu

Michael Barr, McGill University: barr@barrs.org, Associate Managing Editor

Lawrence Breen, Université Paris 13: breen@math.univ-paris13.fr

Ronald Brown, University of Wales Bangor: r.brown@bangor.ac.uk

Jean-Luc Brylinski, Pennsylvania State University: jlb@math.psu.edu

Aurelio Carboni, Università dell Insubria: aurelio.carboni@uninsubria.it

Valeria de Paiva, Palo Alto Research Center: paiva@parc.xerox.com

Martin Hyland, University of Cambridge: M.Hyland@dpmms.cam.ac.uk

P. T. Johnstone, University of Cambridge: ptj@dpmms.cam.ac.uk

G. Max Kelly, University of Sydney: ${\tt maxk@maths.usyd.edu.au}$

Anders Kock, University of Aarhus: kock@imf.au.dk

Stephen Lack, University of Sydney: stevel@maths.usyd.edu.au

F. William Lawvere, State University of New York at Buffalo: wlawvere@acsu.buffalo.edu

Jean-Louis Loday, Université de Strasbourg: loday@math.u-strasbg.fr

Ieke Moerdijk, University of Utrecht: moerdijk@math.uu.nl

Susan Niefield, Union College: niefiels@union.edu

Robert Paré, Dalhousie University: pare@mathstat.dal.ca

Andrew Pitts, University of Cambridge: Andrew.Pitts@cl.cam.ac.uk

Robert Rosebrugh, Mount Allison University: rrosebrugh@mta.ca, Managing Editor

Jiri Rosicky, Masaryk University: rosicky@math.muni.cz

James Stasheff, University of North Carolina: jds@math.unc.edu

Ross Street, Macquarie University: street@math.mq.edu.au

Walter Tholen, York University: tholen@mathstat.yorku.ca

Myles Tierney, Rutgers University: tierney@math.rutgers.edu

Robert F. C. Walters, University of Insubria: robert.walters@uninsubria.it

R. J. Wood, Dalhousie University: rjwood@mathstat.dal.ca