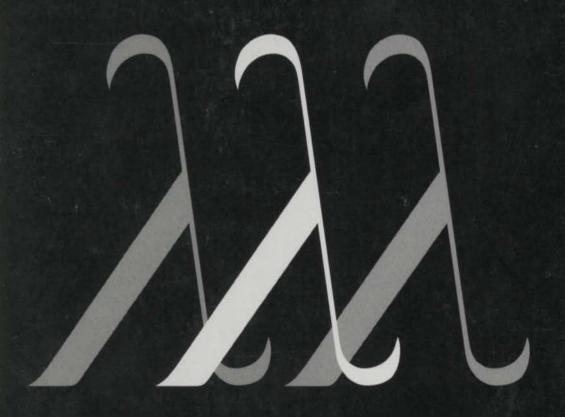
JOURNAL OF Functional Programming

VOLUME 4 PART 4 OCTOBER 1994

CAMBRIDGE UNIVERSITY PRESS



Professor Henk Barendregt

Department of Computer Science Catholic University Nijmegen Toernooiveld 1 6525 ED Nijmegen The Netherlands henk@cs.kun.nl

Professor Paul Hudak

Department of Computer Science Yale University New Haven CT 06520 USA hudak@yale.edu

Arvind

MIT Lab for Computer Science 545 Technology Square Cambridge MA 02139 USA Lennart Augustsson

Department of Computer Science Chalmers University of Technology S-412 96 Göteborg Sweden

Richard S. Bird Oxford University Computing Laboratory Programming Research Group 8–11 Keble Road Oxford OX1 3QD UK F. Warren Burton

F. Warren Burton Department of Computer Science Simon Fraser University Burnaby British Columbia V5A 1S6 Canada Pierre-Louis Curien CNRS-LIENS Ecole Normale Supérieure 45 rue d'Ulm F-75230 Paris France Chris Hankin Department of Computing Science

Imperial College 180 Queen's Gate London SW7 2BZ UK

EDITORS

Professor John Hughes

Department of Computer Sciences Chalmers University of Technology S-412 96 Göteborg Sweden rjmh@cs.chalmers.se **Professor Simon L. Peyton Jones** Department of Computing Science

University of Glasgow Glasgow G12 8QQ UK simonpj@dcs.glasgow.ac.uk

EDITORIAL BOARD

Robert Harper School of Computer Science Carnegie Mellon University Pittsburgh PA 15213-3890 USA Thomas Johnsson Department of Computer Science Chalmers University of Technology S-412 96 Goteborg Sweden Neil D. Jones DIKU Universitetsparken 1, DK-2100 Copenhagen Ø Denmark Richard B. Kieburtz Dept. of Computer Science & Engineering Oregon Graduate Institute 19600 NW von Neumann Drive Reaverton Oregon 97006-1999 USA David MacQueen AT&T Laboratories Rm 2C-322 600 Mountain Avenue Murray Hill NJ 07974 USA G. E. Mints Dept. of Philosophy Stanford University Stanford CA 94305

Professor Philip Wadler Department of Computing Science University of Glasgow Glasgow G12 8QQ UK wadler@dcs.glasgow.ac.uk

EDITORIAL ASSISTANT

Jon Ritchie Department of Computing Science University of Glasgow Glasgow G12 8QQ UK jon@dcs.glasgow.ac.uk

John C. Mitchell

Department of Computer Science Margaret Jacks Hall Stanford University Stanford CA 94305-2140 USA

Rishiyur S. Nikhil Digital Equipment Corporation Cambridge Research Laboratory One Kendall Square, Bldg. 700 Cambridge MA 02139 USA

John T. O'Donnell Department of Computing Science University of Glasgow Glasgow G12 8QQ UK Colin Runciman Department of Computer Science University of York

University of York Heslington York YOI 5DD UK Mitchell Wand

College of Computer Science 169 Cullinane Hall Northeastern University Boston MA 02115 USA

John H. Williams IBM Almaden Research Center K53/803 650 Harry Road San Jose, CA 95120-6099 USA

SUBSCRIPTIONS

Journal of Functional Programming (ISSN: 0956-7968) is published quarterly in January, April, July and October. The subscription price (excluding VAT) of Volume 4, 1994, is £82 net (USA, Canada and Mexico US\$142) post free; single parts cost £22 net (USA, Canada and Mexico US\$37) plus postage. Four parts form a volume. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Orders, which must be accompanied by payment, may be sent to any bookseller, subscription agent or to the publisher Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, or in the USA, Canada and Mexico to Cambridge University Press, The Journals Department, 40 West 20th Street, New York, NY10011-4211, USA. Copies of the journal for subscribers in the USA, Canada and Mexico are sent by air to New York to arrive with minimum delay. Second class postage paid at New York, NY and at additional mailing offices.

Japanese prices for institutions (including ASP delivery) are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo.

Postmaster: send address changes in USA, Canada and Mexico to Journal of Functional Programming, Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211.

Claims for missing issues should be made immediately on receipt of the subsequent issue.

USA

© Cambridge University Press 1994

https://doi.org/10.1017/S0956796800001118 Published online by Cambridge University Press