Journal Of Differential Geometry

S. Hurder, *Infinitesimal rigidity for hyperbolic actions* 515
M.S. Farber, *Singularities of the analytic torsion* 528
P.B. Kronheimer & T.S. Mrowka, *Embedded surfaces and the structure of Donaldson's polynomial invariants* 573
L. Traynor, *Symplectic packing constructions* 735

Vol. 41 - No. 3 May 1995

JOURNAL OF DIFFERENTIAL GEOMETRY

Editors-in-Chief

C. C. HSIUNG
Lehigh University
Bethlehem, PA 18015

S. T. YAU
Harvard University
Cambridge, MA 02138

Editors

JEFF CHEEGER
New York University
New York, NY 10012

H. BLAINE LAWSON, JR.
State University of New York
Stony Brook, NY 11794

SIMON K. DONALDSON
University of Oxford
Oxford OX1 3LB, ENGLAND

RICHARD M. SCHOEN
Stanford University
Stanford, CA 94305

Associate Editors

MICHAEL H. FREEDMAN
University of California
La Jolla, CA 92093

SHIGEFUMI MORI
Faculty of Sciences
Nagoya University
Nagoya 464, JAPAN

NIGEL HITCHIN
Mathematics Institute
University of Warwick
Coventry CV4 7AL, ENGLAND

ALAN WEINSTEIN
University of California
Berkeley, CA 94720

The Journal of Differential Geometry is devoted to the publication of research papers in differential geometry and related subjects such as differential equations, mathematical physics, algebraic geometry and geometric topology.

The subscription price for Vols. **41–42** (1995) is $295.00 list, $68.00 for personal use of individuals; each volume consists of three numbers. Back number prices per volume (with a 40% reduction for individual members and a 20% reduction for institutional members of the American Mathematical Society): Vols. 1–9 (1967–1974), $39.00; Vols. 10–12 (1975–1977), $65.00; Vols. 13–17 (1978–1982), $85.00; Vols. 18–28 (1983–1988), $155.00; Vols. 29–36 (1989–1992), $203.00; Vols. 37–40 (1993–1994), $221.00.

Subscriptions and orders should be addressed to JDG/Linda Kitch, International Press, P.O. Box 2872, Cambridge, MA 02238-2872. *All orders must be accompanied by payment, and check should be made payable to International Press.* General correspondence and changes of address should be sent to the above address.

Instructions for submission of manuscripts are given inside of the back cover of this issue.

Journal of Differential Geometry (ISSN 0022-040X) is published bimonthly in January, March, May, July, September and November by Lehigh University, Christmas-Saucon Hall 14, Bethlehem PA 18015-3175. Second Class Postage Rates paid at Bethlehem, PA and an additional mailing office. Postmaster: Send address changes to JDG/Linda Kitch, International Press, P.O. Box 2872, Cambridge, MA 02238-2872.

© Copyright 1995 Lehigh University. All rights reserved.

ISSN 0022-040X

Printed in the United States of America.

The paper used in this issue is acid-free and falls within the guidelines established to ensure permanence and durability.

Printed on recycled paper.

INDEX

Y. Benoist, *Une nilvariété non affine* 21

J.-M. Bismut, *Equivariant immersions and Quillen metrics* 53

M. Brunella & E. Ghys, *Umbilical foliations and transversely holomorphic flows* 1

R. Brussee, *Some remarks on the Kronheimer-Mrowka classes of algebraic surfaces* 269

U. Bunke, *On the qluing problem for the η-invariant* 397

W. Chen & C. Li, *A note on the Kazdan-Warner type conditions* 259

M. S. Farber, *Singularities of the analytic torsion* 528

S. R. Fenley, *Quasigeodesic Anosov flows and homotopic properties of flow lines* 479

J. Hounie & M. L. Leite, *The maximum pinciple for hypersurfaces with vanishing curvature functions* 247

R. S. Hamilton, *Harnack estimate for the mean curvature flow* 215

S. Hurder, *Infinitesimal rigidity for hyperbolic actions* 515

P. B. Kronheimer & T. S. Mrowka, *Embedded surfaces and the structure of Donaldson's polynomial invariants* 573

J. Kim & M. Pontecorvo, *A new method of constructing scalar-flat Kahler surfaces* 449

P. Li & L.-F. Tam, *Green's functions, harmonic functions, and volume comparison* 277

K. Liu, *On modular invariance and rigidity theorems* 343

F. Luo, *Möbius cone structures on 3-manifolds* 319

E. Lutwak & V. Oliker, *On the regularity of solutions to a generalization of the Minkowski problem* 227

M. Nicolau & S. Szczepanski, *Symmetries of fibered knots* 185

C. Yue, *Brownian motion on Anosov foliations and manifolds of negative curvature* 159