

# Journal Of Differential Geometry

E. Lutwak, <i>On some affine isoperimetric inequalities</i>	1
N. Mok & J.-Q. Zhong, <i>Curvature characterization of compact Hermitian symmetric spaces</i>	15
M. Gage & R. S. Hamilton, <i>The heat equation shrinking convex plane curves</i>	69
R. Brooks, <i>The spectral geometry of a tower of coverings</i>	97

# JOURNAL OF DIFFERENTIAL GEOMETRY

## Editors

PHILLIP A. GRIFFITHS  
Duke University  
Durham, North Carolina 27706

C. C. HSIUNG  
Lehigh University  
Bethlehem, Pennsylvania 18015

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

RICHARD M. SCHOEN  
University of California  
La Jolla, California 92093

Y. T. SIU  
Harvard University  
Cambridge, Massachusetts 02138

S. T. YAU  
University of California  
La Jolla, California 92093

## Associate Editors

MICHAEL M. FREEDMAN  
University of California  
La Jolla, California 92093

RICHARD B. MELROSE  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139

DAVID MUMFORD  
Harvard University  
Cambridge, Massachusetts 02138

ROGER PENROSE  
University of Oxford  
Oxford, England OX1 3LB

DAVID RUELLE  
Institut des Hautes Études Scientifiques  
91440 Bur-Sur-Yvette, France

---

The Journal of Differential Geometry, published bimonthly by Lehigh University in January, March, May, July, September and November, 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. It is the policy of the editorial board to publish papers within four to six months of acceptance.

The subscription price for Vols. 23–24 (1986) is \$190.00 list, \$48.00 for personal use of individuals; each volume consists of three numbers. Back number prices per volume (with a 40% reduction for members of the American Mathematical Society): Vols. 1–2 (1967–1968), \$21.00; Vols. 3–6 (1969–1972), \$27.00; Vols. 7–9 (1972–1974), \$36.00; Vol. 10 (1975), \$45.00; Vol. 11 (1976), \$52.00; Vol. 12 (1977), \$60.00; Vols. 13–15 (1978–1980), \$63.00; Vol. 16 (1981), \$72.00; Vol. 17 (1982), \$78.00; Vols. 18–20 (1983–1984), \$120.00, Vols. 21–22 (1985), \$135.00.

Subscriptions and orders should be addressed to the American Mathematical Society, P. O. Box 1571, Annex Station, Providence, Rhode Island 02901-1571. *All orders must be accompanied by payment, and check should be made*

*payable to the American Mathematical Society.* General correspondence and changes of address should be sent to the American Mathematical Society, P. O. Box 6248, Providence, Rhode Island 02940.

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

Copyright © 1986 Lehigh University. All rights reserved.

ISSN 0022-040X

Printed in the United States of America

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

Journal  
Of Differential  
Geometry

Published by  
LEHIGH UNIVERSITY  
Bethlehem, Pennsylvania

Volume 23 · 1986

# JOURNAL OF DIFFERENTIAL GEOMETRY

## Editors

PHILLIP A. GRIFFITHS  
Duke University  
Durham, North Carolina 27706

C. C. HSIUNG  
Lehigh University  
Bethlehem, Pennsylvania 18015

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

RICHARD M. SCHOEN  
University of California  
La Jolla, California 92093

Y. T. SIU  
Harvard University  
Cambridge, Massachusetts 02138

S. T. YAU  
University of California  
La Jolla, California 92093

## Associate Editors

MICHAEL M. FREEDMAN  
University of California  
La Jolla, California 92093

RICHARD B. MELROSE  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139

DAVID MUMFORD  
Harvard University  
Cambridge, Massachusetts 02138

ROGER PENROSE  
University of Oxford  
Oxford, England OX1 3LB

DAVID RUELLE  
Institut des Hautes Études Scientifiques  
91440 Bur-Sur-Yvette, France

---

The Journal of Differential Geometry, published bimonthly by Lehigh University in January, March, May, July, September and November, 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. It is the policy of the editorial board to publish papers within four to six months of acceptance.

The subscription price for Vols. 23–24 (1986) is \$190.00 list, \$48.00 for personal use of individuals; each volume consists of three numbers. Back number prices per volume (with a 40% reduction for members of the American Mathematical Society): Vols. 1–2 (1967–1968), \$21.00; Vols. 3–6 (1969–1972), \$27.00; Vols. 7–9 (1972–1974), \$36.00; Vol. 10 (1975), \$45.00; Vol. 11 (1976), \$52.00; Vol. 12 (1977), \$60.00; Vols. 13–15 (1978–1980), \$63.00; Vol. 16 (1981), \$72.00; Vol. 17 (1982), \$78.00; Vols. 18–20 (1983–1984), \$120.00, Vols. 21–22 (1985), \$135.00.

Subscriptions and orders should be addressed to the American Mathematical Society, P. O. Box 1571, Annex Station, Providence, Rhode Island 02901-1571. *All orders must be accompanied by payment, and check should be made*

*payable to the American Mathematical Society.* General correspondence and changes of address should be sent to the American Mathematical Society, P. O. Box 6248, Providence, Rhode Island 02940.

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

Copyright ©1986 Lehigh University. All rights reserved.

ISSN 0022-040X

Printed in the United States of America

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