ISSN (0090-5364)

# THE ANNALS of STATISTICS

# An Official Journal of the Institute of Mathematical Statistics

| Special Invited Paper   |                              |
|---|------------------------------|
| A statistical diptych: Admissible inferences—recurrence of symmetric Markov chains  | 1147                         |
| Articles  |                              |
| Statistical analysis of multiple ion channel data  André Robert Dabrowski and David McDonald  | 1180                         |
| Polya trees and random distributions R. DANIEL MAULDIN, WILLIAM D. SUDDERTH AND S. C. WILLIAMS  | 1203                         |
| Some aspects of Polya tree distributions for statistical modelling MICHAEL LAVINE Variable kernel density estimation GEORGE R. TERRELL AND DAVID W. SCOTT Statistical tools to analyze data representing a sample of curves | 1222<br>1236                 |
| ALOIS KNEIP AND THEO GASSER Optimal plug-in estimators for nonparametric functional estimation  |                              |
| LARRY GOLDSTEIN AND KAREN MESSER Weak convergence and adaptive peak estimation for spectral densities   | 1306                         |
| Minimum Hellinger-type distance estimation for censored data ZHILIANG YING A log-linear model for a Poisson process change point  | 1329<br>1350<br>1361<br>1391 |
| R. L. Eubank and Jeffrey D. Hart<br>Testing stationarity in the mean of autoregressive processes  | 1412                         |
|   | 1426                         |
|   | 1441                         |
| via submodels   | 1454                         |
| and spheres   | 1468                         |
| Increasing the confidence in Student's $t$ interval   |                              |
| Constantinos Goutis and George Casella Asymptotics for <i>M</i> -estimators defined by convex minimization Wojciech Niemiro The metrically trimmed mean as a robust estimator   | 1501<br>1514                 |
| of location   | 1534                         |
| Asymptotic properties of the balanced repeated replication method   | 1548                         |
| Bootstrap estimation of conditional distributions   | 1571                         |
| A rank statistics approach to the consistency of a general bootstrap  | 1594                         |
| DAVID M. MASON AND MICHAEL A. NEWTON The learning component of dynamic allocation indices   | 1611                         |
| John Gittins and You-Gan Wang   | 1625                         |
| Short Communications  |                              |
| Minimum impurity partitions David Burshtein, Vincent Della Pietra, Dimitri Kanevsky and Arthur Nádas  | 1637                         |
| Asymptotics for least squares cross-validation bandwidths in nonsmooth cases  | 1647<br>1658                 |

Vol. 20, No. 3—September 1992

#### INSTITUTE OF MATHEMATICAL STATISTICS

(Organized September 12, 1935)

The purpose of the Institute is to foster the development and dissemination of the theory and applications of statistics and probability.

#### OFFICERS AND EDITORS

President: Lawrence D. Brown, Department of Mathematics, White Hall, Cornell University, Itha New York 14853-7901

President-Elect: Stephen M. Stigler, Department of Statistics, University of Chicago, 5734 University

President-Elect: Stephen M. Stigler, Department of Statistics, University of Chicago, 5734 Universal Avenue, Chicago, Illinois 60637
 Past President: Willem R. van Zwet, Department of Mathematics, University of Leiden, P.O. 1 9512, 2300 RA Leiden, The Netherlands
 Executive Secretary: Diane M. Lambert, AT&T Bell Laboratories, 600 Mountain Avenue, Ro 2C-256, Murray Hill, New Jersey 07974
 Treasurer: Jessica Utts, Division of Statistics, University of California, Davis. Please send corresp dence to: IMS Business Office, 3401 Investment Boulevard #7, Hayward, California 94545
 Program Secretary: Iain M. Johnstone, Division of Biostatistics, HRP Building, Room 10, Stanfa University, Stanford, California 94205, 5002

Program Secretary: Iain M. Johnstone, Division of Biostatistics, HRP Building, Room 10, Stanfu University, Stanford, California 94305-5092
 Editor, The Annals of Statistics: Michael Woodroofe, Department of Statistics, Mason Hall, Univers of Michigan, Ann Arbor, Michigan 48109-1027
 Editor, The Annals of Probability: Burgess Davis, Departments of Mathematics and Statistics, Purc University, West Lafayette; Indiana 47907
 Editor, The Annals of Applied Probability: J. Michael Steele, Department of Statistics, University Pennsylvania, Philadelphia, Pennsylvania 19104-6302
 Executive Editor, Statistical Science: Robert E. Kass, Department of Statistics, Carnegie Mel University, Pittsburgh, Pennsylvania 18913

University, Pittsburgh, Pennsylvania 15213

Editor, The IMS Bulletin: George P. H. Styan, Department of Mathematics and Statistics, Burns Hall, McGill University, 805 Sherbrooke Street West, Montreal PQ, Canada H3A 2K6

Editor, The IMS Lecture Notes—Monograph Series: Robert J. Serfling, Department of Mathemati Sciences, Johns Hopkins University, Baltimore, Maryland 21218

Managing Editor: Roger L. Berger, Department of Statistics, Box 8203, North Carolina St

University, Raleigh, North Carolina 27695

Managing Editor: Robert Smythe, Department of Statistics, George Washington University, 2201 Street N.W., Washington, D.C. 20052.

Journals. The scientific journals of the Institute are The Annals of Applied Probability, The Annals Probability, The Annals of Statistics and Statistical Science. The news organ of the Institute is I Institute of Mathematical Statistics Bulletin.

Individual and Organizational Memberships. All individual members pay basic membership du of \$40 plus \$10 for The IMS Bulletin. Each regular member must elect to receive at least one scient journal for an additional amount, as follows: The Annals of Applied Probability (\$10), The Annals Probability (\$20), The Annals of Statistics (\$20) or Statistical Science (\$10). Of the total dues paid, \$24 to The IMS Bulletin and the propriet and the Image of Statistics (\$20) and the propriet and the Image of Statistics (\$20) and the propriet and the Image of Statistics (\$20) and the Image of Statistics (\$20) and the propriet and the Image of Statistics (\$20) and the Image of Statistics (\$20 allocated to *The IMS Bulletin* and the remaining amount is allocated equally among the scientijournal(s) received. Reduced membership dues are available to full-time students, permanent residents countries designated by the IMS Council and retired members. Retired members may elect to receive *T* IMS Bulletin only for \$20. Organizational memberships are available to nonprofit organizations at \$4 per year and to for-profit organizations at \$700 per year. Organizational memberships include t multiple-readership copies of all IMS journals in addition to other benefits specified for each category. (details available from the IMS Business Office).

Individual and General Subscriptions. Subscriptions are available on a calendar-year basis. In vidual subscriptions are for the personal use of the subscripter and must be in the name of, paid directly, and mailed to an individual. Individual subscriptions for 1992 are available to The Annals of Appli Probability (\$70), The Annals of Probability (\$80), The Annals of Statistics (\$80), The IMS Bulletin (\$4 and Statistical Science (\$70). General subscriptions are for libraries, institutions and any multiple-results. ership use. General subscriptions for 1992 are available to *The Annals of Applied Probability* (\$70), *T Annals of Probability* and *The Annals of Applied Probability* (\$180), *The Annals of Statistics* (\$130), *T IMS Bulletin* (\$50) and *Statistical Science* (\$75). Air mail rates for delivery outside North America ε \$80 per title (excluding The IMS Bulletin).

Permissions policy. Authorization to photocopy items for internal or personal use, or the internal personal use of specific clients, is granted by the Institute of Mathematical Statistics, provided that t base fee of \$5.00 per copy, plus \$.00 per page is paid directly to the Copyright Clearance Center, Congress Street, Salem, Massachusetts 01970. For those organizations that have been granted photocopy license by CCC, a separate system of payment has been arranged. The fee code for users of t Transactional Reporting Service is: 0091-1798/92 \$5.00 + .00.

Correspondence. Mail to IMS should be sent to the IMS Business Office (membership, subscription claims, copyright permissions, advertising, back issues), the Editor of the appropriate journal (subm sions, editorial content) or the Production Editor, Patrick Kelly, Department of Statistics, University Pennsylvania, Philadelphia, Pennsylvania 19104-6302.

The Annals of Statistics (ISSN 0090-5364), Volume 20, Number 3, September, 1992. Publish quarterly by the Institute of Mathematical Statistics, 3401 Investment Boulevard #7, Haywar California 94545. Second-class postage paid at Hayward, California and at additional mailing office POSTMASTER: Send address changes to The Annals of Statistics, Institute of Mathematical Statistic 3401 Investment Boulevard #7, Hayward, California 94545.

#### **EDITORIAL STAFF**

Editor

MICHAEL WOODROOFE

Associate Editors

OLE E. BARNDORFF-NIELSEN JAMES O. BERGER PETER J. BICKEL LAWRENCE D. BROWN CHING-SHUI CHENG DAVID L. DONOHO FRIEDRICH GOETZE LOUIS GORDON

PIET GROENEBOOM
PETER HALL
NANCY E. HECKMAN
PETER M. HOOPER
P. JEGANATHAN
JANA JUREČKOVÁ
ROBERT W. KEENER
RAFAIL Z. KHASMINSKII
KER-CHAU LI

JOHN I. MARDEN IAN W. MCKEAGUE YA'ACOV RITOV THOMAS SELLKE DAVID O. SIEGMUND CHING-ZONG WEI JON A. WELLNER GRACE L. YANG

EDITORIAL ASSISTANT LINORE LATHAM

Managing Editor Roger L. Berger

PRODUCTION EDITOR PATRICK KELLY

EDITORIAL ASSISTANT PEGGY T. MORRIS

## PAST EDITORS THE ANNALS OF MATHEMATICAL STATISTICS

H. C. Carver, 1930–1938
S. S. Wilks, 1938–1949
T. W. Anderson, 1950–1952
E. L. Lehmann, 1953–1955
T. E. Harris, 1955–1958

The Annals of Statistics Ingram Olkin, 1972–1973 I. R. Savage, 1974–1976 Rupert G. Miller, Jr., 1977–1979 David V. Hinkley, 1980–1982 Michael D. Perlman, 1983–1985 Willem R. van Zwet, 1986–1988 Arthur Cohen, 1988–1991 WILLIAM KRUSKAL, 1958–1961 J. L. HODGES, JR., 1961–1964 D. L. BURKHOLDER, 1964–1967 Z. W. BIRNBAUM, 1967–1970 INGRAM OLKIN, 1970–1972

The Annals of Probability Ronald Pyke, 1972–1975 Patrick Billingsley, 1976–1978 R. M. Dudley, 1979–1981 Harry Kesten, 1982–1984 Thomas M. Liggett, 1985–1987 Peter Ney, 1988–1990

#### EDITORIAL POLICY

The main purpose of *The Annals of Statistics*, *The Annals of Probability* and *The Annals of Applied Probability* is to publish significant contributions to the theory of statistics and probability and their applications. The emphasis is on importance and interest; formal novelty and mathematical correctness alone are not sufficient for publication. Especially appropriate are authoritative expository papers and surveys of areas in vigorous development. Because statistics is an evolving discipline, the Editors of *The Annals of Statistics* take a broad view of its domain and welcome papers in interface areas. Contributors to *The Annals of Statistics* should review the editorial in the January 1980 issue. All papers are refereed.

#### ADDITIONAL GUIDELINES FOR PREPARING PAPERS FOR THE ANNALS OF STATISTICS

- 1. The introduction and/or abstract should contain a statement pertaining to the statistical importance of the paper. Sometimes this is clear when reference is made to previous work. Statistical importance, not mathematical complexity for its own sake, is the prime criterion for publication.
- 2. The introduction should be thorough and contain clear yet nontechnical descriptions of the important results. Furthermore, the introduction should give a clear indication of where in the paper the main results and conclusions are to be found.
- 3. In papers where the formulation is general and mathematically abstract, when appropriate, the author should provide a short development of a special case, an example, or an illustration of the results. If possible, the special case or example should be in the introduction or shortly thereafter.
- 4. The manuscript should be proofread thoroughly before being submitted. Manuscripts with many typographical errors will cause unnecessary delays and may require resubmission.

#### IMS CORPORATE MEMBERS

THE AEROSPACE CORPORATION Los Angeles, California

AT & T BELL LABORATORIES Murray Hill, New Jersey

Bell Communications Research Morristown, New Jersey

GENERAL MOTORS CORPORATION Research Laboratories

Research Laboratories Warren, Michigan

International Business Machines Corp Thomas J. Watson Research Center Yorktown Heights, New York

SPRINGER-VERLAG NEW YORK INCORPORATED New York, New York

#### IMS INSTITUTIONAL MEMBERS

ACADEMIA SINICA Inst of Statistical Science

Taipei, Taiwan

AMERICAN UNIVERSITY
Dept of Mathematics and Statistics

Washington, DC

ARIZONA STATE UNIVERSITY Committee on Statistics

Dept of Mathematics and Dept of Decision and Information Systems Tempe, Arizona

AUSTRALIAN NATIONAL UNIVERSITY Canberra, ACT, Australia

BOWLING GREEN STATE UNIVERSITY Dept of Mathematics and Statistics Bowling Green, Ohio

CALIFORNIA STATE UNIVERSITY AT FULLERTON Dept of Mathematics Fullerton, California

CASE WESTERN RESERVE UNIVERSITY Dept of Mathematics and Statistics Cleveland, Ohio

CORNELL UNIVERSITY Dept of Mathematics Ithaca, New York

DALHOUSIE UNIVERSITY Killam Memorial Library Halifax, Nova Scotia, Canada

FLORIDA STATE UNIVERSITY Dept of Statistics Tallahassee, Florida

GEORGE WASHINGTON UNIVERSITY Dept of Statistics Washington, DC

HARVARD UNIVERSITY Cabot Science Library Cambridge, Massachusetts

Harvard University Dept of Biostatistics Boston, Massachusetts

HARVARD UNIVERSITY Dept of Statistics Cambridge, Massachusetts

INDIANA UNIVERSITY Dept of Mathematics Bloomington, Indiana

INSTITUTO MEXICANO DEL PETROLEO Mexico, DF, Mexico

IOWA STATE UNIVERSITY Dept of Statistics and Statistical Lab JOHNS HOPKINS UNIVERSITY Depts of Biostatistics and Mathematical Sciences Baltimore, Maryland

Kansas State University Dept of Statistics Manhattan, Kansas

MARA INSTITUTE OF TECHNOLOGY Selangor, Malaysia

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Dept of Mathematics Cambridge, Massachusetts

McGill University
Dept of Mathematics and Statistics

Montreal, Quebec, Canada
MIAMI UNIVERSITY LIBRARY
Oxford, Ohio

MICHIGAN STATE UNIVERSITY Dept of Statistics and Probability East Lansing, Michigan

NATIONAL SECURITY AGENCY Fort George G. Meade, Maryland

NEW MEXICO STATE UNIVERSITY Dept of Mathematical Sciences Las Cruces, New Mexico

NORTH CAROLINA STATE UNIVERSITY Dept of Statistics Raleigh, North Carolina

NORTH DAKOTA STATE UNIVERSITY LIBRARY Fargo, North Dakota

NORTHERN ILLINOIS UNIVERSITY Div of Statistics DeKalb, Illinois

OHIO STATE UNIVERSITY Dept of Statistics Columbus, Ohio

OREGON STATE UNIVERSITY Dept of Statistics Corvallis, Oregon

PENNSYLVANIA STATE UNIVERSITY Dept of Statistics University Park, Pennsylvania

PRINCETON UNIVERSITY LIBRARY Princeton, New Jersey

Purdue University Library West Lafayette, Indiana

QUEEN'S UNIVERSITY Dept of Mathematics and Statistics Kingston, Ontario, Canada

RICE UNIVERSITY LIBRARY Houston, Texas

THE ROCKEFELLER UNIVERSITY LIBRARY New York, New York

SCOTT AIR FORCE BASE Air Weather Service Technical Library SIMON FRASER UNIVERSITY Dept of Mathematics and Statistics Burnaby, British Columbia, Canada

SOUTHERN ILLINOIS UNIVERSITY Dept of Mathematics and Statistics Edwardsville, Illinois

STANFORD UNIVERSITY Dept of Statistics Stanford, California

SYRACUSE UNIVERSITY Dept of Mathematics Syracuse, New York

TECHNICHE UNIVERSITY Inst für Math Stochastic Braunschweig, Germany

TEMPLE UNIVERSITY Dept of Mathematics Philadelphia, Pennsylvania

TEXAS TECH UNIVERSITY Dept of Mathematics Lubbock, Texas

UNIVERSITY OF ALBERTA Dept of Statistics and Applied Probability Edmonton, Alberta, Canada

UNIVERSITY OF ARIZONA Dept of Mathematics Tucson, Arizona

UNIVERSITY OF BRITISH COLUMBIA Dept of Statistics Vancouver, British Columbia, Canada

UNIVERSITY OF CALGARY Dept of Mathematics and Statistics Calgary, Alberta, Canada

UNIVERSITY OF CALIFORNIA Dept of Statistics Berkeley, California

UNIVERSITY OF CALIFORNIA Div of Statistics Davis, California

UNIVERSITY OF CALIFORNIA Main Library Irvine, California

UNIVERSITY OF CONNECTICUT Dept of Statistics Storrs, Connecticut

UNIVERSITY OF FLORIDA Dept of Statistics Gainesville, Florida

UNIVERSITY OF GEORGIA Dept of Statistics Athens, Georgia

University of Illinois Dept of Statistics Champaign, Illinois

UNIVERSITY OF ILLINOIS AT CHICAGO Dept of Math, Stat and Comp Sci Chicago, Illinois

UNIVERSITY OF IOWA Dept of Statistics and Actuarial Sci Iowa City, Iowa

UNIVERSITY OF MARYLAND Dept of Mathematics College Park, Maryland

UNIVERSITY OF MASSACHUSETTS Dept of Mathematics and Statistics Amherst, Massachusetts UNIVERSITY OF MICHIGAN Dept of Statistics Ann Arbor, Michigan

University of Minnesota School of Statistics Minneapolis, Minnesota

UNIVERSITY OF MISSOURI Ellis Library Columbia, Missouri

UNIVERSITY OF MONTREAL Dept of Mathematics Montreal, Quebec, Canada

UNIVERSITY OF NEBRASKA Dept of Mathematics and Statistics Lincoln, Nebraska

University of New Brunswick Library Fredericton, New Brunswick, Canada

UNIVERSITY OF NEW MEXICO
Dept of Mathematics and Statistics
Albuquerque, New Mexico

UNIVERSITY OF NORTH CAROLINA Dept of Statistics Chapel Hill, North Carolina

University of Oregon Dept of Mathematics Eugene, Oregon

UNIVERSITY OF PENNSYLVANIA Dept of Statistics Philadelphia, Pennsylvania

UNIVERSITY OF SOUTH CAROLINA Dept of Statistics Columbia, South Carolina

UNIVERSITY OF STOCKHOLM Inst of Actuarial Math and Math Stat Stockholm, Sweden

UNIVERSITY OF TEXAS AT AUSTIN Dept of Mathematics Austin, Texas

UNIVERSITY OF VICTORIA Dept of Mathematics Victoria, British Columbia, Canada

University of Virginia Dept of Mathematics Charlottesville, Virginia

UNIVERSITY OF WASHINGTON Dept of Statistics Seattle, Washington

UNIVERSITY OF WATERLOO Dept of Statistics and Actuarial Sci Waterloo, Ontario, Canada

VIRGINIA COMMONWEALTH UNIVERSITY Dept of Mathematical Sciences Richmond, Virginia

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Dept of Statistics Blacksburg, Virginia

WAKE FOREST UNIVERSITY Z. Smith Reynolds Library Winston-Salem, North Carolina

WAYNE STATE UNIVERSITY Dept of Mathematics Detroit, Michigan

YORK UNIVERSITY
Dept of Mathematics
Downsylew, Ontario, Canada

### THE ANNALS OF STATISTICS

#### INSTRUCTIONS FOR AUTHORS

**Submission of Papers.** Papers to be submitted for publication should be sent to the Editor of the Annals of Statistics. (For current address, see the latest issue of the Annals.) Four copies should be submitted on paper that will take ink corrections. The manuscript will not normally be returned to the author; when expressly requested by the author, one copy of the manuscript will be returned. All manuscripts should be accompanied by a cover letter

Preparation of Manuscripts. Manuscripts should be typewritten, entirely double-spaced, including references, with wide margins at sides, top and bottom. All copies must be completely legible. When technical reports are submitted, all extraneous sheets and covers must be removed. Typists should check an issue of the *Annals* for style.

**Submission of Reference Papers.** Four copies of unpublished or not easily available papers cited in the manuscript should be submitted with the manuscript.

**Title.** The title should be descriptive and as concise as is feasible, i.e., it should indicate the topic of the paper as clearly as possible, but every word in it should be pertinent.

Abbreviated Title. An abbreviated title to be used as a running head is also required. This should normally not exceed 35 characters. For example, an article with the title "The Curvature of a Statistical Model, with Applications to Large-Sample Likelihood Methods," could have the running head, "Curvature of Statistical Model" or possibly "Asymptotics of Likelihood Methods," depending on the emphasis to be conveyed.

**Affiliation.** Indicate your present institutional affiliation as you would like it to appear.

Summary. Each manuscript is required to contain a summary, clearly separated from the rest of the paper, which will be printed immediately after the title. Its main purpose is to inform the reader quickly of the nature and results of the paper; it may also be used as an aid in retrieving information. The length of a summary will clearly depend on the length and difficulty of the paper, but in general it should not exceed 150 words. Formulas should be used as sparingly as possible within the summary. The summary should not make reference to results or formulas in the body of the paper—it should be selfcontained.

**Footnotes.** Footnotes should not be used, except as described under Title Page Footnotes below. Such information should be included within the text.

**Title Page Footnotes.** Included as a footnote on page 1 should be the headings:

AMS 1980 subject classifications. Primary—; secondary—.

Key words and phrases.

The classification numbers representing the primary and secondary subjects of the article may be found with instructions for its use in the *Mathematical Reviews Annual Subject Index-*1980. The key words and phrases should describe the subject matter of the article; generally they should be taken from the body of the paper.

Acknowledgment of support. Grants and contracts should also be included in this footnote.

Identification of Symbols. Manuscripts for publication should be clearly prepared to insure that all symbols are properly identified. Distinguish between "oh" and "zero," "ell" and "one," "epsilon" and "element of," "summation" and "capital sigma," etc. Indicate also when special type is required (Greek, German, script, boldface, etc.); unless indicated otherwise, formula letters will be set in italics. Acronyms should be introduced sparingly. Any handwritten symbols should be clearly identified.

Figures and Tables. Figures, charts, and diagrams should be prepared in a form suitable for photographic reproduction and should be professionally drawn twice the size they are to be printed. (These need not be submitted until the paper has been accepted for publication.) The printer does not improve upon the quality of the figures submitted. Tables should be typed on separate pages with accompanying footnotes immediately below the table.

**Formulas.** Fractions *in the text* are preferably written with the solidus or negative exponent; thus,

(a+b)/(c+d) is preferred to  $\frac{a+b}{c+d}$ , and  $(2\pi)^{-1}$  or  $1/(2\pi)$  to  $\frac{1}{c+d}$ . Also,  $a^{b(c)}$  and  $a_{t+1}$  are preferred

or  $1/(2\pi)$  to  $\frac{1}{2\pi}$ . Also,  $a^{b(c)}$  and  $a_{b(c)}$  are preferred to  $a^{b_c}$  and  $a_{b_c}$ , respectively. Complicated exponentials should be represented with the symbol exp. A fractional exponent is preferable to a radical sign.

**References.** References should be typed double-spaced and should follow the style:

Kiefer, J. C. (1976). Admissibility of conditional confidence procedures. *Ann. Statist.* 4 836–865.

In textual material, the format "... Keifer (1976)..." should be used. Multiple references can be distinguished as "... Kiefer (1976a)...". Abbreviations for journals should be taken from a current index issue of *Mathematical Reviews*.

**Addresses.** The permanent address of each author should be typed following the references.

Copyright, Page Charges and Offprints. Page charges are \$45 per printed page. Payment of some or all of the estimated page charges associated with articles is strongly encouraged. The editorial review of articles and administration of page charges are completely separate activities. Manuscripts are reviewed and accepted prior to determining whether page charges will be paid.

Corresponding authors receive 25 gratis offprints. Offprints of discussion articles include the main article(s), discussion(s) and rejoinder(s) as a package. Corresponding authors of main articles receive 25 gratis offprints; corresponding discussants receive 10 gratis offprints. Additional offprints may be purchased by using the IMS Offprint Purchase Order Form accompanying the galleys.

Copyright transfer, page charges and offprints are the responsibility of the IMS Business Manager.

Galley Proofs. The corresponding author will ordinarily receive galley proofs. Corrected galley proofs should be sent to AOS Redactory, Science Typographers, Inc., 15 Industrial Boulevard, Medford, NY 11763.

**Correspondence**. All correspondence with the editor must refer to the manuscript number of the paper. This number will be on the card sent to the author acknowledging receipt of the article.