

PROBABILITY **in the** **Engineering** **and** **Informational** **Sciences**

Volume 3

1989

Number 1

Cambridge University Press

PROBABILITY IN THE ENGINEERING AND INFORMATIONAL SCIENCES

Editor

Sheldon Ross

University of California, Berkeley

Editorial Board

F. K. Hwang

Bell Laboratories, U.S.A.

F. Kelly

Cambridge University, U.K.

F. J. Radermacher

Passau University, F.R.Germany

M. Sakaguchi

Osaka University, Japan

N. Singpurwalla

George Washington University, U.S.A.

H. M. Taylor

University of Delaware, U.S.A.

H. C. Tijms

The Free University, The Netherlands

J. Walrand

*University of California, Berkeley,
U.S.A.*

R. Weber

Cambridge University, U.K.

G. Weiss

Georgia Tech University, U.S.A.

K. Yao

UCLA, U.S.A.

U. Yechiali

Tel Aviv University, Israel

Editorial Office: *Probability in the Engineering and Informational Sciences*, College of Engineering, Department of Industrial Engineering and Operations Research, University of California, Berkeley, CA 94720, U.S.A. Tel. (415) 642-3615.

Publishing, Production and Advertising Offices: Cambridge University Press, 32 East 57th Street, New York, NY 10022, U.S.A.

Subscription Offices: Cambridge University Press, 510 North Avenue, New Rochelle, NY 10501, U.S.A. (for US/Canada); or Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England (for UK/rest of world).

1989 Subscription Information: *Probability in the Engineering and Informational Sciences* (ISSN 0269-9648) is published quarterly. Institutional rate: US \$118.00 in the U.S.A. and Canada; UK £87.00 in the U.K. and Eire; UK £93.00 elsewhere. Individual rates (prepayment by personal check or credit card only): US \$58.00 in the U.S.A. and Canada, UK £45.00 elsewhere. Prices include postage and insurance; air mail or registered mail extra.

Article Reprints are available from the authors. For orders of 50 or more reprints, contact the Journals Production Office.

Copyright © 1989 Cambridge University Press

All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying or otherwise, without permission in writing from the copyright holder.

Photocopying information for users in the USA: The Item-Fee Code for this publication indicates that copying for internal or personal use beyond that permitted by Sec. 107 or 108 of the US Copyright Law is authorized for users duly registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the appropriate remittance of \$5.00 per article is paid directly to: CCC, 27 Congress Street, Salem, MA 01970. Specific written permission must be obtained for all other copying: Contact your nearest Cambridge University Press office. *The Item-Fee Code* for this journal is: 0269-9648/89 \$5.00 + .00

Application to mail at second-class rates is pending in New York, NY and additional mailing offices. Postmaster: Send address changes in the U.S.A. and Canada to *Probability in the Engineering and Informational Sciences*, Subscription Department, Cambridge University Press, 510 North Avenue, New Rochelle NY 10501.