



MATHEMATICAL AND COMPUTER MODELLING

(Formerly Mathematical Modelling)

Affiliated with the International Association for Mathematical and Computer Modelling

EDITORS-IN-CHIEF

Ervin Y. Rodin

Xavier J.R. Avula

Editorial Board

- | | |
|-------------------|-------------------|
| Rutherford Aris | N. Metropolis |
| H.T. Banks | D.N.P. Murthy |
| Martin Braun | J.C.J. Nihoul |
| Colin W. Clark | James J. O'Brien |
| G.B. Dantzig | Hans Oestreicher |
| John U. Farley | Edward C. Posner |
| H. von Gierke | Ilya Prigogine |
| Roland Glowinski | C.R. Rao |
| H.S. Green | Fred S. Roberts |
| Frank Harary | Robert Rosen |
| J.N.R. Jeffers | Gian-Carlos Rota |
| Rudolf E. Kalman | Thomas L. Saaty |
| Herbert Keller | Jerome Spanier |
| Murray S. Klamkin | Lynn Arthur Steen |
| M.D. Kruskal | Tzyh-Jong Tarn |
| H. K. Kuiken | Samuel C.C. Ting |
| Roger E. Levien | Lotfi Zadeh |
| Simon A. Levin | O.C. Zienkiewicz |
| William F. Lucas | H.-J. Zimmerman |

**NOW ACCEPTING
TEX MANUSCRIPTS**
(see end of issue
for details)



PERGAMON PRESS

Oxford • New York • Beijing • Frankfurt • São Paulo

MATHEMATICAL AND COMPUTER MODELLING

Affiliated with the International Association for Mathematical and Computer Modelling

VOLUME 13, NUMBER 7

1990

CONTENTS

Invited Review

W. R. Blischke

1 Mathematical models for analysis of warranty policies

G. Adomian

17 A review of the decomposition method and some recent results for nonlinear equations

**H. Gzyl, R. Jiménez and
A. J. Quiroz**

45 The physicist's approach to the travelling salesman problem—II

F. Gamboa and H. Gzyl

49 Linear programming with maximum entropy

H. B. Poorooshash

53 Modulus of lateral retardation and its application to the analysis of piles in seismically active zones

**M. S. Mahmoud and
M. A. Younis**

65 Sensitivity analysis of productive inventories under modeling errors

A. S. Meziani and F. Rezvani

77 Using the analytical hierarchy process to select a financing instrument for a foreign investment

L. Ingber and P. L. Nunez

83 Multiple scales of statistical physics of the neocortex: application to electroencephalography

**M. D. Ross, J. E. Dayhoff
and D. H. Mugler**

97 Toward modeling a dynamic biological neural network

G. S. H. Lock and S. Park

107 A numerical model of convective eversion

Brief Note

W. W. Fisher

119 Markov process modelling of a maintenance system with spares, repair, cannibalization and manpower constraints

I Announcement

III Software Survey Section

Indexed in: Curr. Cont. ASCA, Cam. Sci. Abstr., Curr. Cont. CompuMath., CABS, Math. Cit. Ind., Math. Rev., Oper. Res. Manage. Sci., Curr. Cont. SCISEARCH Data., Zent. Math.



PERGAMON PRESS

Oxford · New York · Beijing · Frankfurt · São Paulo · Sydney · Tokyo · Toronto