

ISSN 0020-7683

1991  
VOLUME 27  
NUMBER 2

INTERNATIONAL JOURNAL OF  
**SOLIDS and**  
STRUCTURES

Editor-in-Chief

**CHARLES STEELE**

Founder and Editor-in-Chief, 1965-1985

**GEORGE HERRMANN**



**Pergamon Press**

OXFORD · NEW YORK · BEIJING · FRANKFURT  
SÃO PAULO · SYDNEY · TOKYO · TORONTO

# INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES

*Editor-in-Chief*

CHARLES STEELE

Division of Applied Mechanics, Stanford University,  
Stanford, CA 94305, U.S.A.

Volume 27, No. 2

1991

## CONTENTS

- |   |     |   |
|---|-----|---|
| <b>Moshe Eisenberger</b>                        | 135 | Buckling loads for variable cross-section members with variable axial forces  |
| <b>Gregory J. Rodin<br/>and Yuh-Long Hwang</b>  | 145 | On the problem of linear elasticity for an infinite region containing a finite number of non-intersecting spherical inhomogeneities |
| <b>A. P. Christoforou<br/>and S. R. Swanson</b> | 161 | Analysis of impact response in composite plates   |
| <b>J.-L. Guyader</b>                            | 171 | Uncertainty bounds for energy of imperfectly described vibration fields. Application to the validity of truncated modal expansion   |
| <b>K. M. Liew and K. Y. Lam</b>                 | 189 | A Rayleigh-Ritz approach to transverse vibration of isotropic and anisotropic trapezoidal plates using orthogonal plate functions   |
| <b>J. W. Rudnicki<br/>and D. A. Koutsibelas</b> | 205 | Steady propagation of plane strain shear cracks on an impermeable plane in an elastic diffusive solid                               |
| <b>J. W. Ju</b>                                 | 227 | On two-dimensional self-consistent micromechanical damage models for brittle solids   |
|   | 259 | Erratum   |

INDEXED IN Appl Mech Rev, Curr Cont ASCA, Cam Sci Abstr,  
Curr Cont/Eng Tech & Appl Sci, Eng Ind, INSPEC Data, Int Civil Eng Abstr,  
Math R, Mechanics, PASCAL-CNRS Data, Curr Cont Sci Cit Ind,  
Curr Cont SCISEARCH Data, SSSA/CISA/ECA/ISMEC

ISSN 0020-7683  
IJSOAD 27(2) 135-260 (1991)



Published by

**Pergamon Press**

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