

CONTENTS

| Papers | Page |
|-----------------------------------------------------------------------------------------------------------|------|
| RECTANGULAR GRILLAGES OF LEAST WEIGHT by George I. N. Rozvany and Sai R. Adidam | 1337 |
| BEAMS SUBJECTED TO FOLLOWER FORCE WITHIN THE SPAN by Jack C. Wiley and Richard E. Furkert | 1353 |
| TURBULENCE EFFECT ON WALL PRESSURE FLUCTUATIONS by Willy Z. Sadeh and Jack E. Cermak | 1365 |
| TRANSVERSE BEAM VIBRATIONS-NONLINEAR CONSTRAINT by Mohammed Ali Dokainish and Rajnish Kumar | 1381 |
| INVARIANT MULTICOUPLER THEORY OF SHELLS by Gerald A. Wempner | 1397 |
| SYMMETRIC BUCKLING OF INELASTIC SPHERICAL SHELLS by Robert K. Emerton and Nicholas F. Morris | 1417 |
| PROBABILISTIC MODELING OF CONCRETE STRUCTURES by Masanobu Shinozuka | 1433 |
| SOME ELEMENTS FOR ANALYSIS OF PLATE BENDING by Robert D. Cook | 1453 |
| LARGE EIGENVALUE PROBLEMS IN DYNAMIC ANALYSIS by Klaus-Jürgen Bathe and Edward L. Wilson | 1471 |
| STATICS OF RANDOM BEAMS by Devendra K. Shukla and Robert M. Stark | 1487 |

(over)

This Journal is published bimonthly by the American Society of Civil Engineers. Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price is \$10.00 per year with discounts to members and libraries. Second-class postage paid at New York, N.Y. and at additional mailing offices. EM, SA.

The Society is not responsible for any statement made or opinion expressed in its publications.

| | Page |
|-------------------------------------------------------------|------|
| SHEAR-FLEXIBLE ORTHOTROPIC PLATES LOADED IN PLANE | |
| by Charles W. Bert and Shyhming Chang | 1499 |
| DYNAMIC RESPONSE OF NONLINEAR MEDIA AT LARGE STRAINS | |
| by Joseph H. Heifitz and Carl J. Costantino | 1511 |
| FINITE EARTHQUAKE-RESPONSE OF INELASTIC STRUCTURE | |
| by Chi-Mou Ni and Lawrence H. N. Lee | 1529 |
| ELASTIC-PLASTIC ANALYSIS BY QUADRATIC PROGRAMMING | |
| by Antone F. Sayegh and Moshe F. Rubinstein | 1547 |
| WIND LOAD ON CYLINDER WITH SPANWISE PROTRUSION | |
| by David F. James and Quan-Si Truong | 1573 |

DISCUSSION

Proc. Paper 9390

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| RANDOM PROCESSES FOR EARTHQUAKE SIMULATION , by Roy Levy, Frank Kozin, and Robert B. B. Moorman (Apr. 1971. Prior Discussion: Oct., 1971 and Feb., 1972). | |
| closure | 1593 |
| INITIAL BUCKLING OF CHANNELS IN COMPRESSION , by William H. Wittrick and Frederic W. Williams (June, 1971. Prior Discussion: Feb., Apr., 1972). | |
| closure | 1595 |
| STRAIN RATE EFFECTS IN PARTICULATE-FILLED EPOXY , by Larry W. Oline and Russell Johnson (Aug. 1971. Prior Discussion: Apr., 1972). | |
| closure | 1596 |
| AEROELASTIC STABILITY OF UNSTIFFENED SUSPENSION BRIDGES , by Daniel Dicker (Dec., 1971. Prior Discussion: June 1972). | |
| closure | 1597 |
| REANALYSIS FOR LIMITED STRUCTURAL DESIGN MODIFICATIONS,^a by Uri Kirsch and Moshe Rubinstein (Feb., 1972). | |
| by John H. Argyris and John R. Roy | 1599 |
| ELASTIC-PLASTIC ANALYSIS OF CYLINDRICAL SHELLS,^a by Nabil A. Shoeb and William C. Schnobrich (Feb., 1972). | |
| by Morris N. Fialkow | 1601 |

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.

| | Page |
|----------------------------------------------------------------------------------------------------------------------------------------------|------|
| FINITE ELEMENT METHOD FOR ELASTIC PLASTIC PLATES, ^a by Ted Belytschko and Milan Velebit (Feb., 1972). by Jan Bäcklund | 1603 |
| AN APPROACH TO TIME-VARYING SPECTRAL ANALYSIS, ^a by Shih-Chi Liu (Feb., 1972). by Mehmet A. Tayfun and Cheng Y. Yang | 1606 |
| DYNAMIC ANALYSIS BY EXTRA FAST FOURIER TRANSFORM, by Jethro W. Meek and Anestis S. Velestos (Apr., 1972). errata | 1608 |

TECHNICAL NOTES

Proc. Paper 9396

| | |
|-------------------------------------------------------------------------------------------|------|
| STRESS INTENSITY FACTORS BY CALIBRATED FINITE ELE- MENT METHOD by P. F. Walsh | 1611 |
|-------------------------------------------------------------------------------------------|------|

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.