

CONTENTS

Papers	Page
WIND LOADS ON KRESGE AUDITORIUM AND TRAVELER'S BUILDING by Francis J. Maher	1
STABILITY OF TENSILE CRACKS IN PRESTRESSED CONCRETE BEAMS by I. O. Oladapo	17
INELASTIC BAR SUBJECTED TO THRUST AND CYCLIC BENDING by Ben Kato and Hiroshi Akiyama	33
REINFORCED LIGHTWEIGHT CONCRETE COLUMNS by Donald W. Pfeifer	57

DISCUSSION

Proc. Paper 6325

SIMPLE METHOD OF ANALYSIS OF VIERENDEEL STRUCTURES, by German Gurfinkel (June, 1967. Prior Discussions: Jan., Feb., March, May, 1968). closure.	85
------------------------------------------------------------------------------------------------------------------------------------------------------------------	----

(over)

This Journal is published monthly by the American Society of Civil Engineers. Publications office is at 2500 South State Street, Ann Arbor, Michigan 48104. Editorial and General Offices are at 345 East 47th Street, New York, N.Y. 10017. Subscription price is \$16.00 per year with discounts to members and libraries. Second-class postage paid at Ann Arbor, Michigan. ST.

	Page
NUMERICAL SOLUTION OF NONLINEAR STRUCTURES, by Trevor J. Poskitt (August, 1967. Prior Discussions: June, 1968). closure.	89
ELASTIC LATERAL BUCKLING OF CONTINUOUS BEAMS, by Alois J. Hartmann (August, 1967. Prior Discussions: March, May, June, 1968). closure.	92
OPTIMUM DESIGN OF ECCENTRICALLY LOADED COLUMNS, by Francis R. Shanley (August, 1967. Prior Discussions: June, 1968). closure.	94
REINFORCED CONCRETE BEAMS SUBJECTED TO REPEATED LOADS, by Charles A. Miller and Sidney A. Guralnick (October, 1967. Prior Discussions: June, Aug., 1968). closure.	94
MEMBRANE-FLEXURAL FAILURE MODES OF RESTRAINED SLABS, by Amnon Jacobson (October, 1967. Prior Discussion: July, 1968). closure.	97
STRENGTH OF STEEL-ENCASED CONCRETE BEAM COLUMNS, by Richard W. Furlong (October, 1967. Prior Discussions: March, Aug., 1968). closure.	99
BENDING OF HYPERBOLIC COOLING TOWERS, by Phillip L. Gould and Seng-Lip Lee (October, 1967. Prior Discussion: July, 1968). closure.	101
FORCES ON RIGID CULVERTS UNDER HIGH FILLS, by Colin B. Brown (October, 1967. Prior Discussion: July, 1968). closure.	103
DISSECTION OF STRUCTURES, by Karl L. Stewart and John Baty (October, 1967. Prior Discussion: June, 1968). closure.	103
SECOND-ORDER THEORY IN ORTHOTROPIC PLATES, by George D. Adotte (October, 1967. Prior Discussions: May, July, 1968). closure.	105
RELEASES AND CONSTRAINTS IN STRUCTURAL NETWORKS, by Samuel P. Mauch and Steven J. Fenves (October, 1967. Prior Discussion: June, 1968). closure.	106
SEISMIC RESISTANCE OF REINFORCED CONCRETE BEAM-COLUMN JOINTS, by Norman W. Hanson and Harold W. Connor (October, 1967. Prior Discussions: June, July, 1968). closure.	107

	Page
SUSPENDER TENSION METHOD FOR BRIDGE ANALYSIS, by Tadeusz Janiszewski (October, 1967. Prior Discussion: June, 1968). closure.	108
COMPUTER SYSTEM FOR ANALYSIS OF LARGE FRAMEWORKS, by David F. Brooks and Derrick M. Brotton (December, 1967. Prior Discussions: June, July, Aug., 1968). closure.	109
MULTIBEAM BRIDGES WITH ELEMENTS OF CHANNEL SECTION, by Narbey Khachaturian, Arthur R. Robinson and Richard B. Pool (December, 1967. Prior Discussion: Aug., 1968). closure.	110
BEAM TESTS WITH UNREINFORCED WEB OPENINGS, by Richard G. Redwood and John O. McCutcheon (January, 1968). errata	111
DIAGONAL CRACKING IN PRESTRESSED CONCRETE BEAMS, by Jitendra N. Kar (January, 1968). errata	112
MULTISPAN SUSPENSION BRIDGES UNDER LATERAL LOADS, by Takeo Fukuda (January, 1968). errata	113
FATIGUE OF GROUTED SLEEVE REINFORCING BAR SPLICES, by Don L. Ivey (January, 1968). closure.	113
ULTIMATE TORQUE OF REINFORCED RECTANGULAR BEAMS, ^a by Thomas T. C. Hsu (February, 1968. Prior Discussions: Nov., 1968). by M. Saeed Mirza	114
BENDING STRENGTH OF ALUMINUM FORMED SHEET MEMBERS, ^a by John R. Jombock and John W. Clark (February, 1968). by Albert L. Johnson and Shien T. Wang	117
GRID MOMENT MAXIMIZATION BY MATHEMATICAL PROGRAM- MING, ^a by Francois N. Ayer and C. Allin Cornell (February, 1968). by Reza Razani	120
by Andrew C. Palmer	123
BRIDGE ANALYSIS USING ORTHOTROPIC PLATE THEORY, ^a by Conrad P. Heins, Jr. and Charles T. G. Looney (Feb., 1968). by Anatol A. Eremin	124
LATERAL LOADS IN ASYMMETRIC MULTISTORY STRUCTURES, ^a by A. Winokur and J. Gluck (March, 1968). by Ian A. MacLeod	124

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

	Page
STRUCTURAL FINGER-JOINTING CRITERIA AND PERFORMANCE, by Robert E. Eby (March, 1968).	
errata	125
SURFACE TREATMENT OF HIGH STRENGTH BOLTED JOINTS, ^a by George C. Brookhart, Jr., I. H. Siddiqi, and Desi D. Vasarhelyi (March, 1968).	
by Herbert M. Mandel	126
LONGITUDINALLY RESTRAINED REINFORCED CONCRETE BEAMS, ^a by German Gurfinkel and Chester P. Siess (March, 1968).	
by Amnon Jacobson	127
LATERAL STABILITY OF WELDED LIGHT TRUSSES, ^a by John A. Hribar and William P. Laughlin (March, 1968).	
by William A. Andrews	130
by David A. Roach	131
PROBABILISTIC MODELS FOR SEISMIC FORCE DESIGN, ^a by Jack R. Benjamin (May, 1968).	
by Abraham M. Hasofer	133
BUCKLING ANALYSIS OF ONE-STORY FRAMES, by Alfred Zweig (September, 1968).	
errata	136

INFORMATION RETRIEVAL

The key words, abstract, and reference "cards" for each article in this Journal represent part of the ASCE participation in the EJC information retrieval plan. The retrieval data are placed herein so that each can be cut out, placed on a 3 x 5 card and given an accession number for the user's file. The accession number is then entered on key word cards so that the user can subsequently match key words to choose the articles he wishes. Details of this program were given in an August, 1962 article in CIVIL ENGINEERING, reprints of which are available on request to ASCE headquarters.

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