

List of Contents

NUMBER 1

- P. Karasudhi,
R. K. N. D. Rajapakse and
B. Y. Hwang** 1 Torsion of a long cylindrical elastic bar partially embedded in a layered elastic half space
- James G. Simmonds** 13 General helicoidal shells undergoing large, one-dimensional strains or large inextensional deformations
- F. Delale** 31 Stress singularities in bonded anisotropic materials
- Abhijit Chandra and
Subrata Mukherjee** 41 Boundary element formulations for large strain-large deformation problems of viscoplasticity
- J. C. Misra and
S. C. Samanta** 55 Wave propagation in tubular bones
- Niels Olhoff and
Richard Parbery** 63 Designing vibrating beams and rotating shafts for maximum difference between adjacent natural frequencies
- Gerald Wempner and
Chao-Meng Hwang** 77 A simple model of elastic-plastic plates
- P. S. Follansbee and
G. B. Sinclair** 81 Quasi-static normal indentation of an elasto-plastic half-space by a rigid sphere—I. Analysis

Announcement

- 93 19th Midwestern Mechanics Conference, Columbus, Ohio, 9–11 September 1985

NUMBER 2

- G. Rega, F. Vestroni and
F. Benedettini** 95 Parametric analysis of large amplitude free vibrations of a suspended cable
- Kostas P. Soldatos** 107 A Flugge-type theory for the analysis of anisotropic laminated non-circular cylindrical shells
- Peter J. Chen** 121 Effects of domain structure on electrically excitable mechanical resonances in ferroelectric ceramics
- A. P. S. Selvadurai and
B. M. Singh** 129 Some annular disc inclusion problems in elasticity
- R. D. Mindlin** 141 Frequencies of piezoelectrically forced vibrations of electroded, doubly rotated, quartz plates
- V. I. Fabrikant and
T. S. Sankar** 159 On contact problems in an inhomogeneous half-space
- Ashok Joshi and
S. Suryanarayan** 167 A unified solution for various boundary conditions for the coupled flexural-torsional instability of closed thin-walled beam-columns

- Agostino A. Cannarozzi and Antonio Tralli** 179 On the analysis of unilaterally supported plates by finite element models

NUMBER 3

- M. Kleiber** 191 Numerical study on necking-type bifurcations in void-containing elastic-plastic material
- E. F. Masur** 211 Optimal structural design under multiple eigenvalue constraints
- H. Cohen and Marcelo Epstein** 233 Remarks on uniformity in hyperelastic materials
- Hans Irschik** 245 A boundary-integral equation method for bending of orthotropic plates
- Tung-Ming Wang, Andrea J. Laskey and Mohamed F. Ahmad** 257 Natural frequencies for out-of-plane vibrations of continuous curved beams considering shear and rotary inertia
- R. Parnes** 267 On singularities due to a concentrated pressure loading of a cylindrical cavity
- Nelson R. Bauld, Jr. and Lih-Shyng Tzeng** 277 A Vlasov theory for fiber-reinforced beams with thin-walled open cross sections
- 299 *Announcement*
European Mechanics Colloquia 1984

NUMBER 4

- J. E. Taylor and Martin P. Bendsøe** 301 An interpretation for min-max structural design problems including a method for relaxing constraints
- S. Dost and B. Tabarrok** 315 Some variational formulations for buckling analysis of circular cylinders
- Gareth P. Parry** 327 Changes of invariance in internal variable theories
- Robert V. Kohn and Michael Vogelius** 333 A new model for thin plates with rapidly varying thickness
- C. Y. Wang** 351 Buckling and postbuckling of the lying sheet
- Kazumi Watanabe** 359 Transient response of an inhomogeneous elastic solid to a moving torsional load in a cylindrical bore
- J. Casey and H. Jahedmotlagh** 377 The strength-differential effect in plasticity
- J. D. Achenbach, M. K. Kuo and J. P. Dempsey** 395 Mode III and Mixed Mode I-II crack kinking under stress-wave loading

- O. Vilnay 411 Discussion of "Modal stiffness of a pretensioned cable net", by C. R. Calladine. *Int. J. Solids Structures* 18, 829-846 (1982)
- C. R. Calladine 415 Reply to discussion

NUMBER 5

- J. E. Dunn 417 Elastic materials of coaxial type and inequalities sufficient to ensure strong ellipticity
- S. K. Datta, H. M. Ledbetter and R. D. Kriz 429 Calculated elastic constants of composites containing anisotropic fibers
- T. C. T. Ting and P. H. Hoang 439 Singularities at the tip of a crack normal to the interface of an anisotropic layered composite
- A. G. Evans and J. W. Hutchinson 455 On the mechanics of delamination and spalling in compressed films
- Z. Mróz and W. A. Trąmpczyński 467 On the creep-hardening rule for metals with a memory of maximal prestress
- K. Burke and F. A. Cozzarelli 487 On the thermodynamic foundations of strain-dependent creep damage and rupture in three dimensions
- Michael Burke and Herbert B. Kingsbury 499 Response of poroelastic layers to moving loads
- L. M. Keer, J. C. Lee and T. Mura 513 A contact problem for the elastic quarter space

Announcement

- 525 Structural Impact and Crashworthiness. An International Conference and Exposition, Imperial College, London, 16-20 July 1984

NUMBER 6

- K. Dems and Z. Mróz 527 Variational approach by means of adjoint systems to structural optimization and sensitivity analysis II. Structure shape variation
- M. W. Hyer and P. C. Bhavani 553 Suppression of anticlastic curvature in isotropic and composite plates
- Jan Blachut and Michal Życzkowski 571 Bimodal optimal design of clamped-clamped columns under creep conditions
- O. O. Ochoa and V. M. Marciano 579 Thermal stresses in laminated beams
- J. P. Carter and J. R. Booker 589 Elastic consolidation around a lined circular tunnel

- P. Burgers and J. P. Dempsey** 609 Plane strain dynamic crack bifurcation
- Announcement*
619 Symposium on Energy Release Rates and Path Independent Integrals in Defect- and Fracture Mechanics, Bad Honnef, Fed. Rep. Germany, 9–11 January 1985

NUMBER 7

- 621 Obituary—Alicia Golebiewska Herrmann 1941–1983
- A. Bhimaraddi** 623 A higher order theory for free vibration analysis of circular cylindrical shells
- L. S. D. Morley** 631 Inextensional bending in shells of explicit cubic representation
- A. Curnier** 637 A theory of friction
- David Durban** 649 Drawing and extrusion of composite sheets, wires and tubes
- Frithiof I. Niordson** 667 Free vibrations of thin elastic spherical shells
- G. J. Weng and C. R. Chiang** 689 Self-consistent relation in polycrystalline plasticity with a non-uniform matrix
- S. Kyriakides and S.-K. Youn** 699 On the collapse of circular confined rings under external pressure

NUMBER 8

- i Publisher's Notice to Authors and Subscribers
- R. Abeyaratne and C. O. Horgan** 715 The pressurized hollow sphere problem in finite elastostatics for a class of compressible materials
- George C. Johnson and Douglas J. Bammann** 725 A discussion of stress rates in finite deformation problems
- G. Bezzine and D. Fortune** 739 Contact between plates by a new direct boundary integral equation formulation
- D. B. Bogy and S. M. Gracewski** 747 Nonspecular reflection of bounded acoustic beams from the liquid–solid interface of two elastic layers on a half-space under water
- R. Bukowski and W. Wojewódzki** 761 Dynamic buckling of viscoplastic spherical shell
- I. O. Ojikutu, R. D. Low and R. A. Scott** 777 Stress singularities in laminated composite wedges

R. M. Christensen	791	Interactive mechanical and chemical degradation in organic materials
		<i>Announcements</i>
	805	Symposium on Energy Release Rates and Path Independent Integrals in Defect- and Fracture Mechanics, Bad Honnef, Fed. Rep. Germany, 9–11 January 1985
	806	The IUTAM Symposium on Mechanics of Damage and Fatigue, Technion–Israel Institute of Technology, Haifa, and at Tel Aviv University, Tel Aviv, Israel, 1–4 July 1985
	806	IUTAM Symposium on Inelastic Behavior of Plates and Shells, Rio de Janeiro, 5–9 August 1985
	807	19th Midwestern Mechanics Conference Columbus, Ohio, 9–11 September 1985

NUMBER 9/10

i	Publisher's Notice to Authors and Subscribers
---	---

S. E. Bechtel and D. B. Bogy	809	Interaction of a piezoelectric transducer with an elastic half-space
Somnath Ghosh and Subrata Mukherjee	829	Boundary element method analysis of thermoelastic deformation in nonhomogeneous media
L. F. Boswell and S. H. Zhang	845	The effect of distortion in thinwalled box-spine beams
R. R. Arnold and J. Mayers	863	Buckling, postbuckling, and crippling of materially nonlinear laminated composite plates
J. N. Reddy	881	A refined nonlinear theory of plates with transverse shear deformation
Z. Q. Huang and L. H. N. Lee	897	Dynamic necking of an elastic–plastic cylinder under uniaxial stretching
T. W. Wright	911	Weak shocks and steady waves in a nonlinear elastic rod or granular material

NUMBER 11/12

i	Publisher's notice to authors and subscribers
---	---

Richard V. Browning, Morton E. Gurtin and William O. Williams	921	A one-dimensional viscoplastic constitutive theory for filled polymers
Y. Benveniste and J. Aboudi	935	A continuum model for fiber reinforced materials with debonding

T. Shioya and T. Machida	953	Yield process of mild steel in plane problems
A. K. Chatterjee and L. Knopoff	963	Spontaneous growth of in-plane shear crack
Roger C. Gauss and Stuart S. Antman	979	Large thermal buckling of nonuniform beams and plates
Philip G. Hodge, Jr.	1001	Simple examples of non linear truss behavior
Cangru Jiang and Chuen-Yaun Chia	1009	Nonlinear bending of rectangular orthotropic plate with two free edges and the other edges having non-uniform rotational flexibility
W. Szyszkowski and P. G. Glockner	1021	Finite deformation and stability behaviour of spherical inflatables subjected to axi-symmetric hydrostatic loading
R. Sowerby and E. Chu	1037	Rotations, stress rates and strain measures in homogeneous deformation processes
Ove Ditlevsen	1049	Biaxial isotropic stochastic visco-elastic creep
J. R. Booker and C. Savvidou	1079	Consolidation around a spherical heat source

AUTHOR INDEX

- Abeyaratne, R., 715
 Aboudi, J. 935
 Achenbach, J.D., 395
 Ahmad, M.F., 257
 Antman, S.S., 979
 Arnold, R.R., 863

 Bammann, D.J., 725
 Bauld, N.R., Jr., 277
 Bechtel, S.E., 809
 Bendsøe, M.P., 301
 Benedettini, F., 95
 Benveniste, Y., 935
 Bezine, G., 739
 Bhavani, P.C., 553
 Bhimaraddi, A., 623
 Blachut, J., 571
 Bogy, D.B., 747, 809
 Booker, J.R., 589, 1079
 Boswell, L.F., 845
 Browning, R.V., 921
 Bukowski, R., 761
 Burgers, P., 609
 Burke, K., 487
 Burke, M., 499

 Calladine, C.R., 415
 Cannarozzi, A.A., 179
 Carter, J.P., 589
 Casey, J., 377
 Chandra, A., 41
 Chatterjee, A.K., 963
 Chen, P.J., 121
 Chia, C-Y., 1009
 Chiang, C.R., 689
 Christensen, R.M., 791
 Chu, E., 1037
 Cohen, H., 233
 Cozzarelli, F.A., 487
 Curnier, A., 637

 Datta, S.K., 429
 Delale, F., 31
 Dempsey, J.P., 395, 609
 Dems, K., 527
 Ditlevsen, O., 1049
 Dost, S., 315
 Dunn, J.E., 417
 Durban, D., 649

 Epstein, M., 233
 Evans, A.G., 455

 Fabrikant, V.I., 159
 Follansbee, P.S., 81
 Fortune, D., 739

 Gauss, R.C., 979
 Ghosh, S., 829
 Glockner, P.G., 1021
 Gracewski, S.M., 747
 Gurtin, M.E., 921

 Hoang, P.H., 439
 Hodge, P.G., Jr., 1001
 Horgan, C.O., 715
 Huang, Z.Q., 897
 Hutchinson, J.W., 455
 Hwang, B.Y., 1
 Hwang, C-M., 77
 Hyer, M.W., 553

 Irschik, H., 245

 Jahedmotlagh, H., 377
 Jiang, C., 1009
 Johnson, G.C., 725
 Joshi, A., 167

 Karasudhi, P., 1
 Keer, L.M., 513
 Kingsbury, H.B., 499
 Kleiber, M., 191
 Knopoff, L., 963
 Kohn, R.V., 333
 Kriz, R.D., 429
 Kuo, M.K., 395
 Kyriakides, S., 699

 Laskey, A.J., 257
 Ledbetter, H.M., 429
 Lee, J.C., 513
 Lee, L.H.N., 897
 Low, R.D., 777

 Machida, T., 953
 Marcano, V.M., 579
 Masur, E.F., 211
 Mayers, J., 863
 Mindlin, R.D., 141
 Misra, J.C., 55
 Morley, L.S.D., 631
 Mróz, Z., 467, 527
 Mukherjee, S., 41, 829
 Mura, T., 513

 Niordson, F.I., 667

 Ochoa, O.O., 579
 Ojikutu, I.O., 777
 Olhoff, N., 63

 Parbery, R., 63
 Parnes, R., 267
 Parry, G.P., 327

 Rajapakse, R.K.N.D., 1
 Reddy, J.N., 881
 Rega, G., 95

 Samanta, S.C., 55
 Sankar, T.S., 159
 Savvidou, C., 1079
 Scott, R.A., 777
 Selvadurai, A.P.S., 129
 Shioya, T., 953
 Simmonds, J.G., 13
 Sinclair, G.B., 81
 Singh, B.M., 129
 Soldatos, K.P., 107
 Sowerby, R., 1037
 Suryanarayan, S., 167
 Szyzkowski, W., 1021

 Tabarrok, B., 315
 Taylor, J.E., 301
 Ting, T.C.T., 439
 Tralli, A. 179
 Trąpczyński, W.A., 467
 Tzeng, L-S., 277

 Vestroni, F., 95
 Vilnay, O., 411
 Vogelius, M., 333

 Wang, C.Y., 351
 Wang, T-M., 257
 Watanabe, K., 359
 Wempner, G., 77
 Weng, G.J., 689
 Williams, W.O., 921
 Wojewódzki, W., 761
 Wright, T.W., 911

 Youn, S.-K., 699

 Zhang, S.H., 845
 Życzkowski, M., 571