



JOURNAL OF  
**Engineering Mechanics**

SEPTEMBER 2016 • VOLUME 142 • ISSUE 9



**Contents**

**PUBLICATIONS**

Bruce Gossett, *Managing Director and Publisher*

**JOURNALS DEPARTMENT**

Angela Cochran, *Director, Journals*

Kelly Anderson, *Managing Editor, Journals*

Holly Koppel, *Managing Editor, Journals*

Elizabeth Guertin, *Publishing Manager, Journals*

Jennifer Chapman, *Senior Editorial Coordinator*

Candice G. Eccles, *Editorial Coordinator*

Laurie Hertneky, *Publications Coordinator*

**PRODUCTION DEPARTMENT**

Matt Boyle, *Director, Publications Production*

Michael Gentry, *Production Workflow Manager*

Rajashree Ranganathan, *Manager, Journals Production*

Heather DiAngelis, *Senior Production Editor*

Katie Fluke, *Production Editor*

DeAndréa Johnson, *Production Editor*

Patricia Jones Kershaw, *Production Editor*

Hannah Patterson, *Production Editor*

Xi Van Fleet, *Senior Manager, Information Services*

**TECHNICAL PAPERS**

Edge-Based Smoothed Three-Node Mindlin Plate Element  
*Wei Li, Xiangyu You, Yingbin Chai, and Tianyun Li*

Integration Algorithms for Elastoplastic Constitutive Laws in Large Deformation Problems  
*Jaouad Dabounou*

Ultrasonic Shear Wave Reflection Method for Direct Determination of Porosity and Shear Modulus in Early-Age Cement Paste and Mortar  
*Kolluru V. L. Subramaniam and Xiaojun Wang*

Vibration Analysis of Toroidal Shells with Hollow Circular Cross-Section Having Variable Thickness  
*Jae-Hoon Kang*

Enhanced Strain Beam Formulation Resolving Several Issues of Displacement-Based Elements for Nonlinear Analysis  
*Ioannis Koutromanos and Jeremy Bowers*

Feasibility Analysis on the Attenuation of Strong Ground Motions Using Finite Periodic Lattices of Mass-in-Mass Barriers  
*Vasilis K. Dertimanis, Ioannis A. Antoniadis, and Eleni N. Chatzi*

Analytical Solution to Uniform Flow over a Porous Plane with Downward Suction  
*Ping-Cheng Hsieh, Pei-Yuan Hsu, and Yen-Ti Lin*

Bayesian Model-Data Fusion for Mechanistic Postearthquake Damage Assessment of Building Structures  
*Kalil Erazo and Eric M. Hernandez*

Statistical Linearization of Nonlinear Structural Systems with Singular Matrices  
*Vasileios C. Fragkoulis, Ioannis A. Kougioumtzoglou, and Athanasios A. Pantelous*

Three-Dimensional Effects in Low-Strain Integrity Testing of Large Diameter Pipe Piles  
*Changjie Zheng, Hanlong Liu, Xuanming Ding, George P. Kouretzis, and Daichao Sheng*

New Domain Integral Transformation in Boundary Element Analysis for 2D Anisotropic Thermoelasticity  
*Y. C. Shiah and Sheng-Hung Wang*

Statistical Linearization of Hysteretic Systems Described by the Ramberg-Osgood Model  
*Ana Maria Mitu, Tudor Sireteanu, Marius Giuclea, and Ovidiu Solomon*

04016055

04016056

04016057

04016058

04016059

04016060

04016061

04016062

04016063

04016064

04016065

04016066



**PUBLISHING OFFICE**

Journals Department  
ASCE  
1801 Alexander Bell Drive  
Reston, VA 20191-4382  
Telephone: (703) 295-6290  
E-mail: journal-services@asce.org