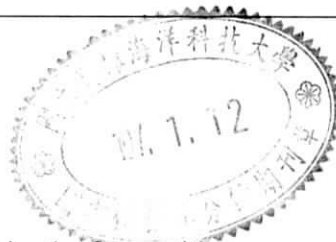




JOURNAL OF
Engineering Mechanics

DECEMBER 2017 • VOLUME 143 • ISSUE 12



Contents

PUBLICATIONS

Bruce Gossett, *Managing Director and Publisher*

JOURNALS DEPARTMENT

Angela Cochran, *Associate Publisher*
 Kelly Anderson, *Managing Editor*
 Holly Koppel, *Managing Editor*
 Elizabeth Guertin, *Manager, Journals Systems Administrator*
 Jennifer Chapman, *Assistant Managing Editor*
 Taryn Dollings, *Editorial Coordinator*
 Candice G. Eccles, *Editorial Coordinator*
 Laurie Hertneky, *Publications Coordinator*

PRODUCTION DEPARTMENT
 Matt Boyle, *Director*
 Michael Gentry, *Workflow Manager*
 Rajashree Ranganathan, *Senior Manager*
 Heather DiAngelis, *Assistant Manager*
 Patricia Jones Kershaw, *Senior Production Editor*
 Laura M. Ansley, *Production Editor*
 DeAndréa Johnson, *Production Editor*
 Katie Thacher, *Production Editor*
 Xi Van Fleet, *Senior Manager, Information Services*

TECHNICAL PAPERS

| | |
|--|----------|
| Effective Energy Criterion for Collapse of Deteriorating Structural Systems <i>Hao Zhou and Jie Li</i> | 04017135 |
| Mechanistic Composition-Specific Fatigue Life of Asphalt Pavements <i>Xue Luo, Fan Gu, and Robert L. Lytton</i> | 04017136 |
| Theoretical Modeling of the Effects of Neutron Irradiation on Properties of Concrete <i>Yuxiang Jing and Yunping Ji</i> | 04017137 |
| Global Sensitivity Analysis of Uncertain Input Variables in Structural Models <i>Changcong Zhou, Fuchao Liu, Chenghu Tang, and Wenxuan Wang</i> | 04017138 |
| Advanced Impact Force Model for Low-Speed Pounding between Viscoelastic Materials and Steel <i>Wenxi Wang, Xugang Hua, Xiuyong Wang, Zhengqing Chen, and Gangbing Song</i> | 04017139 |
| 3D Elastoplastic Model for Crushable Soils with Explicit Formulation of Particle Crushing <i>Mengcheng Liu, Yong Zhang, and Hongzhou Zhu</i> | 04017140 |
| Combining Plane Wave Expansion and Variational Techniques for Fast Phononic Computations <i>Yan Lu and Ankit Srivastava</i> | 04017141 |
| Cyclic Plastic Hinges with Degradation Effects for Frame Structures <i>Lasse Tidemann and Steen Krenk</i> | 04017142 |
| TECHNICAL NOTES | |
| Simple and Efficient Method to Simulate Homogenous Multidimensional Non-Gaussian Vector Fields by the Spectral Representation Method <i>Yongxin Wu, Rui Li, Yufeng Gao, Ning Zhang, and Fei Zhang</i> | 06017016 |
| Optimum Length of a Heavy Cable with a Concentrated Load <i>C. Y. Wang</i> | 06017017 |



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