



## **BSSA Special Issue on Rotational Seismology and Engineering Applications**

(Scheduled for the May, 2009 Issue of the Bulletin of Seismological Society of America)

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### **I. Introduction, Reviews, and Tutorials**

- (1) Introduction to the Special Issue on Rotational Seismology and Engineering Applications (W.H.K. Lee, M. Çelebi, M.I. Todorovska, and H. Igel). [BSSA-D-08-00344]
- (2) *Review*: Progress in Rotational Ground-Motion Observations from Explosions and Local Earthquakes in Taiwan (W.H.K. Lee et al.). [BSSA-D-08-00205]
- (3) *Review*: Rotations in Structural Response (M.D. Trifunac). [BSSA-D-08-00068]
- (4) *Review*: Requirements for a Ground Rotation Sensor to Improve Advanced LIGO (B. Lantz et al.). [BSSA-D-08-00199]
- (5) *Review*: Accelerometer Development for Use in Gravitational Wave Detection Interferometers (R. DeSalvo). [BSSA-D-08-00155]
- (6) Tutorial on Earthquake Rotational Effects: Historical Examples (J.T. Kozak) [BSSA-D-08-00308]
- (7) Tutorial on Rotations in the Theories of Finite Deformation and Micropolar (Cosserat) Elasticity (J. Pujol). [BSSA-D-08-00161]
- (8) Tutorial on New Developments on the Physics of Rotational Motions (R. Teisseyre). [BSSA-D-08-00089]
- (9) Tutorial on Surface Rotations from the Wave Passage Effects — Stochastic Approach (Z. Zembaty). [BSSA-D-08-00102]
- (10) Tutorial on Gravitational Pendulum Theory Applied to Seismic Sensing of Translation and Rotation (R. Peters). [BSSA-D-08-00163]
- (11) Tutorial on Measuring Rotations Using Multi-pendulum Systems (V. Graizer). [BSSA-D-08-00145].
- (12) Suggested Notation Conventions for Rotational Seismology (J.R. Evans et al.). [BSSA-D-08-00060]
- (13) Suggested Readings in Continuum Mechanics and Earthquakes (E.F. Grekova and W.H.K. Lee, compilers) [BSSA-D-08-00343]
- (14) A Short Glossary for Rotational Seismology and Earthquakes (W.H.K. Lee, compiler). [BSSA-D-08-00342]

## II. Articles

- (1) The Single-Couple Component of the Far-Field Radiation from Dynamical Fractures (L. Knopoff and Y.T. Chen). [BSSA-D-08-00288]
- (2) An Asymmetric Micropolar Moment Tensor Derived from a Discrete-Block Model for a Rotating Granular Substructure (R.J. Twiss). [BSSA-D-08-00084]
- (3) Fundamental Deformations in Asymmetric Continuum (R. Teisseyre, and M. Gorski). [BSSA-D-08-00091]
- (4) Spinors and Twistors in the Description of Rotational Seismic Waves and Spin and Twist Solitons (E. Majewski). [BSSA-D-08-00160]
- (5) Numerical Simulation of Ground Rotations along 2D Topographical Profiles under the Incidence of Elastic Plane Waves (L.M.C. Godinho et al.). [BSSA-D-08-00096]
- (6) Source and Basin Effects on Rotational Ground Motions: Comparison with Translations (H. Wang et al.). [BSSA-D-08-00115]
- (7) Research and Development Status of a New Rotational Seismometer Utilizing the Flux Pinning Effect of a Superconductor (A. Takamori et al.). [BSSA-D-08-00087]
- (8) Performance Characteristics of a Rotational Seismometer for Near-Field and Engineering Applications (R. Cowsik et al.). [BSSA-D-08-00207]
- (9) Ring Laser Measurements of Ground Rotation for Seismology (K.U. Schreiber et al.). [BSSA-D-08-0017]
- (10) Perspectives for Ring Laser Gyroscopes in Low-Frequency Seismology, by R. Widmer-Schmidrig and W. Zürn. [BSSA-D-08-00267]
- (11) The Application of Fiber Optic Gyroscopes for the Measurement of Rotations in Structural Engineering (K.U. Schreiber et al.). [BSSA-D-08-00086]
- (12) Laboratory and Field Testing of Commercial Rotational Seismometers (R.L. Nigbor, J.R. Evans, and C.R. Hutt). [BSSA-D-08-00247]
- (13) Observing Rotational and Translational Ground Motions at the HGSD Station in Taiwan from 2007 to 2008 (C.C. Liu et al.). [BSSA-D-08-00156]
- (14) Recording Rotational and Translational Ground Motions of Two TAIGER Explosions in Northeastern Taiwan on 4 March 2008 (C.J. Lin et al.) [BSSA-D-08-00176]
- (15) Tilt Motions Recorded at Two WISE Sites for the 2003 Tokachi-Oki Earthquake (M8.0) (S. Kinoshita et al.). [BSSA-D-08-00090]
- (16) The Effect of Torsional Ground Motion on Structural Response-Code Recommendation for Accidental Eccentricity (Ghayamghamian et al.). [BSSA-D-08-00196]
- (17) Study of Rotational Ground Motion in the Near-Field Region (M. Stupazzini et al.). [BSSA-D-08-00153]
- (18) Seismic Wave Strain, Rotation, and Gradiometry for the 4 March 2008 TAIGER Explosions (C.A. Langston et al.). [BSSA-D-08-00200]
- (19) Sensitivity Densities for Rotational Ground-Motion Measurements (A. Fichtner et al.). [BSSA-D-08-00064]
- (20) Observations and Modeling of Rotational Signals in the P-Coda: Constraints on Crustal Scattering (D.N. Pham et al.). [BSSA-D-08-00101]

- (21) Interpretation of Broadband OBS Horizontal Data Seismic Background Noise (R. Pillet et al.). [BSSA-D-08-00123]
- (22) About the Non-unique Sensitivity of Pendulum Seismometers to Translational, Angular and Centrifugal acceleration (T. Forbiger). [BSSA-D-08-00150].
- (23) The Effects of Tilt on Interferometric Rotation Sensors (D.N. Pham et al.). [BSSA-D-08-00181]
- (24) Response to Complex Ground Motions of Seismometer Galperin Sensor (V. Graizer) . [BSSA-D-08-00174]
- (25) Empirical Scaling of Rotational Spectra of Strong Earthquake Ground Motion (V.W. Lee, and M.D. Trifunac). [BSSA-D-08-00070]
- (26) Transient and Permanent Rotations in a Shear Layer Excited by Strong Earthquake Pulses (V. Gicev, and M.D. Trifunac). [BSSA-D-08-00066]
- (27) Response of Structures to Near-Source, Differential, and Rotational Strong Ground Motion (R.S. Jalali, and M.D. Trifunac). [BSSA-D-08-00067]

### **III. Short Notes**

- (1) Waves in Linear Elastic Media with Microrotations, Part 1: Isotropic Full Cosserat Model (M.A. Kulesh). [BSSA-D-08-00152]
- (2) Waves in Linear Elastic Media with Microrotations, Part 2: Isotropic Reduced Cosserat Model (E.F. Grekova, M.A. Kulesh, and G.C. Herman). [BSSA-D-08-00154]
- (3) Rotational Motions of Seismic Surface Waves in a Laterally Heterogeneous Earth (A.M. Ferreira, and H. Igel). [BSSA-D-08-00149]
- (4) Design of a Relatively Inexpensive Ring Laser Seismic Detector (R.W. Dunn et al.). [BSSA-D-08-00092]
- (5) Strong-Motion Fluid Rotation Seismograph (Jedlicka et al.) [BSSA-D-08-00099]
- (6) Performance Test of a Commercial Rotational Motions Sensor (J. Wassermann et al.) [BSSA-D-08-00099]
- (7) Rotational Motions Observed during an Earthquake Swarm in April 1998 Offshore Ito, Japan (M. Takeo). [BSSA-D-08-00173]
- (8) Array Deployment to Observe Rotational and Translational Ground Motions along the Meishan Fault, Taiwan: A Progress Report (C.F. Wu et al.). [BSSA-D-08-00185]
- (9) Rotational Earthquake Effects in the United Kingdom (S.L. Sargeant, and R.M.W. Musson). [BSSA-D-08-00097]
- (10) Software for Inference of Dynamic Ground Strains and Rotations and Their Errors from Short Baseline Array Observations of Ground Motions (P. Spudich and J.B. Fletcher). [BSSA-D-08-00230]
- (11) Rotational Seismic Load Definition in Eurocode 8, Part 6 for Slender Tower-shaped Structures (Z. Zembaty). [BSSA-D-08-00252]