

Program for 2010 SSA Annual Meeting

Presenter is indicated in bold.

Wednesday, 21 April—Concurrent SSA Oral Sessions

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
	Building Code Uses of Seismic Hazard Data Session Chairs: Charles A. Kircher and Nicolas Luco (see page 284 of <i>SRL</i>)	Monitoring for Nuclear Explosions Session Chairs: Bill Walter, Ola Dahlman, Paul G. Richards, and Ray Willemann (see page 286 of <i>SRL</i>)	Characterizing the Next Cascadia Earthquake and Tsunami Session Chairs: Chris Goldfinger and Rob Witter (see page 288 of <i>SRL</i>)	Magnitude Scaling and Regional Variation of Ground Motion Session Chairs: Fabrice Cotton, Gail Atkinson (see page 291 of <i>SRL</i>)
8:30	INVITED: The 2008 U.S. National Seismic Hazard Map Applications for Building Codes. Petersen, M. , Harmsen, S., Rukstales, K., Luco, N.	INVITED: Comprehensive Test Ban Treaty Is Effectively Verifiable, Collina, T.	INVITED: The Landward Limit of Cascadia Great Earthquake Rupture. Hyndman, R.D. , Wang, K., Cassidy, J., Kao, H., Mazzotti, S., Dragert, H., Henton, J., Leonard, L., and Rogers, G.	Accurate Predictions of Strong Ground Motion Based on Weak Motion Data: Case Studies from Italy and Japan. Malagnini, L., Akinci, A., Mayeda, K., Herrmann, R.B., Munafo', I.
8:45	INVITED: Project 07—Development of New Ground Motions for Model Building Codes. Kircher, C.A.	INVITED: Progress and Achievements in Monitoring Compliance with the Comprehensive Nuclear Test-Ban-Treaty (CTBT). Zerbo, L.	INVITED: A Comparison of the Location of Interseismic Locking and Slow Slip Events on the Cascadia Subduction Zone. Weldon, II, R.J. , Schmidt, D., Gao, H., Alba, S., and Livelybrooks, D.	Ground-Motion Attenuation Model for Small-To-Moderate Shallow Crustal Earthquakes in California and Its Implications on Regionalization of Ground-Motion Prediction Models. Chiou, B., Youngs, R. , Abrahamson, N., and Addo, K.
9:00	(Previous presentation continued)	INVITED: The United States National Data Center for the CTBT. Woods, M.T.	INVITED: Segmentation and Probabilities for Cascadia Great Earthquakes based on Onshore and Offshore Paleoseismic Data. Goldfinger, C. , Patton, J.R., Morey, A.E., and Witter, R.C.	Comparisons of Ground-Motion Attenuation in Eastern North America versus California. Atkinson, G.M. , Assatourians, K., and Nicol, E.A.
9:15	INVITED: New Risk-Targeted Seismic Design Maps for Model Building Codes. Luco, N.	Observed Seismic Technological Advances As Demonstrated During And Following The May 25, 2009 North Korean-Declared Nuclear Test. Jih, R.-S.	INVITED: ETS-Delineated Future Rupture of the Cascadia Megathrust. Melbourne, T.I. , and Brudzinski, M.	Exploring the Lower Limits of the NGA Using Data from California. Hellweg, M. , Darragh, R., and Silva, W.
9:30	INVITED: New Provisions for Peak Ground Acceleration and Vertical Component Design Response Spectra in the 2010 NEHRP Seismic Provisions and ASCE 7-10 Standard. Crouse, C.B. , Campbell, K.W., Bozorgnia, Y., Power, M., Anderson, D.G.	INVITED: Seismological Monitoring of the Comprehensive Nuclear Test Ban Treaty. Sykes, L.R.	A Continuous Moment Tensor Analysis in the Region of the Mendocino Triple Junction, California. Guilhem, A. , Dreger, D.S., and Uhrhammer, R.	An Earthquake Discrimination Scheme to Optimize Ground-Motion Prediction Equation Selection. Garcia, D. , Wald, D.J., Allen, T.I., Hayes, G.P., Lin, K.W., and Marano, K.D.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
9:45	INVITED: Ground Motion Issues Likely to be Addressed in the Next Code Development Cycle. Hooper, J.D.	INVITED: Scientific Challenges for Seismic Nuclear Explosion Monitoring. Zucca, J.J.	Mapping the Juan de Fuca Slab Beneath the Cascadia Margin. McCroory, P.A. , Blair, J.L., and Waldhauser, F.	Comparison of the NGA Models to the Turkish Strong Ground Motion Database: A Preliminary Study. Gulerce, Z. , and Abrahamson, N.A.
10:00	Break—Lower Level Exhibit Hall			
	Building Code Uses of Seismic Hazard Data (<i>continued</i>)	Monitoring for Nuclear Explosions (<i>continued</i>)	Characterizing the Next Cascadia Earthquake and Tsunami (<i>continued</i>)	Magnitude Scaling and Regional Variation of Ground Motion (<i>continued</i>)
10:30	Uncertainty in the Risk of Collapse of Code-Designed Structures Due to Uncertainty in the Earthquake Hazard. Shome, N. , and Frankel, A.D.	Analysis of the IDC Reviewed Event Bulletin for Detection Capability Estimation of the IMS Primary Seismic Stations. Kvaerna, T. , and Ringdal, F.	Validating Numerical Tsunami Simulations in Southern Oregon Using Late Holocene Records of Great Cascadia Earthquakes and Tsunamis. Witter, R.C. , Zhang, Y.J., Goldfinger, C., Priest, G.R., and Wang, K.	Next Generation Attenuation (NGA) East Ground Motion Database: Comparing Observations with Current ENA Attenuation Relations. Cramer, C.H. , Kutliroff, J.R., and Dangkua, D.T.
10:45	Peak and Integral Seismic Parameters of LAquila 2009 Ground Motions: Observed vs PSHA and Code provision values. Chiauzzi, L., Masi, A., Mucciarelli, M.	Bayesloc Multiple-Event Location Applied to a Global Data Set. Myers, S.C. , and Johannesson, G.	Cascadia Supercycles: Energy Management of the long Cascadia Earthquake Series. Goldfinger, C. , Witter, R.C., Priest, G.R., Wang, K., and Zhang, Y.J.	Source Properties, Site Amplification and Crustal Attenuation in Japan from Spectral Analysis of K-and KiK-net Data. Oth, A. , Parolai, S., Bindi, D., and Di Giacomo, D.
11:00	Seismic Loss Estimation Along the North Anatolian Fault Based on Scenario Earthquakes. Askan, A. , Erberik, M.A., Ugurhan, B.	A New Look at an Old Discriminant: Ms—mb. Richards, P.	Temporal Clustering and Recurrence of Holocene Paleoearthquakes in the Region of the 2004 Sumatra-Andaman Earthquake. Patton, J.R. , Goldfinger, C., Morey, A.E., Erhardt, M., Black, B., Garrett, A.M., Djadjadihardja, Y., and Hanifa, U.	“Best Practices” for Using Macroseismic Intensity and Ground Motion to Intensity Conversion Equations for Hazard and Loss Models. Cua, G.B. , Wald, D.J., Marano, K., Allen, T., Garcia, D., Gerstenberger, M.C., Worden, C.B.,
11:15	Comparison of Methods for Site Specific Seismic Response Assessment of Shallow and Deep Bedrock Sites. Ghanat, S.T.	Apparent Explosion Moment. Patton, H.J. , and Taylor, S.R.	Characterizing Megathrust Recurrence Probabilities in the Pacific Northwest. Perkins, D., and Laforge, R.	Felt Intensity vs. Instrumental Ground Motion: Why a Difference Between California and Eastern North America at Some Periods? Dangkua, D.T. , and Cramer, C.H.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
11:30	Effect of Permafrost on Seismic Site Response and Design Spectrum. Dutta, U. , Yang, Z., and Xu, G.	Regional P/S Methods of Discriminating Explosions from Earthquakes: Applications and Limitations. Walter, W.R. , Pasyanos, M.E., Ford, S.R., and Matzel, E.	An Analysis of Temporal Clustering of Cascadia Subduction Zone Earthquakes and its Implications to Seismic Hazard. Wong, I. , Kulkarni, R., Zachariasen, J., Dober, M., Goldfinger, C., and Lawrence, M.	VS30 and Kappa from Accelerometric Data Analysis. Drouet, S. , Cotton, F., and Guéguen, P.
11:45		Nuclear Explosion Monitoring R&D Roadmap. Casey, L.R., Ziagos, J.P. , and Bell, W.R.		Ground-Motion at Reference Rock Sites and the Reduction of Uncertainty Related to Site Conditions. Edwards, B. , Poggi, V., Faeh, D.
12:00	SSA Annual Meeting—Lower Level. President’s Invited Speaker: Marcia McNutt, Director of the US Geological Survey			
	Advances in Seismic Hazard Mapping Session Chairs: Keith L. Knudsen and Laurie G. Baise (see page 293 of <i>SRL</i>)	Monitoring for Nuclear Explosions Session Chairs: Bill Walter, Ola Dahlman, Paul G. Richards, and Ray Willemann (see page 295 of <i>SRL</i>)	The Evolution of Slow Slip and Tremor in Time and Space Session Chairs: Evelyn Roeloffs and Joan Gomberg (see page 297 of <i>SRL</i>)	Seismic Imaging: Recent Advancement and Future Directions Session Chairs: Michael Begnaud and Youshun Sun (see page 299 of <i>SRL</i>)
2:15	Applying Satellite Remote Sensing to Document Liquefaction Failures. Oommen, T. , Baise, L.G., Gens, R., Prakash, A., and Gupta, R.P.	Operation of the International Monitoring System Network. Araujo, F., Castillo, J.E., Nikolova, S., The Operations Section of the IDC.	INVITED: Locating ETS Tremors: How? Where? Which? When? and Why? Kao, H. , Shan, S.-J., Rosenberger, A., Rogers, G.C., Dragert, H., Klaus, A.J., Wech, A.G., Creager, K.C., Brown, J.R., Beroza, G.C.	Animating the Seismic Wavefield: Exploring the Effects of Solid Earth Heterogeneity on Long-Period Surface Waves. Lloyd, A. , and Woodward, R.L.
2:30	Observations of Pore Pressure Increase in Liquefiable Layers during Strong Shaking at NEES Field Sites. Seale, S.H. , and Steidl, J.H.	Innovative Statistical Data Processing Methods for Automatic Classification of Waveform Data at the CTBTO. Le Bras, R.J., Vaidya, S., Arora, N., and Russell, S.	Spectral Analysis of Tremor Using Beamforming. Gerstoft, P. , Zhang, J., Vidale, J., Ghosh, A.,	INVITED: Finite-Frequency Seismic Tomography of Anelastic Structures in East Asia. Zhao, L. , Chen, P., Chen, Q.F., and Gaherty, J.B.
2:45	St. Louis Area Earthquake Hazards Mapping Project (SLAEHMP): Hazard Model and Methodology Update. Cramer, C.H.	Geological and Geophysical Applications of On Site Inspection for CTBT Verification. Sweeney, J.J. , Hawkins, W.L.	Toward a Unified View of Tremor Distribution in Space and Time. Ghosh, A. , Vidale, J.E., Sweet, J.R., Creager, K.C., Wech, A.G., Houston, H.	INVITED: Seismic Tomography and Imaging of the Southern California Crust. Tape, C., Liu, L., Maggi, A., and Tromp, J.
3:00	A Terrain-based Vs30 Estimation Map of the Contiguous United States. Yong, A. , Hough, S.E., Braverman, A., and Iwahashi, J.	Comparisons of Regional Source Properties of the North Korean Nuclear Explosions and Their Implications. Hong, T.K.	Modeling the Pattern of Tremor Migration in Cascadia. Gershenson, N.I. , Bambakidis, G., Hauser, E.C., Creager, K.C.	INVITED: A Global 3D P-Velocity Model of the Earth’s Crust and Mantle for Improved Event Location. Young, C.J. , Ballard, S., Hipp, J.R., Chang, M.C., Rowe, C.A., and Begnaud, M.L.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
3:15	Exploring the Proximity of Ground-Motion Models Using High-Dimensional Visualization Techniques. Scherbaum, F. , Kuehn, N., Ohrnberger, M., and Koehler, A.	Seismic Simulations of Recent DPRK Nuclear Explosions Including the Effects of Free Surface Topography and 3D Structure. Rodgers, A.J. , Petersson, N.A., and Sjogreen, B.	Segmentation of Non-Volcanic Tremor Activity along the Cascadia Subduction Zone. Farahbod, A.M. , Calvert, A.J.	Full-3D Waveform Tomography for Southern California. Chen, P. , Lee, E., Jordan, T.H., and Maechling, P.J.
3:30	A Comprehensive Model to Include the Effects of Near-Fault Ground Motions in Probabilistic Seismic Hazard Analysis. Baker, J.W. , and Shahi, S.K.	An Analysis of Seismic Characteristics of the 25 May 2009 North Korean Underground Nuclear Test. Murphy, J.R. , Kohl, B.C., Bennett, T.J., Israelsson, H.G.	Low Frequency Earthquakes from Tremor in Subduction Zones. Brown, J.R. , Beroza, G.C.,	Full-wave Ambient Noise Tomography of the Northern Cascadia. Shen, Y. , and Zhang, W.
3:45	Break —Lower Level Exhibit Hall			
	Advances in Seismic Hazard Mapping (<i>continued</i>)	Engaging Students and Teachers in Seismology: In Memory of John Lahr Session Chairs: John Taber and Larry Braile (see page 301 of <i>SRL</i>)	The Evolution of Slow Slip and Tremor in Time and Space (<i>continued</i>)	Seismic Imaging: Recent Advancement and Future Directions (<i>continued</i>)
4:15	Assessing the Seismic Hazard of Lake Maracaibo, Northwestern Venezuela. Wong, I. , Zachariasen, J., and Dober, M.	John Lahr's Lasting Impact on the IRIS E&O Program. Taber, J.J. , Bravo, T.K., Hubenthal, M., Johnson, J., McQuillan, P., Toigo, M., and Welti, R.	The Background Hum of a Plate Boundary: Developing a Detailed Catalog of Tremor Activity Along 150 Kilometers of the South-Central San Andreas Fault, 2001–Present. Shelly, D.R.	Can We Improve Q Estimates by Using a New “Geometrical Spreading” Model? Jiakang, X.
4:30	Probabilistic Seismic Hazard Assessment for Central Manila, Philippines. Mote, T.I. , Koo, R., Manlapig, R.V., and Zamora, C.	A Decade of Earthquake Monitoring with an Educational Seismograph. Braile, L.W.	INVITED: Spatial and Temporal Evolution of Long Term Slow Slip Events in the Guerrero Gap, Mexico. Radiguet, M., Cotton, F. , Vergnolle, M., Valette, B., Kostoglodov, V., Cotte, N., Pathier, E., and Shapiro, N.	INVITED: Eikonal Tomography: Surface Wave Tomography by Phase-Front Tracking Across a Regional Broad-Band Seismic Array. Lin, F. , Ritzwoller, M.H., and Snieder, R.
4:45	Comparison of Seismicity of the Dead Sea Fault and San Andreas Faults. Kutliroff, J.K. ,	The Quake-Catcher Network: Bringing Seismology to Homes and Schools. Lawrence, J.F. , Cochran, E.S., Saltzman, J., Christensen, C.M., Hubenthal, M., and Chung, A.I.	INVITED: Documenting Transient Slip Events in Cascadia with Geodesy: Working Towards a Catalog of Slow Slip Events. Schmidt, D.A. , and Gao, H.	Seismic Wave Gradiometry Using the Wavelet Transform: Potential Application to Surface Wave Inversions Using USArray. Poppeliers, C.
5:00	Non-Ergodic PSHA—Example. Walling, M.A. , and Abrahamson, N.A.	Seismological Education and Outreach at a College Football Game: An Experiment to Record Crowd-Related Seismicity. Nies, A. , Haney, M.M., Zollweg, J., and the Boise State Football Seismology Team.	Comparison of Five Northern Washington Episodic Tremor and Slip Events. Houston, H.B. , Delbridge, B.G., Wech, A.G., and Creager, K.C.	Influence of Velocity Anisotropy on an Accuracy of Microearthquake Locations. Chesnokov, E.M. , and Krasnova, M.A.

Time	Salon A	Salon E	Salon F	Salon G
5:15	Testing the Plausibility of Anthropogenic versus Seismogenic Causes of the Rotation of a Lycien Sarcophagus in Pınara, SW-Turkey. Hinzen, K.-G. , Schreiber, S., and Yerli, B.	Translating Seismology into Simple Animations: A Powerful Learning Tool for Earth-science Educators. Johnson, J. , Bravo, T.K., and Butler, R.F.	Slow Slip Phenomena Not So Phenomenal? Peng, Z., and Gomberg, J.	INVITED: Imaging with Scattered Teleseismic Waves: Data, Method and Application to the Hellenic Subduction Zone. Pearce, F.D. , and Rondenay, S.
5:30		Teachable Moments: Capturing the Power of an Earthquake to Teach about Seismology. Bravo, T.K. , Butler, R.F., and Johnson, J.	Slow Slip and Dynamic Rupture from Competition Between Dilatant Stabilization and Thermal Pressurization. Segall, P. , and Bradley, A.	Investigating the Limits of Ray-Based Global Surface-Wave Tomography. Hjorleifsdottir, V. , Dalton, C.A., Ekstrom, G.
6:45	Town Hall Meeting—Salon E & F. The Big One is Coming: What are YOU going to do about it?			

Wednesday, 21 April—Morning Poster Sessions

Engaging Students and Teachers in Seismology: In Memory of John Lahr (see page 302 of *SRL*)

1. Temblor: Simplifying Earthquake Visualization. **Powers, P.M.**
2. Introduction to Earthquake Focal Mechanisms Using Seismographs in Schools Data. **Levasseur, D.**, and Ford, S. R.
3. Teachers Involved in Expeditionary Seismology: The TIES that Bind. **Boyd, D.**, Dillon, T., Arratia, M., Ringgold Middle School, Rio Grande City, Tx USA; Weart, Mote, A., Myrick, M., Ohman, S., Theis, H., Pulliam, J., Grand, S.P., Ellins, K., and Olson, H.
4. Networking in Educational Seismology: The IRIS Seismographs in Schools Program. **Bravo, T.K.**, Braile, L.W., Hubenthal, M., Taber, J., Toigo, M., and Wyatt, K.
5. Teachers on the Leading Edge: An Earth Science Teacher Professional Development Program Featuring Pacific Northwest Geologic Hazards. Butler, R.F., Granshaw, F., Butler, R.F., Groom, R., Hedeon, C., **Johnson, J.**, Magura, B., Pratt-Sitaula, B., Thompson, D., and Whitman, J.

Joint Inversion of Multiple Geophysical Data Sets for Seismic Structure (see page 303 of *SRL*)

6. A Probabilistic Framework for the Joint Inversion of Multiple Datasets. Hauser, J., Dyer, K.M., **Pasyanos, M.E.**, Bungum, H., Faleide, J.I., and Clark, S.A.
7. Testing Joint Inversion of Travel Times and Gravity Data for Imaging of Western Colombia: Trade-offs and Sensitivities. **Rowe, C.A.**, Dionicio, L.V., Maceira, M., and Zhang, H.
8. Tomographic Imaging of the Upper Mantle beneath the Colorado Rocky Mountains from Simultaneous Joint Inversion of Teleseismic Body Wave Residuals

and Bouguer Gravity. **MacCarthy, J.K.**, Aster, R.C., Hansen, S.M., and Dueker, K.G.

9. Joint Inversion of Seismic and Magnetotelluric Data in the Parkfield Region of California Using the Cross-Gradient Constraint. **Bennington, N.L.**, Thurber, C.H., Bedrosian, P., and Zhang, H.
10. Joint Inversion of InSAR and Seismic Waveform Data for the Finite-fault Solution of the 21 February 2008 Wells, Nevada Earthquake. **Ford, S.R.**, Dreger, D.S., and Ryder, I.
11. Joint Inversion of Rayleigh Wave Ellipticity and Spatial Autocorrelation Measurements. **Hobiger, M.**, Cornou, C., Le Bihan, Endrun, B., Renalier, F., Di Giulio, G., Savvaidis, A., Wathelet, M., and Bard, P.-Y.

Seismic Imaging: Recent Advancement and Future Directions (see page 305 of *SRL*)

12. Characterization of the Closely-Spaced Earthquakes along the North Anatolian Fault Zone, NW Turkey. **Bulut, F.**, Bohnhoff, M., Ellsworth, W.L., and Dresen, G.
13. SORD as a Computational Platform for Earthquake Simulation, Source Imaging, and Full 3D Tomography. **Wang, F.**, Ely, G.P., and Jordan, T.H.
14. The Crustal and Uppermost Mantle Structure of Iran from 3D Seismic Tomography. **Sun, Y.**, Zeng, X., and Toksoz, M.N.
15. Seattle Basin Shear-Velocity Model from Noise Correlation Rayleigh Waves. **Delorey, A.A.**, and Vidale, J.E.
16. Testing Global 3D Travel Time Prediction for Earthquake Location. **Begnaud, M.**, Ballard, S., Rowe, C., Young, C., Steck, L., and Hipp, J.
17. Global 3-D P-Wave Tomography with Teleseismic and Regional Travel Time Prediction Capabilities. **Simmons, N.A.**, Myers, S.C., and Johannesson, G.
18. Determination and Validation of Regional 3-D Crust and Upper Mantle Vp and Vs Models and Their Tectonic

Implications—Case Example from the Taiwan Region. **Chiu, J.M.**, Kim, K.H., Huang, B.S., Chen, K.C., Liang, W.T., Yen, H.Y., and Pujol, J.

Ground Motion: Observations and Theory (see page 306 of *SRL*)

19. Experimental Evidence of Inhomogeneous P Wave at Very Low Strain. **Marcellini, A.**, Tento, A., and Daminelli, R.
20. Response Spectra of Probable Ground Motions for Nonlinear Analysis of Systems. **Malhotra, P.K.**
21. Strong Motion Recordings and Residual Displacements: What Are We Actually Recording in Strong Motion Seismology? **Graizer, V.**
22. 'Domitoring': First Results of the Seismic Surveillance of Cologne Cathedral. **Hinzen, K.-G.**, Fleischer, C., and Schock-Werner, B.

Seismologic Methods, Techniques, and Theory (see page 307 of *SRL*)

23. Seismological Attenuation Coefficient and Q. **Morozov, I.B.**
24. Wave Equations in Nonlinear Elastic Anisotropic Randomly Inhomogeneous Media. **Chesnokolov, E.M.**, Kukhareenko, Y.A., and Goncharuk, S.
25. Smoothing-Free Earthquake Source Inversion: Physically-Guided Regularization in Finite Fault Modeling. **Song, S.**, and Somerville, P.
26. Determining the Focal Mechanisms of Earthquakes in Southern California by Full Waveform Modeling. **Busfar, H.A.**
27. Multiwavelet Seismic Wave Gradiometry: Application to the Glendora Array, Sullivan, IN, USA. **Poppeliers, C.**
28. A Bayesian Method for Single-Station Identification of Local and Regional Earthquake. **Ebel, J.E.**
29. Toward Using Eccentric Mass Shakers for Active Seismic Monitoring. **Niu, F.**, Silver, P., and Nigbor, R.
30. Thermal Anomalies Identification and Analysis of Several Earthquakes in Sichuan, China. **Zhao, J.**, Zhang, W., Wang, W., Yan, G., and Mu, X.

Wednesday, 21 April—Afternoon Poster Sessions

Numerical Prediction of Earthquake Ground Motion (see page 308 of *SRL*)

31. Numerical Modeling of 3D Wave Propagation in the Grenoble Valley (French Alps) with Special Reference to the Duration Observed for Local Seismic Events. **Chaljub, E.**, Cornou, C., and Tsuno, S.
32. Euroseistest Numerical Simulation Project: Comparison with Local Earthquake Recordings for Validation. **Chaljub, E.**, Bard, P.Y., Hollender, F., Theodulidis, N., Moczo, P., Tsuno, S., Kristek, J., Cadet, H., and Bielak, J.

33. High-Frequency Generation in k^2 Kinematic Source Model. Causse, M.C., **Laurendeau, A.L.**, Cotton, F.C., and Mai, M.M.
34. Modeling of Scattering from the Pacific Trench of Mexico Excited by Teleseismic Body Waves. **Dominguez-Ramirez, L.**, Sanchez-Sesma, F., and Davis, P.
35. Numerical Analysis of Earthquake Ground Motion in the Mygdonian Basin, Greece: Comparison of 2D Wave Propagation in Linear and Nonlinear Media. **Bonilla, L.F.**, Gelis, C., Foerster, E., Mariotti, C., Pecker, A., Steinitz, B., Bard, P.Y., Tsuno, S., Hollender, F., Ptilakis, K., and Makra, K.
36. Stable Discontinuous Staggered Grid in the 4th-order Finite-difference Modeling of Seismic Ground Motion. **Kristek, J.**, Moczo, P., and Galis, M.
37. Seismic Wavefield Generated by SH Line Sources in Two Quarter Spaces with Scatterers Distributed around the Bimaterial Interface. **Benites, R.A.**, and Ben-Zion, Y.
38. Numerical Modeling of Earthquake Ground Motion in the Mygdonian Basin, Greece: Verification of the 3D Numerical Methods. **Moczo, P.**, Kristek, J., Franek, P., Chaljub, E., Bard, P.-Y., Tsuno, S., Iwata, T., Iwaki, A., Priolo, E., Klin, P., Aoi, S., Mariotti, C., Bielak, J., Taborda, R., Karaoglu, H., Etienne, V., and Virieux, J.
39. Formulation and Implementation of the Spectral Element Method (SEM) for Elastodynamic Problems. **Meza-Fajardo, K.C.**, and Papageorgiou, A.S.
40. Moderate Earthquake Ground Motion Validation in the San Francisco Bay Area. **Dreger, D.S.**, Kim, A., and Larsen, S.
41. Nonstandard FDTD Scheme for Computation of Elastic Waves. **Takenaka, H.**, Jafargandomi, A.
42. Studying the Effect of Fault Roughness on Strong Ground Motion. **Shi, Z.**, and Day, S.
43. A Stochastic Earthquake Ground-Motion Prediction Model for the United Kingdom. **Rietbrock, A.**, Strasser, F., and Edwards, B.
44. The Big Ten Earthquake Scenarios for Southern California. **Ely, G.P.**, Jordan, T.H., Maechling, P., Olsen, K.B., Day, S.M., Minster, J.-B., Graves, R.W., Bielack, J., Taborda, R., Beroza, G., Ma, S., Cui, Y., Urbanic, J., and Callaghan, S.
45. 2D P-SV Nonlinear Investigations of Basin-Edge Amplification. **O'Connell, D.R.H.**, Liu, P.C., and Bonilla, L.F.
46. The SCEC-USGS Rupture Dynamics Code Comparison Exercise. **Harris, R.A.**, Barall, M., Archuleta, R., Andrews, D.J., Dunham, E., Aagaard, B., Ampuero, J.P., Cruz-Atienza, V.M., Dalguer, L., Day, S., Duan, B., Ely, G., Gabriel, A., Kaneko, Y., Kase, Y., Lapusta, N., Ma, S., Noda, H., Oglesby, D., Olsen, K., Roten, D., and Song, S.
47. Long Period ($T > 0.8s$) Strong Ground Motion Simulations along the Wasatch Front. **Moschetti, M.P.**, Ramirez-Guzman, L., and Bielak, J.

48. Effect of Some Key Parameters on Directivity of Near-fault Ground Motions Derived from a Homogeneous Strike-Slip Fault Modeling. **Hu, J.**, and Xie, L.
49. The Dynamics of Fault Steppers with Rate-State Friction. **Ryan, K.**, and Oglesby, D.D.

Magnitude Scaling and Regional Variation of Ground Motion (see page 312 of *SRL*)

50. Accelerometer Housing as a Cause of Variation of Recorded Ground Motion: The Example of the L'Aquila (Italy) 2009 Earthquake. Ditommaso, R., and **Mucciarelli, M.**
51. Ground Motion in Northern Sicily (Italy). **D'amico, S.**, Mercuri, A., Malagnini, L., Herrmann, R.B., and Akinci, A.
52. Towards Regional Ground Motion Models on the Eastern North Anatolian Fault Zone. **Ugurhan, B.**, and Askan, A.
53. Source Scaling Relationship for M4.6-M7.6 Earthquakes in Taiwan Orogenic Belt. Yen, Y.-T., and **Ma, K.-F.**
54. Empirical Characterization of Ground Motion Processes in Japan, and Comparison to Other Regions. **Ghofrani, H.**, and Atkinson, G.M.
55. Ground Motions from the 29 September 2009 Samoa M8.0 Earthquake and Aftershocks. **McNamara, D.**, Meremonte, M., Leeds, A., Fox, J., Petersen, M., and Gee, L.
56. Ground-Motion Prediction Equations for Eastern North America from a Hybrid Empirical Method. Pezeshk, S., **Zandieh, A.**, and Tavakoli, B.
57. Investigating the Regional Dependence of Ground-Motion Models from an Information-Theoretic Perspective. Delavaud, E., **Scherbaum, F.**, Kuehn, N., and Allen, T.
58. A Hierarchical Global Ground Motion Model to Take into Account Regional Differences. **Kuehn, N.M.**, Scherbaum, F., Riggelsen, C., and Allen, T.
59. New Attenuation Relationship for Far Field Earthquakes Caused by Dip Slip Mechanism. **Adnan, A.B.**, Meldi, S., Masyhur, I.
60. Energetic and Enervated Earthquakes: Real Scatter in Apparent Stress and Implications for Ground Motion Prediction. **Baltay, A.S.**, Prieto, G.A., Ide, S., and Beroza, G.C.
61. Surface and Borehole Estimates of Single-Station Standard Deviation. **Rodriguez-Marek, A.**, Bonilla, L.F., and Cotton, F.

The Seismo-Acoustic Wavefield: Fusion of Seismic and Infrasound Data (see page 314 of *SRL*)

62. Seismo-acoustic Investigation at Mt. Etna Volcano: the Case Study of November 16, 2006. Sciotto, M., Cannata,

- A., Privitera, E., Di Grazia, G., **Gresta, S.**, and Montalto, P.
63. Low Frequency Sound from Earthquakes: What Can We Uniquely Learn from Seismo-Acoustics? **Arrowsmith, S.**, Hartse, H., Whitaker, R., and Burlacu, R.
64. Robust Detection and Location of Infrasound and Seismo-Acoustic Events. **Arrowsmith, S.**, Whitaker, R., Modrak, R., and Anderson, D.
65. Monitoring of Micro-Seismicity Using the Temporal Seismo-Acoustic Network in Eastern Coastal Area of the Korean Peninsula. **Jeon, J.**, and Che, I.
66. Comparing Coupled and Separated Finite-Difference Calculations of Seismo-Acoustic Wave Propagation. **Chael, E.P.**, Aldridge, D.F., Preston, L., and Symons, N.P.
67. The HUMBLE REDWOOD Seismic/Acoustic Coupling Experiments: Joint Inversion for Yield Using Seismic, Acoustic and Crater Data. **Foxall, B.**, Marrs, R., Lenox, E., Reinke, R., Seastrand, D., Bonner, J., Mayeda, K., and Snelson, C.
68. The Utilization of Portable Seismic Stations and a Small-Size Infrasound Array for Characterizing Local Seismicity along Coastal Areas in Korea. **Che, I.Y.**, and Jeon, J.S.
69. Lessons Learned from the Design, Installation and Operation of Seismo-Acoustic Arrays. **Hayward, C.T.**, Stump, B.W., Kubacki, R., and Golden, P.
70. The Los Alamos Seismo-Acoustic Research Center. Arrowsmith, S., **Roberts, P.**, Baker, D., Stead, R., and Whitaker, R.

Operational Earthquake Forecasting (see page 316 of *SRL*)

71. CSEP: Preliminary Results of the New Zealand Earthquake Forecast Testing Center. **Gerstenberger, M.C.**, Christophersen, A., and Rhoades, D.A.
72. A New Generic Model for Aftershock Decay in Earthquake Forecasting. **Christophersen, A.**, and Gerstenberger, M.C.
73. Earthquake Early Warning: Update on Prospective Users' Perspectives. **Savage, W.U.**, Nishenko, S.P., and Johnson, T.B.
74. An Intermediate-Term Attenuation Precursor to the 2004 Parkfield Earthquake: Was It Fluid Driven? **Chun, K.-Y.**, Yuan, Q.-Y., and Henderson, G. A.
75. Multidisciplinary Approach for Atmospheric Earthquake Precursors Validation. **Ouzounov, D.P.**, Pulinets, S.A., Liu, J.Y., Hattori, K., Parrot, M., Taylor, P., and Kafatos, M.
76. Instrumentally Recorded Precursors for the 24 May 2006, Mw=5.4, Morelia Fault Earthquake Sequence, in Mexicali Valley, Baja California, Mexico. Sarychikhina, O., **Glowacka, E.**, Vázquez, R., Munguía, L., Farfán, F., and Díaz de Cossío Batani, G.

Thursday, 22 April—Concurrent SSA Oral Sessions

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
	Operational Earthquake Forecasting Session Chairs: Gordon Woo, Michael Blanpied, and Warner Marzocchi (see page 317 of <i>SRL</i>)	Numerical Prediction of Earthquake Ground Motion Session Chairs: Emmanuel Chaljub, Peter Moczo, and Steven M. Day (see page 319 of <i>SRL</i>)	Near-Surface Deformation Associated with Active Faults Session Chairs: Lee M. Liberty and Thomas L. Pratt (see page 323 of <i>SRL</i>)	The Seismo-Acoustic Wavefield: Fusion of Seismic and Infrasound Data Session Chairs: Brian Stump, Jeff Johnson, and Stephen Arrowsmith (see page 326 of <i>SRL</i>)
8:30	Operational Earthquake Forecasting and Risk Management. Woo, G.	INVITED: High Frequency Ground Motion from Spontaneous Ruptures on Rough Faults. Dunham, E.M. , and Kozdon, J.E.	Crustal Deformation Modeling in the Central United States. Boyd, O.S. , Zeng, Y., Frankel, A.D., and Ramirez-Guzman, L.	The Seismo-Acoustic Wavefield: A New Paradigm in Studying Geophysical Phenomena. Arrowsmith, S. , Stump, B., Johnson, J., and Drob, D.
8:45	INVITED: Prospects for Operational Earthquake Forecasting. Jordan, T.H.	Accurate and Stable Treatment of Nonlinear Fault Boundary Conditions with Higher-Order Finite Difference Methods. Kozdon, J.E. , Dunham, E.M., and Nordström, J.	Recurrent Eocene and Quaternary Uplift Above the Southwestern Blytheville Arch, Arkansas: Is It Contributing to the Formation of Lake St. Francis? Williams, R.A. , Stephenson, W.J., Pratt, T.L., and Odum, J.K.	INVITED: Harmonic Tremor on Active Volcanoes: Seismo-acoustic Wavefields. Lees, J.M. , and Johnson, J.B.
9:00	Development of an Official Operational Earthquake Forecast for California (UCERF3 by the ongoing WGCEP). Field, E.H.	Dynamic Modeling of Mw 7.0 or Larger Earthquakes on the Sierra Madre–Cucamonga Fault System in Los Angeles: Effects of Inelastic Off-Fault Response. Ma, S. , Day, S.M.	Evidence for One or More Major Late-Quaternary Earthquakes and Surface Faulting in the East Tennessee Seismic Zone. Vaughn, J.D. , Obermeier, S.F., Hatcher, R.D., Howard, C.W., Mills, H.H., and Whisner, S.C.	Seismo-Acoustic Signals Produced by the Rapidly Inflating Santiaguito Lava Dome, Guatemala. Johnson, J.B. , and Lees, J.M.
9:15	INVITED: Operational Earthquake Forecasting in Italy. Marzocchi, W.	Dynamic Ground Motion in Fault Steepovers with Material Contrasts. Lozos, J.C. , Oglesby, D.D., and Brune, J.N.	Seismic Potential of the Pishin/Mach Shear Zone in Northern Baluchistan, Pakistan. Kakar, D.M. , Szeliga, W., Bilham, R.,	INVITED: Probing the Atmosphere and Atmospheric Sources with the USArray. Hedlin, M.A.H. , Drob, D., Walker, K., De Groot-and Hedlin, C.D.
9:30	Development of an Earthquake Impact Scale for use with the USGS PAGER System. Wald, D.J. , Marano, K.D., Jaiswal, K.S., Hearne, M., and Bausch, D.	Ground Motion from Dynamic Ruptures on the Wasatch Fault Embedded in a 3-D Velocity Structure. Liu, Q. , Archuleta, R.J., and Smith, R.B.	Creep on the Ornach-Nal Fault, India's Western Boundary with Asia. Bilham, R. , Szeliga, W., and Lodi, S.	Atmospheric Measurements with the USArray Transportable Array. Busby, R.W. , Woodward, R., Hafner, K., Hedlin, M., and Vernon, F.
9:45	Are Mitigation Actions Warranted? The Case of the 2009 L'Aquila Earthquake. Van Stiphout, T. , Wiemer, S., and Marzocchi, W.	Ground Motion Predictions from 0–10 Hz for M7 Earthquakes on the Salt Lake City Segment of the Wasatch Fault, Utah. Roten, D. , Olsen, K.B., Pechmann, J.C., Cruz-Atienza, V.M., and Magistrale, H.	Probabilistic Estimates of Surface Slip including the Effects of Creep and Afterslip. Aagaard, B.T. , Lienkaemper, J.L., and Schwartz, D.P.	INVITED: Seismo-acoustic Studies in the European Arctic. Gibbons, S.J. , and Ringdal, F.
10:00	Break —Lower Level Exhibit Hall			

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
	Operational Earthquake Forecasting (<i>continued</i>)	Numerical Prediction of Earthquake Ground Motion (<i>continued</i>)	Near-Surface Deformation Associated with Active Faults (<i>continued</i>)	The Seismo-Acoustic Wavefield: Fusion of Seismic and Infrasound Data (<i>continued</i>)
10:30	Tobago 2011—A Prospective Case for Operational Earthquake Forecasting. Latchman, J.L. , and Aspinall, W.P.	Calibration of Simulated Motions from Spontaneous Rupture Models Relative to NGA Ground Motion Prediction Equations. Seyhan, E. , Star, L.M., Graves, R.W., and Stewart, J.P.	Slip Partitioning in Oblique Fault Systems. Nunley, M., Oglesby, D.D. , and Bowman, D.	INVITED: The Seismo-Acoustic Boundary Layer. Langston, C.A.
10:45	Testing and Evaluating Operational Earthquake Forecasts. Schorlemmer, D. , Jordan, T.H., Jackson, D.D., and the CSEP Working Group.	INVITED: Efficient Simulation of Anelastic Wave Propagation by the Octree-based Finite Element Method—An Improved Approach. Bielak, J. , Karaoglu, H., and Taborda, R.	GPS Constraints on Deformation and Fault Slip Rates in the Back Arc of the Cascadia Subduction Zone from Northern California to Central Oregon. Thatcher, W.	Seismic and Acoustic Waves Generated by an Exploding Meteoroid. Evers, L.G. , and Dost, B.
11:00	Time-Dependent Earthquake Forecasts Based on Smoothed Seismicity and Rate-And-State Friction. Helmstetter, A. , and Werner, M.	On Accuracy of the Numerical Schemes in Media With a Large P-wave to S-wave Speed Ratio. Moczo, P. , Kristek, J., Pazak, P., Galis, M., and Chaljub, E.	Possible Late Quaternary Folding and Faulting Along Umtanum Ridge, Yakima Fold and Thrust Belt, Washington. Sherrod, B.L. , Blakely, R.J., Barnett, E.A., and Knepprath, N.	INVITED: Source Signature and Propagation Path Effects from Topography on Local Seismic-Acoustic (Infrasound) Data. McKenna, M.H. , Lester, A.P., McKenna, J.R., Anderson, T.S., Kopenhoeffter, K., Gibson, R., and McComas, S.
11:15	Automated Calculation of Post-Earthquake Damage State Exceedance Probabilities Considering the Threat of Aftershocks. Gerstenberger, M.C. , Luco, N., Uma, S.R., and Ryu, H.	Numerical Prediction of Long-Period Earthquake Ground Motion in Japan. Koketsu, K. , Miyake, H., Hikima, K., Hayakawa, T., Suzuki, H., and Watanabe, M.	Geometry and Rupture History of the Seattle Fault Zone, Washington State, from Modeling of Late Holocene Land-level Changes. Pratt, T.L.	Detection of Short Time Transients From Spectrograms Using Scan Statistics. Taylor, S.R. , Arrowsmith, S.J., and Anderson, D.N.
11:30	Early Aftershocks Statistics: First Results of Prospective Test of Alarm-Based Model (EAST) and Setting a Frequency-Based Model. Shebalin, P. , Narteau, C., Holschneider, M., and Schorlemmer, D.	Accurate Prediction of Ground Motion Using an hp-adaptive Discontinuous Galerkin Finite-Element Method. Etienne, V. , Chaljub, E., Virieux, J., and Operto, S.	Active Thrusting within the Himalayan Orogenic Wedge in the Kashmiri Himalaya. Gavillot, Y.G., Meigs, A.M. , Hebel, A.H., Yule, J.D., Madden, C., Malik, M.M., Yeats, R.Y., and Kaericher, M.K.	Infrasound Network Design for Recovering Near-Surface Atmospheric Structure. Marcillo, O.E. , and Johnson, J.B.
11:45	Using Simple Models for Fast, Robust Results. Holliday, J.R.H. , and Rundle, J.B.R.	Efficient Parallel Seismic Simulations Including Topography and 3-D Material Heterogeneity on Locally Refined Composite Grids. Petersson, N.A. , and Rodgers, A.	Characterizing Very Slow Faults in an Active Pull-Apart Setting, Vienna Basin, Austria. Decker, K. , and Hintersberger, E.	Seismo-Acoustic Signals from a Semi-Urban Environment. Lewkowicz, J. , Bonner, J.L., Leidig, M., and Britton, J.M.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
12:00	Lunch—Lower Level. The Obama Administration and CTBT Ratification.			
	Quantification and Treatment of Uncertainty and Correlations in Seismic Hazard and Risk Assessments Session Chairs: Chris H. Cramer, Jack Baker, and Tuna Onur (see page 328 of <i>SRL</i>)	Numerical Prediction of Earthquake Ground Motion (<i>continued</i>)	Earthquake Debates Session Chairs: Danijel Schorlemmer, David D. Jackson, Jeremy D. Zechar, and Warner Marzocchi (see page 330 of <i>SRL</i>)	Seismic Structure and Geodynamics of the High Lava Plains and Greater Pacific Northwest Session Chairs: David E. James, G. Randy Keller, and Matthew J. Fouch (see page 331 of <i>SRL</i>)
1:30	Non-Stationary Path Effects in Portfolio Loss Computation. Walling, M.A. , Luco, N., and Ryu, H.	Euroseistest Verification and Validation Project: An International Effort to Evaluate Ground Motion Numerical Simulation Relevance. Hollender, F. , Manakou, M., Bard, P.-Y., Chaljub, E., Raptakis, D., Pitilakis, K., Tsuno, and S.	INVITED: A Discussion of Elastic Rebound, Earthquake Recurrence and Characteristic Earthquakes. Ellsworth, W.L. , and Weldon II, R.J.	Seismic Imaging of Remnant Slabs, Slab Gaps and Problematic Plumes in the Pacific Northwest. James, D.E. , Fouch, M.J., Roth, J.B., and Carlson, R.W.
1:45	Impacts of Earthquake Hazard Uncertainties on Probabilistic Portfolio Loss Risk Assessment. Molas, G.L. , Onur, T., Bryngelson, J., and Shome, N.	Amplification and Attenuation in Southern California Basins Extracted from Ambient Seismic Field Analysis. Denolle, M. , Beroza, G., Prieto, G., and Lawrence, J.	INVITED: Reply to Ellsworth and Open Discussion. Weldon, II, R.J.	INVITED: Seismic Evidence for Fossil Subduction and Small-Scale Convection Beneath the Northwestern U.S. Schmandt, B. , and Humphreys, E.
2:00	Updated Computation of Probability Distributions of Regional Annual Losses for Seismic Design Alternatives in Memphis, Tennessee. Ryu, H. , Luco, N., Karaca, E., and Walling, M.	INVITED: Elastic Model Up-Scaling for the Elastic Wave Equation Based on Non-Periodic Homogenization. Capdeville, Y. , Guillot, L., and Marigo, J.-J.	INVITED: A Discussion of Elastic Rebound, Earthquake Recurrence and Characteristic Earthquakes. Weldon, II, R.J. , and Ellsworth, W.L.	INVITED: Lithosphere-Asthenosphere Interaction Beneath the Pacific Northwest From the Integrated Analysis of Body and Surface Waves. Obrebski, M. , Allen, R., Porritt, R., Pollitz, F., and Hung, S.-H.
2:15	A Bayesian Ground Motion Model for Estimating the Covariance Structure of Ground Motion Intensity Parameters. Kuehn, N.M. , Riggelsen, C., Scherbaum, F., and Allen, T.	INVITED: Numerical Insights of 2D-PSV Nonlinear Basin Response Analyses. Bonilla, L.F. , Gelis, C., and Liu, P.C.	INVITED: Reply to Weldon and Open Discussion. Ellsworth, W.L.	INVITED: Surface Wave Constraints on the Causes of High Lava Plains Volcanism. Wagner, L.S. , Fouch, M.J., Long, M.D., James, D.E., and Forsyth, D.
2:30	Spatial Correlation of Earthquake Ground Response Spectra: Measurement Techniques and Implications for Regional Infrastructure Risk. Baker, J.W. , and Jayaram, N.	INVITED: Quantifying the Risk Posed to Tall Steel Frame Buildings in Southern California from Earthquakes on the San Andreas Fault. Mourhatch, R., Siriki, H., and Krishnan, S.	INVITED: The Case for Gutenberg-Richter Scaling on Faults. Page, M.T. , Felzer, K.R., Weldon II, R.J., Biasi, G.P., Alderson, D.L., and Doyle, J.C.	INVITED: Regional Electrical Conductivity of the Pacific Northwestern U.S. from EMScope. Egbert, G.D. , Schultz, A., and Fouch, M.J.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
2:45	The CyberShake Project: Full-Waveform Probabilistic Seismic Hazard Calculations for Southern California. Graves, R. , Callaghan, S., Small, P., Mehta, G., Milner, K., Juve, G., Vahi, K., Field, E., Deelman, E., Okaya, D., Maechling, P., and Jordan, T.	Site Effects in Nonlinear Structural Performance Predictions. Li, W. , and Assimaki, D.	INVITED: Reply to Page and Open Discussion. Schwartz, D.P.	INVITED: Raytrace Models from the High Lava Plains (HLP) Controlled-source Experiment. Cox, C.M. , Keller, G.R., Harder, S.H., and Klemperer, S.
3:00	Break —Lower Level Exhibit Hall			
	Quantification and Treatment of Uncertainty and Correlations in Seismic Hazard and Risk Assessments (<i>continued</i>)	Deterministic Simulated Ground Motion Records under ASCE 7-10 as a Bridge Between Geotechnical and Structural Engineering Industry Session Chairs: Alexander Bykovtsev and Walter Silva (see page 334 of <i>SRL</i>)	Earthquake Debates (<i>continued</i>)	Seismic Structure and Geodynamics of the High Lava Plains and Greater Pacific Northwest (<i>continued</i>)
3:30	An Empirical Perspective on Uncertainty in Earthquake Ground Motions. Atkinson, G.M.	INVITED: Requirements for Development of Acceleration Time Histories per ASCE 7-10 Standard. Crouse, C.B.	INVITED: Do Large Earthquakes on Faults Follow a Gutenberg-Richter or Characteristic Distribution?: A Characteristic View. Schwartz, D.P.	INVITED: P-to-S Receiver Function Imaging of the Crust Beneath the High Lava Plains of Eastern Oregon. Eagar, K.C. , Fouch, M.J., James, D.E., and Carlson, R.W.
3:45	Intra-Event Uncertainty of Long-Period Ground Motions For Large Earthquakes With Southeast-Northwest Rupture Direction on the Southern San Andreas Fault. Olsen, K.B. , Day, S.M., Dalguer, L.A., Cui, Y., Maechling, P., Jordan, T., Chourasia, A., and Okaya, D.	INVITED: On the Sensitivity of Near-Source Ground Motions to Heterogeneity of Fault Ruptures. Rowshandel, B.	INVITED: Reply to Schwartz and Open Discussion. Page, M.	An Integrated Analysis of Lithospheric Structure in the High Lava Plains region: Preliminary Observations. Keller, G.R. , Okure, M., Wallet, B., and Cox, C.
4:00	Empirical Testing of Probabilistic Seismic Hazard Estimates. Albarello, D. , D'Amico, V., and Mucciarelli, M.	INVITED: A Consideration of Uncertainty when Selecting Near-Source Ground Motions for Design. Olsen, A.H. , Heaton, and T.H.	INVITED: Applications of Earthquake Simulators to Assessments of Earthquake Probabilities. Dieterich, J. , and Richards-Dinger, K.	Crustal Stress Indicators for Southwest British Columbia: What Controls Faulting in the Crust? Balfour, N.J. , Cassidy, J., and Dosso, S.
4:15	A First Attempt to Constrain Reliability and Measurement Error Associated with Expert Opinion and Judgment in Interpreting Paleoseismic Data. Grant Ludwig, L. , and Runnerstrom, M.G.	INVITED: Earthquake Source Statistics Including Variability of Slip for Simulation-Based Ground Motion Prediction. Song, S. , Somerville, P., and Graves, R.	INVITED: Reply to Dieterich and Open Discussion. Michael, A.J.	Coulomb Stress Interactions among $M \geq 6$ Earthquakes in the Gorda Deformation Zone and on the Mendocino Fracture Zone, Cascadia Megathrust and Northern San Andreas Fault. Rollins, J.C.R. , and Stein, R.S.S.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
4:30	Possible Explanations for Discrepancies Between Precarioously Balanced Rocks and 2008 Hazard Maps. Brune, J. , Purvance, M., Anooshehpour, R., Anderson, J., Grant-Ludwig, L., Rood, D., and Kendrick, K.	INVITED: Deterministic Simulated Ground Motion (SGM) Records under ASCE 7-10 as a Bridge between Geotechnical and Structural Engineering Industry. Bykovtsev, A.S.	INVITED: Barriers to the Use of Physics-Based Seismicity Simulators in Seismic Hazards Assessments. Michael, A.J.	Upper Mantle Anisotropy Beneath the High Lava Plains: Linking Upper Mantle Dynamics to Surface Tectonomagmatism. Long, M.D., Fouch, M.J. , Wagner, L.S., and James, D.E.
4:45			INVITED: Reply to Michael and Open Discussion. Dieterich, J.H.	The Mantle Flow Field Beneath Western North America. Fouch, M.J. , and West, J.D.
5:15	Joyner Lecture—Salon E & F. Progress and Controversy in Seismic Hazard Mapping. Frankel, A. (see page 334 of <i>SRL</i>).			

Thursday, 22 April—Morning Poster Sessions

Characterizing the Next Cascadia Earthquake and Tsunami (see page 335 of *SRL*)

1. An Evaluation of Tsunami Evacuation Options of Padang, West Sumatra, Indonesia. **Cedillos, V.**, Deierlein, G.G., Henderson, J.S., Ismail, F.A., Syukri, A., Toth, J., Tucker, B.E., and Wood, K.R.
2. Reconciling Recurrence Interval Estimates, Southern Cascadia Subduction Zone. **Patton, J.R.**, and Leroy, T.H.
3. Cascadia Tremor and Its Megathrust Implications. **Wech, A.G.**, and Creager, K.C.
4. HAZUS Analyses of 15 Earthquake Scenarios in the State of Washington. **Terra, F.M.**, Wong, I.G., Frankel, A., Bausch, D., Biasco, T., and Schelling, J.D.
5. The National Science Foundation American Reinvestment and Recovery Act Cascadia Initiative. **Jackson, M.**, Woodward, R., and Toomey, D.
6. The 17 November, 2009 Haida Gwaii (Queen Charlotte Islands), British Columbia, Earthquake Sequence. **Cassidy, J.F.**, Rogers, G.C., Brillon, C., Kao, H., Mulder, T., Dragert, H., Bird, and A.L., Bentkowski, W.

The Evolution of Slow Slip and Tremor in Time and Space (see page 336 of *SRL*)

7. Imaging Shallow Cascadia Structure with Ambient Noise Tomography. **Porritt, R.W.**, Allen, R.M., Shapiro, N.M., Boyarko, D.C., Brudzinski, M.R., O'Driscoll, L., Zhai, Y., Humphreys, E.D., and Levander, A.R.
8. PBO Strainmeter Measurements of Cascadia Slow Slip and Tremor Events, 2005–2010. Hodgkinson, K., **Mencin, D.**, Henderson, B., Borsa, A., Gallaher, W., Gottlieb, M., Johnson, W., Van Boskirk, and Jackson, M.
9. Constraints on Aseismic Slip During and Between Northern Cascadia Episodic Tremor and Slip

- Events from Plate Boundary Observatory Borehole Strainmeters. **Roeloffs, E.A.**, and McCausland, W.A.
10. Cascadia Slow slip Events Found in Water Level Changes at Tidal Stations. **Alba, S.K.M.**, Weldon II, R.J., Livelybrooks, D., and Schmidt, D.A.
11. On the Temporal Evolution of an ETS Event along the Northern Cascadia Margin. **Dragert, H.**, Wang, K., and Kao, H.
12. Tectonic Tremor Near the Calaveras Fault Triggered by Large Teleseisms. **Aguiar, A.C.**, Brown, J.R., and Beroza, G.C.
13. Tidal Triggering of LFEs near Parkfield, CA. **Thomas, A.T.**, Burgmann, R.B., and Shelly, D.R.
14. Investigating Low Frequency Impulsive Events at Slumgullion Landslide. **Macqueen, P.**, Gomberg, J., Schulz, W., Bodin, P., Foster, K., Kean, J., and Creager, K.
15. The Seismic Story of the Nile Valley Landslide - Foreshocks, Mainshocks, and Aftershocks. Allstadt, K., **Vidale, J.**, Thelen, W., Sarikhan, I., and Bodin, P.

Monitoring for Nuclear Explosions (see page 338 of *SRL*)

16. Recent Fundamental Advances in Seismic Monitoring. **Willemann, R.J.**
17. Towards Continental Scale Regional Phase Amplitude Tomography. **Phillips, W.S.**, Yang, X., and Stead, R.J.
18. Station Set Residual: Event Classification Using Historical Distribution of Observing Stations. Procopio, M.J., **Lewis, J.E.**, and Young, C.J.
19. IMS Seismic Stations Instrumentation Challenges. **Starovoit, Y.O.**, and Grenard, P.
20. ISC Contribution to Monitoring Research. **Storchak, D.A.**, Bondár, I., Harris, J., and Gaspà, O.
21. Comprehensive Nuclear Test Ban Treaty (CTBT) Monitoring in the Context of the National Data Centre Preparedness Exercise (NPE). **Coyne, J.**, Kitov, I., Krysta, M., Becker, A., Brachet, N., and Mialle, P.

22. Crust and Upper Mantle Tomography using Pn, Pg, Sn, and Lg Phases for Improved Regional Seismic Travel Time Prediction. **Myers, S.C.**, Begnaud, M.L., Ballard, S., Pasyanos, M.E., Phillips, W.S., Ramirez, A.L., Antolik, M.S., Hutchenson, K.D., Dwyer, J.J., Rowe, C.A., and Wagner, G.S.
23. A New Approach for Improved Epicenter Location of Regional Earthquakes Using a Sparse Remote Network. **Song, F.**, Fehler, M.C., Toksöz, M.N., and Lee, W.
24. Toward an Empirically-based Parametric Explosion Spectral Model. **Ford, S.R.**, and Walter, W.R.
25. Modeling Rg from the HUMBLE REDWOOD II Experiment: A Blind Test for Yield and Depth of Burial Estimation. **Bonner, J.L.**, Reinke, R., Lenox, E., Foxall, B., and Mayeda, K.
26. Analysis of Repeated Explosions at Degelen Mountain in the Semipalatinsk Test Site, Kazakhstan. **Stroujkova, A.**, and Bonner, J.L.
27. Exploring the Limits of Waveform Correlation Event Detection as applied to Three Earthquake Aftershock Sequences. **Carr, D.B.**, Resor, M.E., and Young, C.J.
28. Automatic Hydroacoustic Phase Identification using a Two-Stage Neural Net. **Salzberg, D.**, Dysart, P., and Lockwood, M.
29. Routine Infrasound Event Detection and Location at the IDC. Brachet, N., Mialle, P., Bittner, P., and **Given, J.**
30. Theoretical and Experimental Developments in Ground to Ground Infrasound Propagation. **Waxler, R.**, Talmadge, C.L., Drob, D., Chunchuzov, I., Hetzer, C., Assink, J., Blom, P., and Di, X.
31. What InSAR Can Tell Us About Underground Nuclear Explosions: A Decade of Experience. **Vincent, P.**, and Buckley, S.M.

Recent Advances in Source Parameters and Earthquake Magnitude Estimations (see page 342 of *SRL*)

32. Moment Magnitudes in the Middle East from Regional Coda Wave Envelopes. **Gok, R.**, Mayeda, K., Pasyanos, M.E., Matzel, E., Rodgers, A.J., and Walter, W.R.
33. Temporal and Spatial Variations of Local Magnitudes in Alaska and Aleutians and Calibration with Moment Magnitudes. **Ruppert, N.A.**, and Hansen, R.A.
34. New Developments in Earthquake Monitoring in Switzerland. **Olivieri, M.**, Clinton, J., Deichmann, N., Husen, S., and Giardini, D.
35. Seismic Quality Factor and Source Parameters of the Baikal Rift System Earthquakes. **Dobrynina, A.A.**, Chechelnitzsky, V.V., Chernykh, E.N., and Sankov, V.A.
36. A General Method to Estimate Earthquake Moment and Magnitude Using Regional Phase Amplitudes. **Pasyanos, M.E.**
37. Detailed Results and Validations of the SCARDEC Method. Ferreira, A.M.G., **Vallée, M.**, and Charléty, J.

Deterministic Simulated Ground Motion Records under ASCE 7-10 as a Bridge Between Geotechnical and Structural Engineering Industry (see page 343 of *SRL*)

38. INVITED: Deterministic Simulations of Nonlinear Vibration of Viscoelastic Elements in Thin-Walled Constructions with Variable Rigidity. **Abdikarimov, R.A.**
39. INVITED: Deterministic Calculation of Dynamic Stability of Viscoelastic Elements in Thin-Walled Constructions with Variable Rigidity. **Abdikarimov, R.A.**, and Khodzhaev, D.A.
40. INVITED: Simulated Ground-Motion (SGM) Procedure with Time History Analysis for Bridges, High-Rise Buildings and Essential Facilities Located within 5 km of a Fault Zone. **Bykovtsev, A.S.**
41. INVITED: Site Specific Seismic Investigation (SSSI) for Large Landslides in Santa Barbara and Ventura Counties, California. **Bykovtsev, A.S.**
42. INVITED: Deterministic Calculation of Nonlinear Vibrations of Viscoelastic Orthotropic Cylindrical Panels with Concentrated Masses. **Khodzhaev, D.A.**
43. INVITED: Addressing Surface Faulting at Caltrans Bridges. **Merriam, M.**, and Yashinsky, M.
44. INVITED: Detection and Identification of Seismic Phases on Engineered Structures. **Baker, M.R.**

Quantification and Treatment of Uncertainty and Correlations in Seismic Hazard and Risk Assessments (see page 344 of *SRL*)

45. Ground Motion Uncertainty in ShakeMap Constrained by Observations, Prediction Equations, and Empirical Studies. **Worden, C.B.**, Wald, D.J., Lin, K., and Cua, G.
46. A Generalised Conditional Intensity Measure Approach and Holistic Ground Motion Selection. **Bradley, B.A.**, University of Canterbury, Christchurch, New Zealand, brendon.bradley@canterbury.ac.nz
47. Estimating Epistemic Uncertainty in the Location and Magnitude of Historical Earthquakes. **Bakun, W.H.**, Gomez Capera, A.A., and Stucchi, M.
48. Uncertainty in Probabilistic Fault Displacement Hazard Analysis. Moss, R.E.S., and **Ross, Z.**

Thursday, 22 April—Afternoon Poster Sessions

Near-Surface Deformation Associated with Active Faults (see page 345 of *SRL*)

49. What Is the Effective Number of Parameters in a Fault Slip Model? **Funning, G.J.**
50. Revisiting Surface Rupture Mapping of the 2002 M7.9 Denali Fault Earthquake with LiDAR. **Haeussler, P.J.**, Labay, K., Schwartz, D.P., and Seitz, G.G.
51. Spatial and Temporal Variability of Submarine Landslide Deposits Triggered by Megathrust Earthquakes at Port Valdez, Alaska. **Ryan, H.F.**, Haeussler, P.J., Lee, H.J., Parsons, T., and Sliter, R.W.

52. A Tunnel Runs through It—An inside View of the Thrust-Faulted Portland Hills, Oregon. **Wells, R.**, Walsh, K., Peterson, G., Fleck, R., Beeson, M., Evarts, R., Burns, S., Blakely, R., and Duvall, A.
53. Shallow Crustal Structure in the South Georgia Rift near the Epicenter of the 1886 Charleston, South Carolina Earthquake. **Beale, J.N.**, Buckner, and Chapman, M.C.
54. Determining Earthquake Recurrence Over the Past 3 - 4 Events on the Southern Santa Cruz Mountains Section of the San Andreas Fault. **Streig, A.R.**, and Dawson, T.E.
55. Late Quaternary Shortening and Earthquake Chronology of an Active Fault in the Kashmir Basin, Northwest Himalaya. **Madden, C.**, Trench, D., Meigs, A., Ahmad, B., Bhat, M.I., and Yule, J.D.
56. Middle Holocene surface rupture of the Riasi fault, Kashmir, India. **Hebeler, A.**, Yule, J.D., Madden, C., Malik, M., Meigs, A., Gavillot, Y., and Kaericher, M.
57. Timing and Magnitude of Late Quaternary Paleearthquakes on the South Kochkor Thrust fault, central Tien Shan, Kyrgyz Republic. **Weldon, L.M.**, Djumabaeva, A., Abdrakhmatov, K., Weldon, II, R.J., and Bemis, S.
58. Tracing Active Faulting in the Inner Continental Borderland, Southern California, Using New High-Resolution Seismic Reflection and Bathymetric Data. **Conrad, J.E.**, Ryan, H.F., and Sliter, R.W.
59. The San Andreas Fault Zone Directly Offshore Pacifica and Daly City, California: Complex Deformation and Previously Unmapped Structures. **Ross, S.L.**, Ryan, H.F., Chin, J.L., Sliter, R.W., Conrad, J.E., Dartnell, P., Edwards, B.E., Phillips, E.L., and Wong, F.L.
60. Measurement of Apparent Offset and Interpretation of Paleoslip: A Case Study from the San Andreas Fault in the Carrizo Plain. **Akciz, S.O.**, Grant-Ludwig, L., Zielke, O., and Arrowsmith, J.R.
61. A Re-evaluation and Comparison of Paleoseismic Earthquake Dates for the Pallett Creek Site on the Southern San Andreas Fault. **Biasi, G.P.**, and Scharer, K.M.
62. Insights into Active Deformation of Southern Prince William Sound, Alaska from New High-Resolution Seismic Data. **Finn, S.P.**, Liberty, L.M., Haeussler, P.J., and Pratt, T.L.
63. PFLOW: A 3-D Numerical Modeling Tool for Calculating Fluid-Pressure Diffusion from Coulomb Strain. **Wolf, L.W.**, Lee, M.-K., Meir, A.J., and Dyer, G.
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- Advances in Seismic Hazard Mapping** (see page 348 of *SRL*)
64. Preliminary Geological Site Condition Map of Korea. **Kang, S.**, and Kim, K.-H.
65. Assessment of Seismic Hazard for Jordan: A Sensitivity Study with Respect to Different Seismic Source and Magnitude Recurrence Models. **Yilmaz, N.**, and Yucemen, M.S.
66. Field Reconnaissance and Response to the M=7.6 Padang, Indonesia Earthquake. **McGarr, A.**, and Mooney, W.D.
67. Seismic Hazard Assessment of Georgia, Taking into Account Local Site Conditions with Emphasis on Tbilisi Urban Area. Elashvili, M., **Javakhishvili, Z.**, Godoladze, T., and Jorjiashvili, N.
68. Dissemination and Visualization of Digital Geotechnical Data Associated with the 1995 Hyogo-ken Nanbu Earthquake in Kobe, Japan. Thompson, E.M., Tanaka, H., **Baise, L.G.**, Tanaka, Y., and Kayen, R.
69. A Kinematic Fault Network Model of Crustal Deformation for California and Its Application to the Seismic Hazard Analysis. **Zeng, Y.**, Shen, Z.-K., and Petersen, M.D.
70. The Importance of Detailed Geologic Mapping in Regional Seismic Slope Stability Assessment. **Abramsonward, H.**, Apel, T., Gray, B.T., and Bozkurt, S.B.
71. Estimating 5% Damped Response Spectra at Shallow Soil Sites in the Central United States. **Woolery, E.**, Street, R., and Paschall, A.
72. Key Science Issues in the Intermountain West for the Next Version of the U.S. National Seismic Hazard Maps. **Harmsen, S.C.**, Petersen, M.D., Haller, K.M., and Lund, W.R.
73. Constraints on Ground Accelerations Inferred from Unfractured Hoodoos near the Garlock Fault, California. **Anooshehpour, R.**, Brune, J.N., Purvance, M.D., and Daemen, J.K.
74. Dating Precariously Balanced Rocks Using Be-10 With Numerical Models. Rood, D.H., Balco, G., Purvance, M., Anooshehpour, R., Brune, J., **Grant Ludwig, L.**, and Kendrick, K.
75. May Subsidence Rate Serve as Proxy for Site Effects? Michel, S., **Cornou, C.**, Pathier, E., Menard, G., Collombet, M., Knies, U., Bard, P.-Y., and Fruneau, B.

Friday, 23 April—Concurrent SSA Oral Sessions

Time	Salon A	Salon E	Salon F	Salon G
8:00	Field Observations of the Mw 7.0 Haiti Earthquake of January 12, 2010. Mooney, W.D. In Salon E			
	Volcanic Plumbing Systems: Results, Interpretations and Implications for Monitoring Session Chairs: Gregory Waite and Weston Thelen (see page 350 of <i>SRL</i>)	Recent Advances in Source Parameters and Earthquake Magnitude Estimations Session Chairs: Domenico Di Giacomo and George L. Choy (see page 352 of <i>SRL</i>)	Subsurface Imaging for Urban Seismic Hazards at the Engineering Scale Session Chairs: John N. Louie and William J. Stephenson (see page 356 of <i>SRL</i>)	State of Stress in Intraplate Regions Session Chairs: Charles Langston and Christine Powell (see page 359 of <i>SRL</i>)
8:30	INVITED: Seismic Monitoring at Cascade Range Volcanoes: What We've Learned, Where We Are, Where We Need To Be. Moran, S.C. , Malone, S.D., Murray, T.L., Oppenheimer, D.H., and Thelen, W.A.	INVITED: IASPEI Standard Magnitudes At The U.S. Geological Survey/National Earthquake Information Center. Dewey, J.W. , Bryan, C.J., Buland, R.P., and Benz, H.M.	New Technique to Invert 1-D Soil Structure Based on the Site Information with Similar Amplification Characteristics. Kawase, H. , and Kuribayashi, K.	State of Stress in Central and Eastern North America Seismic Zones. Mazzotti, S. , Townend, J.
8:45	INVITED: Real-Time Tracking of Earthquake Swarms at Redoubt Volcano, 2009. West, M.E. , and Thompson, G.	Estimating Source Parameters of Small-To-Medium Sized Earthquakes Using a Multi-Objective Optimisation Approach. Heyburn, R. , Bowers, D., and Fox, B.	Shear-wave Velocity Model of the Santiago de Chile Basin Derived from Ambient Noise Measurements for Simulations of Ground Motion. Pilz, M. , Parolai, S., Picozzi, M., and Zschau, J.	Seismogenic Yield Stresses in an Intraplate Region Estimated Using Laboratory Friction Experiments to Interpret Earthquake source Parameters. McGarr, A. , Boatwright, J.
9:00	Precursory Seismicity to the November 21, 2008 Eruption at Nevado del Huila Volcano, Colombia. McCausland, W.A. , Cardona, C.E., White, R.A., and Santacoloma, C.	Application of Regional Body-Wave Magnitude Scales to Earthquakes in a Continental Margin. Hong, T.K. , and Lee, K.	Estimating Dynamic Strain Amplitudes Beneath Mobile Shakers. Menq, F.-Y. , Cox, B., and Stokoe, K.H.	Passive Margin Earthquakes as Indicators of Intraplate Deformation. Wolin, E. , and Stein, S.
9:15	Investigating Volcanic Plumbing Systems through "Inversion" of Seismologically-Determined Crustal Stress Fields. Roman, D.C.	Automatic Computation of Moment Magnitudes for Small Earthquakes and the Scaling of Local to Moment Magnitude. Edwards, B. , Allmann, B., Clinton, J., and Faeh, D.	INVITED: Earthquakes in Southern Nevada Project: A Summary of Findings to Date. Snelson, C.M. , Taylor, W.J., Luke, B., and Said, A.	Reservoir-Triggered Seismicity in the Canadian Shield. Lamontagne, M. , and Manescu, D.
9:30	Inflation and Rheology of the Submarine Campi Flegrei Magma Systems Using Long Water Pipe Tiltmeters. Bilham, R. , Romano, P., and Scarpa, R.	Regional Variations in Apparent Stress Scaling From Coda Envelopes. Mayeda, K. , and Malagnini, L.	INVITED: Analysis of High-Resolution P-Wave Seismic Imaging Profiles Acquired through Reno, Nevada, for Earthquake Hazards Assessment. Frary, R.N. , Stephenson, W.J., Louie, J.N., Odum, J.K., Maharrey, J.Z., Dhar, M.S., Kent, R.L., and Hoffpauir, C.G.	On the New Madrid Strain Rate/Release Discrepancy: Reexamining the Observational Underpinnings of Sacred Exotic Cows. Hough, S.E. , and Page, M.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
9:45	Evolution of the Lateral Conduit System at Kilauea Volcano during the Early Stages of the Pu'u O'o Eruption. Colella, H.V. , and Dieterich, J.H.	Comparisons of Different Teleseismic Magnitude Estimates from Global Earthquake Datasets and Assessment of Influence of Site and Propagation Effects. Di Giacomo, D. , Parolai, S., Bormann, P., Saul, J., Bindi, D., Wang, R., and Grosser, H.	INVITED: Seismic, Geotechnical, and Earthquake Engineering Site Characterization. Yilmaz, O. , Eser, M., and Berilgen, M.	INVITED: Earthquake Focal Mechanisms and Stress Estimates in the New Madrid Seismic Zone. Horton, S.P. , and Johnson, G.
10:00	Break —Lower Level Exhibit Hall			
	Volcanic Plumbing Systems: Results, Interpretations and Implications for Monitoring (<i>continued</i>)	Recent Advances in Source Parameters and Earthquake Magnitude Estimations (<i>continued</i>)	Subsurface Imaging for Urban Seismic Hazards at the Engineering Scale (<i>continued</i>)	State of Stress in Intraplate Regions (<i>continued</i>)
10:30	INVITED: Volcano Monitoring with Continuous Seismic Correlations: Examples Using Ambient Noise and Volcanic Tremor. Haney, M.M.	INVITED: A Report Card on Real-Time Estimators of Seismic Sources. Okal, E.A.	A Case Study for Seismic Zonation in Municipal Areas. Yilmaz, O. , Eser, M., and Berilgen, M.	The Relationship Between Intrusions and Earthquakes in the New Madrid Seismic Zone as an Indicator of Stress Concentration. Powell, C.A. , and Langston, C.A.
10:45	Noise Tomography and Green's Function Estimates on Erebus Volcano, Antarctica. Chaput, A.J. , Aster, R.C., and Kyle, P.R.	Developing Real-Time Magnitude Estimation Using a Damped Predominant Period Function, Tpd, Applied to Data from the Hellenic Seismological Broadband Network (Operated by the Institute of Geodynamics, National Observatory of Athens, NOA). Lodge, A., Boukouras, K., Rietbrock, A. , and Melis, N.	Interferometric Multichannel Analysis of Surface Waves (IMASW). O'Connell, D.R.H. , and Turner, J.P.	Seismicity and Crustal Structure of the Eastern Tennessee Seismic Zone from Gravity and Magnetic Data Modeling. Arroucau, P. , Vlahovic, G., and Powell, C.A.
11:00	Pulsatile Loading of Redoubt Volcano, Alaska. Denlinger, R.P. , West, M.E., and Diefenbach, A.	Rapid Centroid Moment Tensor (CMT) Inversion in 3D Earth Structure Model for Earthquakes in Southern California. Lee, E. , Chen, P., Jordan, T.H., and Maechling, P.J.	Constraints on the Near Surface Seismic Velocity Structure of the Wasatch Front Region, Utah, from Sonic Log Analyses. Pechmann, J.C. , Jensen, K.J., and Magistrale, H.	Mesozoic-Cenozoic Structure at the Epicenter of the 1886 Charleston, South Carolina Earthquake. Chapman, M.C. , and Beale, J.N.
11:15	Initial Results from a Temporary Seismic Array in Katmai National Park, Alaska: Velocity and Attenuation Models. Murphy, R.A. , Thurber, C.H., Prejean, S.G.	Characteristics of the Earthquake Environment Inferred from Global Variations in Modern Magnitudes. Choy, G.L. , and Kirby, S.H.	INVITED: Preliminary Results from a Multi-Method Approach for Acquiring Shear-Wave Velocity Data in the Portland and Tualatin Basins, Oregon. Odum, J.K. , Stephenson, W.J., Maharrey, J.Z., Frary, R.N., and Dart, R.L.	A Seismic Investigation of the Rio Grande Rift: the Role of Edge-Driven Convection in Continental Rifting. Rockett, C.V. , Pulliam, J., and Grand, S.P.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
11:30	Crustal Structure and Magma Plumbing of Newberry Volcano: A P-Wave Tomography Study. Beachly, M.W. , Hooft, E.E.E., Toomey, D.R., Waite, G.P., and Durant, D.T.	Toward a Moment Magnitude Catalog for Earthquake Hazard Assessment in Eastern Canada. Bent, A.L.	INVITED: Optimized Velocities and PSDM in the Reno Basin. Kell-Hills, A.M. , Pullammanappallil, S., Louie, J.N., Cashman, P., and Trexler, J.	Seismic Anisotropy and Crustal Thickness of Eastern Flank of the Rio Grande Rift. Pulliam, J. , Barrington, T., Xia, Y., Grand, S.P., Boyd, D., Dillon, T., Arratia, M., and Weart, C.
11:45	Two-dimensional P-wave Velocity Model of Ross Island, Antarctica: Preliminary Results. Maraj, S. , Snelson, C.M., Kyle, P., Aster, R.C.	INVITED: Tsunami Early Warning Using Earthquake Rupture Duration and Predominant Period: The Importance of Length and Depth of Faulting. Lomax, A. and Michelini, A.	Mt. Rose Fan Failure Plane: Low Angle Normal Fault or Landslide? Kell-Hills, A.M. , Sarmiento, A., Ashcroft, T., Louie, J.N., Kent, G., Wesnousky, S., and Pullammanappallil, S.	
12:00	Lunch—Lower Level. The Great South Central Chile Earthquake—A Snapshot of Lessons Learned 2 Months Later			
	Statistics of Earthquakes Session Chairs: Donald Turcotte, James Holliday, John Rundle, and Mark Yoder (see page 361 of <i>SRL</i>)	Recent Advances in Source Parameters and Earthquake Magnitude Estimations (<i>continued</i>)	Seismology of the Atmosphere, Oceans, and Cryosphere Session Chairs: Daniel McNamara, Keith Koper, and Richard Aster (see page 363 of <i>SRL</i>)	At the Interface Between Earthquake Sciences and Earthquake Engineering in the Pacific Northwest Session Chairs: Arthur D. Frankel and Ivan G. Wong (see page 364 of <i>SRL</i>)
1:30	Evaluating Earthquake Predictions on Laboratory Experiments and Resulting Strategies for Predicting Natural Earthquake Recurrence. Kilgore, B., and Beeler, N.M.	INVITED: Recent Developments in Source Inversion by Using the W-phase. Rivera, L. , Duputel, Z., and Kanamori, H.	INVITED: Storms, Infragravity Waves and Possible Sources of the Earth's Vertical and Horizontal Hum. Romanowicz, B.A. , Dolenc, D., and Rhie, J.,	INVITED: A SSHAC Level 3 Probabilistic Seismic Hazard Analysis for British Columbia. McCann Jr, M.W. , and Addo, K.
1:45	The Effect of Censored Time, Space and Magnitude Data on Earthquake Clustering Statistics. Wang, Q. , and Jackson, D.	Rapid Determination of Large Earthquakes Moment Magnitude, Focal Mechanism, and Source Time Functions Inferred from Body-Wave Deconvolution. Vallée, M. , Charléty, J., Ferreira, A.M.G., Delouis, B., and Vergoz, J.	INVITED: Atmosphere -> Ocean Waves -> Seismic Signals: Solid Earth - Climate Connections. Bromirski, P.D.	Seismic Hazard in Western Canada from Global Positioning System vs. Earthquake Catalogue Data. Mazzotti, S. , Leonard, L.J., Cassidy, J.C., Rogers, G., and Halchuk, S.
2:00	Activation vs. Quiescence: Which is the Precursory Signal for the Next Large Earthquake? Rundle, J.B. , Holliday, J.R., Turcotte, D.L., Tiampo, K.F., and Klein, W.	Ms vs. Mw for Italian Earthquakes: Focus on the L'Aquila Earthquake Series. Bonner, J.L. , Herrmann, R.B., Malagnini, L., and Stroujkova, A.	Global Trends in Microseism Intensity from the 1970s to Present. Aster, R.C. , McNamara, D.E., Bromirski, P.D.	INVITED: Key Scientific Issues in the Pacific Northwest for the Next Version of the U.S. National Seismic Hazard Maps. Petersen, M.D. , and Frankel, A.D.

<i>Time</i>	<i>Salon A</i>	<i>Salon E</i>	<i>Salon F</i>	<i>Salon G</i>
2:15	Regional Seismicity as a Flow of Clusters: A Case Study in California. Zaliapin, I. , and Bautista, J.	Source Parameters of Nanoseismicity Recorded at Mponeng Deep Gold Mine, South Africa: Implications for Scaling Relationships. Kwiatek, G. , Plenkers, K., Dresen, G., and the Jaguars Group.	INVITED: Probing Microseism Origin and Earth Structure via Array Analysis of <i>P</i> Waves from Storms. Zhang, J. , Gerstoft, P., Shearer, P.M., and Bromirski, P.D.	INVITED: Site Response and Sedimentary Basin Effects in the Portland, Oregon Region. Frankel, A.D. , Carver, D.L., and Norris, R.D.
2:30	Parkfield Repeating Earthquakes Are Neither Time- nor Slip-Predictable. Rubinstein, J.L. , and Ellsworth, W.L.	Empirical Relations Between Radiated Seismic Energy and Source Dimension. Chesnokov, E.M., King, J. , and Abaseyev, S.S.	On the Composition of Earth's Short-Period Seismic Noise Field. Koper, K.D. , Seats, K., and Benz, H.M.	Impacts to Oregon's Critical Energy Infrastructure Hub. Wang, Y.
2:45	When Geomorphology Discriminates Between Occurrence Probability Models. Fitzenz, D.D. , Ferry, M.A., and Jalobeanu, A.	Further Development of the Cepstral Stacking Method (CSM) for Accurate Determinations of Focal Depths for Earthquakes and Explosions. Alexander, S.S. , and Cakir, R.	Seismic Observations of Seasonal Sea-Ice Cycles in Alaska. McNamara, D. , and Koper, K.	INVITED: Seismic Source Characterization of the Yakima Fold Belt and its Implications to Seismic Hazard. Wong, I. , Zachariasen, J., Thomas, P., Youngs, R., Hanson, K., Swan, B., Perkins, B., and McCann, M.
3:00	Break —Lower Level Exhibit Hall			
	Salon A	Exhibit Hall	Salon I	Salon G
	Statistics of Earthquakes <i>(continued)</i>	Seismicity and Seismotectonics Session Chairs: Diane Doser and Jeanne Hardebeck (see page 365 of <i>SRL</i>)	Time Reversal in Geophysics Session Chairs: Carene Larmat, Jean-Paul Montagner, and Kees Wapenaar (see page 367 of <i>SRL</i>)	Seismic Hazard Mitigation Policy Development and Implementation Session Chairs: Yumei Wang and Zhenming Wang (see page 368 of <i>SRL</i>)
3:30	Epistemic Uncertainty in California-Wide Synthetic Seismicity Simulations. Pollitz, F.F.	Finite Fault Kinematic Rupture Model of the 2009 Mw 6.3 LAquila Earthquake from Joint-Inversion of Strong Motion, GPS and InSAR Data. Yano, T. , Shao, G., Liu, Q., Ji, C., and Archuleta, R.J.	Time Reversal Source Localization of Long-Duration Signals in a Laboratory Sample with Implications to Earth Processes. Anderson, B.E., Ulrich, T.J. , Guyer, R.A., and Johnson, P.A.	INVITED: What Earthquake Engineers Need Seismologists to Contribute. Poland, C.D.P.
3:45	Earthquake Statistics of Synthetic Seismicity for Northern California Using Virtual California. Yikilmaz, M.B. , Turcotte, D.L., Yakovlev, G., Rundle, J.B., and Kellogg, L.H.	Pronounced sP Phases Recorded at Regional Distances in Southwestern Japan: Modeling and Implications. Hayashida, T. , Tajima, F., and Mori, J.	Time Reverse Modeling of Low-Frequency Tremor Signals. Steiner, B. , Saenger, E.H., Artman, B., Witten, B., and Schmalholz, S.M.	INVITED: Seismic Policy Development and Implementation in Kentucky. Cobb, J.

	<i>Salon A</i>	<i>Exhibit Hall</i>	<i>Salon I</i>	<i>Salon G</i>
4:00	Distinguishing Tectonic Categories of Earthquakes in the EEPAS Forecasting Model. Rhoades, D.A. , Somerville, P.G., Dimer de Oliveira, F., and Thio, H.K.	Spatial Distribution of Stress along the Interplate Boundary in Hokkaido Northern Japan. Ghimire, S. , and Tanioka, Y.	Time Reversal Applied to Location of San Andreas Triggered Tremor. Larmat, C. , Johnson, P.A., and Guyer, R.A.	INVITED: New “Courtney Grants” to Seismically Strengthen Community Infrastructure in Oregon: What about Other States? Wang, Y.
4:15	Numerical Models of Aftershocks, with 3D Heterogeneous Stress, Rate-State Friction, and Coulomb Stress: Comparisons with the Landers, Denali, and Loma Prieta Earthquakes. Smith, D.E. , and Dieterich, J.H.	Investigating the Source of Seismic Swarms Along the Eastern End of the Puerto Rico Trench. Mintz, H.E. , Pulliam, J., Lopez Venegas, A.M., Ten Brink, U., and Von Hillebrandt-Andrade, C.	INVITED: Time Reversal Source Imaging and GRiD MT Monitoring with W-Phase. Tsuruoka, T. , Kawakatsu, K., and Rivera, R.	History of Seismic Provisions in the Building Code of Arkansas. Ausbrooks, S.M.
4:30	Forecasts of Repeating Microearthquakes near Parkfield, California. Zechar, J.D. , and Nadeau, R.M.	A New Method for Identifying Triggered Seismicity. Magee, A.C. , Fouch, M.J., and Clarke, A.B.	INVITED: The Gap between Theory and Practice for Seismic Interferometry for the Earth. Snieder, R. , Slob, E., and Wapenaar, K.	Impacts of the 2009 Samoa Tsunami and Earthquake. Dengler, L.A. , Brandt, J., Ewing, L., Irish, J., Jones, C., and Lazrus, H.
4:45	Analysis of Spatial Variations in Magnitude of Completeness of JAGUARS Catalog ($-5 < M < -1$) Recorded in the Mponeng Deep Gold Mine in South Africa. Plenkers, K. , Schorlemmer, D., Kwiatek, G., and the Jaguars-Group	Asymmetric Properties of Early Aftershocks on Faults in California. Zaliapin, I. , and Ben-Zion, Y.	INVITED: Earthquake Source Modeling using Time-Reversal or Adjoint Methods. Hjorleifsdottir, V. , Liu, Q., and Tromp, J.	Discussion

Friday, 23 April—Morning Poster Sessions

Seismic Hazard Mitigation Policy Development and Implementation (see page 378 of *SRL*)

1. Developing Seismic Hazard Maps for Policy Applications in Kentucky. **Wang, Z.**
2. Earthquake Safety Initiative for Rural Communities in Western China. **Yuan, Z.X.**, Wang, L.M., and Wang, Z.M.

At the Interface Between Earthquake Sciences and Earthquake Engineering in the Pacific Northwest (see page 377 of *SRL*)

3. Development of Ground Motions for Scoggins Dam Seismic Retrofit. **Zafir, Z.**
4. Vertical Escape Options Needed to Transform Tsunami Safety. Wang, Y., Raskin, J., Boyer, M.M., Moncada, J., Straus, S., Yeh, H., and **Yu, K.**
5. Seismic Monitoring at the Alaskan Way Viaduct in Seattle, Washington. **Delorey, A.A.**, and Vidale, J.E.

Seismic Networks, Analysis Tools, and Instrumentation (see page 375 of *SRL*)

6. A Software Toolbox for Systematic Evaluation of Seismometer-Digitizer System Responses. **Bonner, J.L.**, Buland, R., Herrmann, R.B., Stroujkova, A., Leidig, M.R., and Ferris, A.
7. Guidelines for Standardized Testing of Broadband Seismometers and Accelerometers. Hutt, C.R., Evans, J.R., Followill, F., **Nigbor, R.L.**, and Wielandt, E.
8. NetQuakes—A New Approach to Urban Strong Motion Seismology. **Luetgert, J.H.**, Hamilton, J.C., and Oppenheimer, D.H.
9. How Low Can You Go? Exploring the Capabilities of Low-Cost Accelerometers. **Chung, A.I.**, Lawrence, J.F., Prieto, G.A., Kohler, M.D., and Cochran, E.S.
10. ShakeNet: A Tiered Wireless Accelerometer Network for Rapid Deployment in Civil Structures. Mishra, N., Hao, S., **Kohler, M.**, Govindan, R., and Nigbor, R.
11. The Central U.S. Seismic Observatory (CUSSO). **Wang, Z.**, McIntyre, J., and Woolery, E.W.
12. Arizona Integrated Seismic Network: A New Era in Seismology for Arizona. Brumbaugh, D.S., Arrowsmith, J.R., Beck, S.L., Diaz, M., Fouch, M.J., **Hodge, B.E.**, and Zandt, G.

13. ANSS Quake Monitoring System (AQMS) at the Pacific Northwest Seismic Network. **Hartog, R.**, Kress, V., Bartlett, T., and Bodin, P.
14. EMERALD: Software for Managing Large Seismic Data Sets. **West, J.D.**, Fouch, M.J., and Arrowsmith, J.R.
15. The New Data Product Development Effort within the IRIS DMS. **Bahavar, M.**, Hutko, A.R., and Trabant, C.
16. Real-Time Double-Difference Location and Monitoring of Fine-Scale Seismic Properties. **Waldhauser, F.**, and Schaff, D.
17. Chasing Aftershocks with Subspace Detectors. **Harris, D.B.**, and Dodge, D.A.

Seismicity and Seismotectonics (see page 372 of *SRL*)

18. Broadband Source Mechanism Modeling of Recent Earthquakes in Calabria, Southern Italy. **D'Amico, S.**, Orecchio, B., Presti, D., Gervasi, A., Guerra, I., Neri, G., Zhu, L., and Herrmann, R.
19. Crustal Structure of the Iranian Plateau and Surrounding Region. **Priestley, K.**, Rham, D., and Acton, C.
20. Modeling of Three-Dimensional Regional Velocity Structure Using Wide-Angle Seismic Data from the Hi-CLIMB Experiment in Tibet. **Griffin, J.D.**, Nowack, R.L., Tseng, T.L., and Chen, W.P.
21. Seismotectonic Environment of Some Enervated Earthquakes Along the Sumatra Subduction Zone. **McCann, W.R.**, and Choy, G.L.
22. A Study of Seismicity, Earthquake Source Processes, and Fault Interactions in the Region Between the Denali and Fairweather-St. Elias Fault Systems, Southeast Alaska and Northwest Canada. **Doser, D.I.**, Escudero, C.R., Rodriguez, H.
23. Seismic Reflection Images of the Central California Coast Ranges and the Tremor Region around Cholame from Reprocessing of Industry Seismic Reflection Profile "SJ-6." **Gutjahr, S.**, and Buske, S.
24. Finite-Source Parameters and Scaling of Micro-Repeating Earthquakes at Parkfield. Dreger, D.S., Nadeau, R.M., Kim, A., **Statz-Boyer, P.**, and Acevedo-Cabrera, A.
25. Landers Off-Fault Aftershocks are Well-Aligned with the Background Stress Field, Contradicting the Hypothesis of Highly-Heterogeneous Crustal Stress. **Hardebeck, J.L.**
26. The Earthquakes of August 3, 2009 in the Canal de Ballenas Region, in the Gulf of California, Mexico. **Castro, R.R.**, Valdes, C.M., Shearer, P., Wong, V.M., Astiz, L., Vernon, F., Perez-Vertti, A., and Mendoza, A.
27. Foreshock Sequence of the 2008 Mw 5.0 Mogul-Somerset, Nevada, Earthquake. **Smith, K.D.**, Von Seggern, D.H., Anderson, J.G.
28. P-Wave Slowness Anomalies across USArray Determined by Limited-Aperture Beam Forming. **Sawyer, R.L.**, and Poppeliers, C.

29. Lateral Crustal Velocity Variations across the Andean Foreland in San Juan, Argentina from the JHD Analysis. **Asmerom, B.B.**, Chiu, J.M., Pujol, J., and Smalley, R.

Seismic Structure and Geodynamics of the High Lava Plains and Greater Pacific Northwest (see page 372 of *SRL*)

30. Rayleigh Wave Phase Velocity Dispersion Analysis in the High Lava Plains, Oregon. **Feng, H.S.**, and Beghein, C.
31. Crustal and Lithosphere Structure of the Pacific Northwest with Ambient Noise Tomography. **Gao, H.**, Humphreys, E., Yao, H., and Hilst, R.
32. Preliminary Model of the Juan de Fuca Slab. **Chu, R.**, Sun, D., and Helmberger, D.V.
33. The 2006–2010 Maupin, Oregon Earthquake Swarm. **Braunmiller, J.**, Williams, M., Trehu, A.M., and Nabelek, J.

Time Reversal in Geophysics (see page 371 of *SRL*)

34. Time Reversal and Cross-Correlations Techniques - the Normal Mode Approach. **Montagner, J.-P.**, Larmat, C., and Phung, H.
35. Revealing Source and Path Sensitivities of Basin Guided Waves by Time-Reversed Simulations. **Roten, D.**, Day, S.M., and Olsen, K.B.
36. Looking inside a Subducting Slab Using Source-Side Seismic Interferometry. **Matzel, E.M.**
37. Imaging the Rupture of the September 2009 M8.1 Samoan Outer Rise Earthquake and a Triggered Aftershock on the Plate Interface. **Hutko, A.**, Lay, T., and Koper, K.
38. Rupture Imaging of Recent Large Earthquakes in South America via Backprojection of Teleseismic P-waves. **Sufri, O.**, Xu, Y., and Koper, K.D.

Seismology of the Atmosphere, Oceans, and Cryosphere (see page 369 of *SRL*)

39. First Observations From the NEPTUNE Canada Seismograph Network. **Rogers, G.C.**, Meldrum, R.D., Mulder, T.L., Baldwin, R., and Rosenberger, A.
40. Investigating Source Locations for Body Wave Energy in Ambient Seismic Noise. **Pyle, M.L.**, and Koper, K.D.
41. Seismic Noise Polarization at Stations in the Central United States. **Hawley, V.**, and Koper, K.D.
42. An Explicit Relationship Between Time-Domain Noise Correlation and Spatial Autocorrelation (SPAC) Results and Application to Microseism Directionality. **Tsai, V.C.**, Moschetti, M.P., and McNamara, D.E.
43. Temporal Icequake Investigation and Location at Mount Erebus, Antarctica. **Knox, H.A.**, Aster, R.C., and Kyle, P.R.
44. Hydro Acoustics in Tsunami Warning. **Salzberg, D.**

Statistics of Earthquakes (see page 369 of *SRL*)

45. Darned Lies and Circular Statistics? **Anderson, D.N.**, Arrowsmith, M.D., and Taylor, S.R.
46. Separating Aftershocks from Background Seismicity Using Record-Breaking Intervals. **Yoder, M.R.**, Turcotte, D.L., and Rundle, J.B.
47. Initiation and Propagation of Earthquake Rupture. Gran, J.D., Yakovlev, G., Turcotte, D.L., and Rundle, J.B.

Friday, 23 April—Afternoon Poster Sessions

Subsurface Imaging for Urban Seismic Hazards at the Engineering Scale (see page 381 of *SRL*)

48. Superficial 3-D Basin Structural Model in Grenoble, France, Evaluated by Geophysical and Geological Data. **Tsuno, S.**, Cornou, Collombet, M., Menard, G., and Bard, P.-Y.
49. Cross-Constraints between Station Delays, Gravity, and Reflection for the Reno-area Basin Floor, Nevada. **Dhar, M.S.**, Thompson, M., Kell-Hills, A., Louie, J.N., Smith, K.D., and Widmer, M.C.
50. Surface Geophysics for Emergency Microzonation: The L'Aquila Earthquake Example. **Gallipoli, M.R.**, Mucciarelli, M., and Albarello, D.
51. Seismic Characterization of the Sites of the Italian Accelerometric Network. Foti, S., Parolai, S., Albarello, D., Milana, G., Mucciarelli, M., Puglia, R., Maraschini, M., Bergamo, P., Comina, C., Tokeshi, K., Picozzi, M., Di Giacomo, D., Strollo, A., **Pilz, M.**, Milkereit, R., Bauz, R., Lunedei, E., Pileggi, D., Bindi, D.
52. Shallow-Seismic Site Characterizations of Near-Surface Geology at 20 Strong-Motion Stations in Washington State. **Cakir, R.**, Walsh, T.J., Maffucci, C.M., Perreault, J., and Burton, K.
53. Characterization of Shallow Seismic Velocity Structure in Southwestern Utah Using Spatial Autocoherence. Huang, S., **Pankow, K.L.**, and Thorne, M.S.
54. Site Characterization in Northwestern Turkey Based on Spatial Autocorrelation Technique: A Comparative Study on Site Hazard Estimation. Asten, M., **Askan, A.**, Ekincioglu, E.E., Sisman, F.N., and Ugurhan, B.
55. Site Effect Assessment in Bishkek (Kyrgyzstan) Using Earthquake and Noise Recording Data. Parolai, S., Orunbayev, S., Bindi, D., Strollo, A., Usupayev, S., Picozzi, M., **Di Giacomo, D.**, Augliera, P., D'alema, E., Milkereit, C., Moldobekov, B., and Zschau, J.
56. Shallow Seismic and Geotechnical Site Surveys at the Turkish National Grid for Strong-Motion Seismograph Stations. **Yilmaz, O.**, Savaskan, E., Bakir, S., Yilmaz, T., Eser, M., Akkar, S., and Tuzel, B.
57. Comparison of Shear-Wave Velocity Depth Profiles from Downhole and Surface Seismic Experiments. **Yilmaz, O.**, Eser, M., Sandikkaya, A., Akkar, S., Bakir, S., and Yilmaz, T.

58. Absolute Site Response from L'Aquila Earthquake. **Mercuri, A.**, Malagnini, L., and Herrmann, R.B.

Volcanic Plumbing Systems: Results, Interpretations and Implications for Monitoring (see page 380 of *SRL*)

59. An Integrated Analysis of Low-Frequency Seismicity at Fuego Volcano, Guatemala. **Waite, G.P.**, Lyons, J.J., and Nadeau, P.A.
60. Return to Lo'ihi: Cross-correlation Analysis of the 1996 Earthquake Swarm at Lo'ihi Submarine Volcano, Hawai'i. **Caplan-Auerbach, J.**, and Thurber, C.H.
61. Halloween 2009 Earthquake Swarm Near Sunset Crater National Monument, Arizona. **Hodge, B.E.**, and Brumbaugh, D.S.
62. Tracking Long Period Earthquakes Beneath Mammoth Mountain, California. **Shelly, D.R.**, Hill, D.P., and Pitt, A.M.
63. Analysis of a "New" Seismic Dataset from the 1980 Eruption of Mount St. Helens. **Thelen, W.A.**, Malone, S.D.
64. Statistical Analysis of Seismicity Beneath Alaskan Volcanoes. **Junek, W.N.**
65. Oscillation of Fluid-filled Cracks Triggered by Degassing of CO₂ due to Leakage Along Wellbores: Field Observations of a Single Force Source Process. **Bohnhoff, M.**, and Zoback, M.D.

The January/February 2010 Earthquakes in Haiti, Offshore Northern California, and Chile: Origins, Impacts and Lessons Learned (see this program.)

66. Shaking, Ground Effects, and Human Response to the Mw 6.5 Northern California Earthquake of January 10, 2010. **Dengler, L.A.**, Bazard, D., Cashman, S.M., Hemphill-Haley, E., Hemphill-Haley, M., Kelsey, H., McPherson, R., and Tillinghast, S.
67. Quantifying Strong Ground Shaking in Sparsely Instrumented Regions. **McPherson, B.C.**, Hemphill-Haley, M.A., Dengler, L.A., Williams, T.B., Erickson, G.J., and Bazard, D.
68. Geodetic and Seismologic Evidence for a Locked Southern Margin of the Cascadia Subduction Zone. **McPherson, B.C.**, Hemphill-Haley, M.A., Dreger, D., Hellweg, P., and Rollins, J.C.
69. The 2010 M 6.5 and M 5.9 Offshore Ferndale Earthquakes: Seismicity, Seismic History and Stress. **Hellweg, M.**, McPherson, R., Dreger, D.S., Dengler, L., Rollins, J.C., and Stein, R.S.
70. Slip-Distribution and Kinematic Rupture Process of the January 9, 2010 Mw6.5 Gorda Plate Event. **Dreger, D.S.**, Murray-Moraleda, J., and Svarc, J.
71. Historic Earthquakes Along Southern Hispaniola, and Comparison of the Effects of the 1770 and 2010 Haiti Events. **McCann, W.R.**, and Mora, S.
72. New Observations of Earthquake Site Response and Seismic Attenuation in Haiti. **Cassidy, J.F.**

- Al-Khoubbi, I., Rogers, G.C., Bent, A., McCormack, D., and Andrews, C.
73. Rapid, Multiresolution Mapping of Damage and Rupture from the 2010 Haiti Earthquake. **Yikilmaz, M.B.**, Bernardin, T., Bishop, M.S., Bowles, C., Elliott, A., Morelan, A., Cowgill, E.S., Kellogg, L.H., Kreylos, O., and Oskin, M.
 74. Real Time Seismic Monitoring in Haiti. McCormack, D.A., Al-Khoubbi, I., Andrews, C., Lamontagne, M., Asudeh, I., **Bent, A.L.**, Greene, H., Halchuk, S., Drysdale, J., Woodgold C., and Adams, J.
 75. The January 12, 2010 Mw. 7.0 Haiti Earthquake Recorded at Strong Motion Stations of the Puerto Rico Strong Motion Program. **Upegui Botero, F.M.**, Caro Cortes, J.A., Huerta Lopez, C.I., Martinez Cruzado, J.A., Suarez, L.E., and Pando, M.A.
 76. Ground Deformation Effects of the 12 January 2010 Earthquake in Haiti. **Wells, D.L.**, Rathje, E., Bachhuber, J., Cox, B., French, J., Green, R., Olson, S., Rix, G., Suncar, O., Pena, L., and Mundaray, T.
 77. Haiti Earthquake Magnitude 7.0 January 12th 2010 and Aftershock as Located by ISU/UASD. **Pujols, R.A.**, Polanco, E., Arias, J., Delgado, J.R., Martinez, F., Ramirez, N., Garcia, F., and Perez, S.
 78. Preliminary Report on Aftershock Recording and Site Characterization in Haiti. **Hough, S.E.**, Anglade, D., Benz, H., Ellsworth, W., Given, D., Hardebeck, J., Janvier, M.G., Maherrey, J.Z., Mazabraud, Y., McNamara, D., Mercier De Lepinay, B., Meremonte, M., Mildor, B.S-L., Prepetit, C., and Yong, A.
 79. Post-Earthquake Health Monitoring of Critical Infrastructure at Haiti to Assist Rapid Relief Efforts. **Oommen, T.**, Baise, L.G., Gens, R., and Prakash, A.
 80. Co-Seismic Landsliding and Local Tsunami Generation on the Haitian Peninsula from the January 2010 Mw 7.1 Earthquake. **Goldfinger, C.**, and McAdoo, B.G.
 81. Project REPONS: Offshore Fault Mapping and Turbidite Record Reconnaissance in Response to the January 12 2010 Earthquake, Haiti. **McHugh, C.**, Gulick, S., Cormier, M.-H., Diebold, J., Dieudonne, N., Hornbach, M., Seeber, L., Steckler, M., Braudy, N., De Bow, S., Deming, J., Douilly, R., Johnson, H., Mishkin, K., Sorlien, C., Symithe, S., Templeton, J., and Wilson, R.
 82. Caribbean Tsunami Warning Program. **Von Hillebrandt-Andrade, C.G.**, and Proenza, X.W.
 83. Surface Deformation of the January 12th, 2010 Haiti Earthquake from ALOS-PALSAR Interferometry. **Funning, G.J.**
 84. Source Mechanisms of the January 12, 2010, M_w 7.1 Haiti Earthquake and its Aftershocks. **Hjörleifsdóttir, V.**, and Nettles, M.
 85. The January 2010 Haiti Mainshock-Aftershock Discrepancy: Structural and Stress Interactions Between Faults in Strain Partitioned Transpression. Seeber, N., and **Waldhauser, F.**
 86. The January 12, 2010 Haiti Earthquake : Indications for a Long Duration Event with a Spatially Concentrated Rupture. **Vallée, M.**
 87. Source Properties of the January 2010 M7 Haiti Earthquake Estimated by Back Projection of Waves Recorded by the National Seismic Network of Venezuela. **Meng, L.**, Ampuero, J.P., and Rendon, H.
 88. 12 January 2010 M=7.0 Haiti Earthquake Calculated to Increase Failure Stress on Adjacent Segments of the Enriquillo Fault and Other Fault Systems. **Lin, J.**, Stein, R.S., Sevilgen, V., and Toda, S.
 89. USGS PAGER Information for the 2010 Mw 7.0 Haiti and Mw 8.8 Chile Earthquakes. **Marano, K.D.**, Wald, D.J., Jaiswal, K.S., Hearne, M.G., Lin, K., and Hayes, G.P.
 90. The USGS National Earthquake Information Center Response to Recent Large Earthquakes. **Hayes, G.P.**, Wald, D.J., Earle, P.S., Benz, H.M., Briggs, R.W., Sipkin, S.A., Dewey, J.W., Choy, G., Jaiswal, K., Lin, K., Marano, K.D., and Hearne, M.
 91. High-Resolution Aftershock Relocations and Focal Mechanisms of the 2010 Mw7.0 Haiti and Mw8.8 Chile Earthquakes. **Waldhauser, F.**, Diehl, T., Seeber, N., Hjörleifsdóttir, V., Nettles, M.
 92. Preliminary Source Model of the 2010 Mw 8.9 Maule Chile Earthquake Constrained by Teleseismic Data. Shao, G., **Liu, Q.**, Li, X., Zhao, X., Yano, T., Ji, C., Archuleta, R.J.
 93. Global Long-Period Seismic Wavefield of the February 27, 2010 Chile Earthquake. **Aster, R.C.**
 94. The Accelerogram Recorded in Buenos Aires, Argentina, During the Mw=8.8 February 27, 2010 Great Chilean Seismic Event. Sabbione, N.C., and **Carmona, J.S.**
 95. The Very Large Central Chile Earthquake of 27 February 2010 and the Predictability. **Purcaru, G.**
 96. W-Phase: Lessons from the February 27, 2010 Chilean Earthquake. Duputel, Z., **Rivera, L.**, and Kanamori, H.
 97. The W-Phase and PTWC's Response to the Mw 8.8 Chile Earthquake of February 27, 2010. Duputel, Z., Rivera, L., Kanamori, H., Weinstein, S., **Hirshorn, B.**, and Hsu, V.
 98. NOAA West Coast/Alaska Tsunami Warning Center Operations During the 2010 Chilean Tsunami. Huang, P., **Nyland, D.**, and Whitmore, P.
 99. Dispersion of the Feb 27, 2010 Tsunami or Why the Tsunami Was Smaller Than Predicted. **Salzberg, D.**, and Fryer, G.
 100. Seismic Recordings of the Maule, Chile Tsunami of 27 Feb 2010. **Okal, E.A.**
 101. Plate Boundary Observatory Strain Recordings of the February 27, 2010, M8.8 Chile Tsunami. Hodgkinson, K., **Mencin, D.**, Borsa, A., and Jackson, M.
 102. Field Survey and Preliminary Simulation of the 2010 Maule, Chile Tsunami in French Polynesia. Reymond, D., Hyvernaud, O., Hebert, H., **Okal, E.A.**, Jamelot, A., and Allgeyer, S.

103. The 2010 Chilean Tsunami on the California Coastline. Wilson, R.I., **Dengler, L.A.**, Legg, M.R., Long, K., and Miller, K.M.

State of Stress in Intraplate Regions (see page 378 of *SRL*)

104. Are Recent Earthquakes near Greenbrier, Arkansas Induced by Waste-Water Injection? **Horton, S.P.**, and Ausbrooks, S.M.

105. Preliminary Results for the Detection of Non-volcanic Tremor in the New Madrid Seismic Zone Using a Phased Array. Langston, C.A., **Deshon, H.R.**, Horton, S., and Withers, M.

106. Analysis of Recent Earthquakes in Cleburne, Texas. **Howe, A.M.**, Hayward, C.T., Stump, B.W., and Frohlich, C.

107. Observation of Microearthquake Sequences in the Haicheng, Liaoning, China. **Kim, G.Y.**, and Shin, J.-S.

108. Relocation of the 20 January 2007 ML 4.8 Odaesan Earthquake Sequence. **Kim, K.-H.**, Kang, S., and Park, Y.

109. Seismicity of Stable Continental Regions (SCRs): Correlation of Earthquake Locations, Magnitudes, and M_{max} with Deep Lithospheric Structure. **Ritsema, J.**, and Mooney, W.D.

110. The North American Upper Mantle: Density, Composition, and Evolution. **Mooney, W.D.**, and Kaban, M.K.

111. Source Parameters of the April 18, 2008 (Mw 5.2) Mount Carmel, Illinois Earthquake Sequence. **Ayele, S.T.**, Horton, S., and Powell, C.