Tuesday, 15 April 2025—Oral Sessions

Presenting author is indicated in bold.

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9	Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Adventures in Social Seismology: Ethical Engagement, Earthquake Early Warnings, Operational Forecasts, and Beyond (see page 1337).	**Network Seismology: Recent Developments, Challenges and Lessons Learned** (see page 1429).	**Fiber-optic Sensing Applications in Seismology** (see page 1388).			**Testing, Testing 1 2 3: Appropriate Evaluation of New Seismic Hazard and Risk Models** (see page 1472).	**From Physics to Forecasts: Advancements and Future Directions of Induced Seismicity Research** (see page 1395).
8:00 AM	INVITED: Geosciences in Dangerous Area: The Case of Haiti. **Symithe, S. J.**, Calais, E.	Evolution and Optimization of the Raspberry Shake Data Center: Managing the World's Largest Real-time Seismic Network. **Christensen, B.**, Boaz, R.	Applications of Distributed Acoustic Sensing Using Dark Fiber in Dallas, Texas. **Sharma, J.**, Arrowsmith, S., Hayward, C., DeShon, H. R.	8:00 AM		Testing and Evaluation of Earthquake Simulations for Natural Hazards and Risk Modelling. **Gerstenberger, M. C.**, Penney, C., Nicol, A., Fry, B., Pace, B., Bayliss, K.	INVITED: Interpretable Deep Learning Framework for Forecasting Induced Seismicity in Geothermal Fields. **Nakata, N.**, Bi, Z.
8:15 AM	STUDENT: The Large-enrollment Seismology Skill Building Workshop Is an Inclusive and Effective Geoscience Recruiting Tool. **Ventura-Valentin, W. A.**, Brudzinski, M. R., Haberli, G., Hubenthal, M., Meyer, E. H.	ISC: Supplementary Services for Seismology. **Storchak, D. A.**, Harris, J., Di Giacomo, D., Lieser, K.	INVITED: STUDENT: Daily Groundwater Monitoring Using Vehicle-DAS Elastic Full-waveform Inversion. **Li, H.**, Liu, J., Mao, S., Yuan, S., Clapp, R., Biondi, B.	8:15 AM		Evaluating the Impact of 3D Fault Geometry on Surface Rupture Probabilities Using Earthquake-cycle Simulations. **Gómez-Novell, O.**, Visini, F., Álvarez-Gómez, J. A., Pace, B.	Modeling and Forecasting Wastewater Disposal Induced Seismicity in the Delaware Basin. **Sirorattanakul, K.**, Fang, Z., An, J., Ruby, N., Tavakoli, R., Palmer, J., Comiskey, C.
8:30 AM	INVITED: Navigating Earthquake News in the Age of AI. **Stanley, S. M.**, Wardle, C.	Station Statistics Derived from the ISC Bulletin. Harris, J., Gallacher, R., **Garth, T.**, Storchak, D. A.	Detection and Source Characterisation of Crevasse Icequakes at an Alpine Glacier Using Distributed Acoustic Sensing. Hudson, T. S., Noe, S., Walter, F., Kendall, M., **Fichtner, A.**	8:30 AM		INVITED: At the Testing Frontier. **Page, M.**	Managing Induced Earthquake Potential with Deep Graph Neural Networks. **Liu, B.**, Ellsworth, W. L., Howe, G., Eimon, B., Gebara, M., Murphy, O., Beroza, G. C.
8:45 AM	INVITED: Centering Users When Designing Earthquake and Aftershock Products. **Schneider, M.**, Artigas, B., Wein, A. M., van der Elst, N., McBride, S. K., Becker, J., Castro, R., Diaz, M., Gonzalez-Huizar, H., Hardebeck, J., Michael, A. J., Mixco, L., Page, M.	Geophysical and Sea-level Monitoring in Puerto Rico: Recent Developments, Challenges and Lessons Learned. **Huerfano, V. A.**, Martinez-Cruzado, J. A., Rivera, J.	Englacial Ice Quake Cascades in the Northeast Greenland Ice Stream - DAS Observations and Implications for Ice Stream Dynamics. **Fichtner, A.**, Hofstede, C., Kennett, B., Svensson, A., Westhoff, J., Walter, F., Ampuero, J., Cook, E., Zigone, D., Jansen, D., Eisen, O.	8:45 AM		STUDENT: Modeling Synthetic Catalogues of Earthquake Ruptures in Complex Interacting Fault Systems: A Case Study in Central Apennines, Italy. **Saghatforoush, K.**, Pace, B., Verdecchia, A., Visini, F., Peruzza, L., Zielke, O.	Modeling and Forecasting Induced Seismicity in the Midland Basin, Texas and Oklahoma. **Marty, S. B.**, Avouac, J., Curry, B., Hussenoeder, S. A., Yuan, Y., Jin, L.
9:00 AM	Reflections on the Role of the International Community for the Promotion of Global Risk Reduction. **Hough, S. E.**	In the Pursuit of 99% Data Return - Case Study of the Italian National Accelerometric Network. **Franke, M.**, Filippi, L., Zambonelli, E., Ammirati, A., Radman, S.	Monitoring of Tele-seismic Events Using Multiple Trans-oceanic Telecom Cables and Distributed Fiber Sensing. **Mazur, M.**, Karrenbach, M., Fontaine, N. K., Ryf, R., Kamalov, V., Williams, E. F., Dallachiesa, L., Gunnarsson, A. I., Jonsson, O., Hlynsson, A. A., Hlynsson, S., Chen, H., Winter, D., Neilson, D. T., Ruiz-Angulo, A., Hjorleifsdottir, V.	9:00 AM		INVITED: Guidelines for the Evaluation Process of a NSHM: The Italian MPS19 Legacy. **Marzocchi, W.**, Meletti, C., D'Amico, V., Lanzano, G., Luzi, L., Martinelli, F., Pace, B., Rovida, A., Taroni, M., Visini, F.	Advanced Deep Learning for Distinguishing the Quarry Blasts from Induced Seismicity. Yang, L., **Chen, Y.**, Siervo, D., Vallejo, K., Savvaidis, A.
9:15–10:30 AM	Poster Break			9:15–10:30 AM	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4-6	Key Ballroom 9	Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Adventures in Social Seismology: Ethical Engagement, Earthquake Early Warnings, Operational Forecasts, and Beyond (see page 1337).	**Network Seismology: Recent Developments, Challenges and Lessons Learned** (see page 1429).	**Fiber-optic Sensing Applications in Seismology** (see page 1388).		**Late-breaking on Recent and Future Large Earthquakes** (see page 1414).	**Advancing Time-dependent PSHA and Seismic Risk Assessment: Accounting for Short- to Medium-term Clustering** (see page 1334).	**From Physics to Forecasts: Advancements and Future Directions of Induced Seismicity Research** (see page 1398).
10:30 AM	The December 5, 2024 Offshore Cape Mendocino Earthquake: Response to Earthquake Early Warning in an Earthquake Experienced Region. **Goltz, J. D.**	Advancing Operational Earthquake Monitoring at Local and Regional Scales With Machine Learning-enhanced SeisComP Tools - as Demonstrated in Switzerland. **Jozinović, D.**, Clinton, J. F., Massin, F., Diehl, T., Saul, J.	INVITED: STUDENT: Characterizing Microearthquakes and Shallow Attenuation With Downhole Optical Fibers in the Cape Modern Geothermal Field. **Chang, H.**, Nakata, N., Abercrombie, R. E., Dadi, S., Titov, A.	10:30 AM	STUDENT: The Multi-segment Complexity of the 2024 Mw 7.5 Noto Peninsula Earthquake Governs Tsunami Generation. **Kutschera, F.**, Jia, Z., Oryan, B., Wong, J., Fan, W., Gabriel, A.	INVITED: Exploring Long and Short-term Time Dependencies in Earthquake Risk Modeling. Iacoletti, S., **Cremen, G.**, Galasso, C.	INVITED: Mitigation and Optimization of Induced Seismicity Using Physics-based Forecasting. **Hill, R. G.**, Weingarten, M., Langenbruch, C., Fialko, Y.
10:45 AM	STUDENT: Scientific Storytelling to Improve Earthquake Shaking and Impact Communication. **Pope, I. E.**, Macias, M. A., Stoian, C. B., McBride, S. K., Lin, K., Earle, P. S., Wald, D. J.	Using Machine Learning for Near Real-time Monitoring in Utah and Yellowstone. **Baker, B.**, Armstrong, A. D., Pankow, K. L.	Rapid Earthquake Magnitude Estimation From P-wave Strains: Comparing Borehole Strain Meters and DAS. **Sawi, T.**, McGuire, J. J., Barbour, A. J., Yoon, C. E., Yartsev, V., Karrenbach, M., Stewart, C., Hemphill-Haley, M., McPherson, R., Stockdale, K.	10:45 AM	Analysis of the Magnitude 5.7 Parker Butte Earthquake Near Yerington Nevada, Using High Precision Relocation, InSAR, GPS, and Strong Motion Data. **Bogolub, K. R.**, Trugman, D. T., Hammond, W. C., Jiang, Y., Koehler, R. D., Rowe, C. D., Smith, K. D.	INVITED: Who Needs ETAS-based Seismic Hazard? **Iervolino, I.**, Cito, P., Chioccarelli, E., Vitale, A., Giorgio, M.	The Prinos CO_2 Storage Site (Greece): Seismotectonic Setting and Monitoring Challenges. **Kiratzi, A. A.**, Vavlas, N., Cotton, F., Pilz, M., Ktenidou, O. J., Sokos, E., Kiomourtzi, P., De Marchi, N., Marras, C., Bracciamà, V., Albani, Y., Papadopoulos, A., Caccamo, C.
11:00 AM	Deaf University Student Experiences With Earthquake Early Warning. **Cooke, M. L.**, Cooper, A., Takayama, K., Sumy, D., McBride, S. K.	An Explainable Phase-picking Model That Imitates Human Workflow. **Park, Y.**, Armstrong, A. D., Yeck, W. L., Shelly, D. R., Beroza, G. C.	Detecting and Locating Earthquakes using Machine Learning Workflow and Offshore Distributed Acoustic Sensing. **Shi, Q.**, Denolle, M. A., Lipovsky, B. P., Williams, E. F., Ni, Y., Wilcock, W. S. D.	11:00 AM	The 2025 Ms6.8 (Mw 7.1) Dingri Earthquake Sequence and Seismogenic Structure. **Wang, D.**, Yao, D., Chen, F., Wang, Z.	Risk Implications of Poisson Assumptions and Declustering Inferred From a Fully Time-Dependent Earthquake Forecast. **Field, E. H.**, Milner, K. R., Porter, K. A.	Transient Rate-dependent Forecast for Induced Earthquakes in Carbon Sequestration. Wang, C., Geffers, G., Sherman, C. S., **Kroll, K. A.**
11:15 AM	STUDENT: Public Feedback and Actions During EEW Alerts: Lessons From Central America. **Orihuela, B.**, Clinton, J. F., Massin, F., Burgoa, B., Boese, M., Protti, M., Yani, R., Marroquin, G.	Towards Consistent Event Classification at Mount Baker Volcano, Washington, USA. **Stevens, N. T.**, Poobua, S., Hartog, J., Malone, S., Thelen, W., Wright, A. K., Johnson, B., O'Rourke, C. T.	Coherence-based Earthquake Location Using Integrated Fiber-optic and Conventional Seismic Networks. **Bozzi, E.**, Pascucci, G., Gaviano, S., Saccorotti, G., Bocchini, G., Harrington, R., Ugalde, A., Martins, H. F., Grigoli, F.	11:15 AM	Sampling the Earthquake Cycle in a Graben System: Insights from the 2025 Mw7.1 Dingri Earthquake in the Southern Tibetan Plateau. **Wei, S.**, Ma, Z., Zeng, H., Li, C., Chen, H., Shan, X.,	STUDENT: Accounting for Earthquake Sequences in Probabilistic Seismic Hazard Assessment. **Pane, A.**, Visini, F., Marzocchi, W.	Efficient Physics-based Modelling of Induced Seismicity Decatur CCS Project and Upscaling to the Illinois Basin. **Acosta, M.**, Salha, G., Forestier, C., Wang, G., Avouac, J.
11:30 AM	Just Because We Can, Does That Mean We Should? An Ethical Discussion and Case Studies of International Aftershock Forecast by the U.S. Geological Survey. **McBride, S. K.**, Schneider, M., van der Elst, N., Michael, A. J., Page, M., Hardebeck, J., Llenos, A. L., Wein, A. M.	Implementation of AI/ML Detection of Seismicity as a Real-time SeisComP Module. **Muñoz Lopez, C. E.**, Salles, V., Skevofilax, C. G., Chen, Y., Savvaidis, A.	Deep Learning for Distributed Acoustic Sensing Data Compression. **Chen, Y.**, Saad, O., Chen, Y., Savvaidis, A.	11:30 AM	Two Days, Three Earthquakes, Three Provinces. Mulder, T., Bird, A., **Bent, A. L.**, Brillon, C., Paul, C., Ackerley, N., Boucher, C., Kao, H., Cassidy, J., Smith, B., Schaeffer, A., Kolaj, M., Crane, S.	Seismic Models for the Taiwan Probabilistic Seismic Hazard Assessment: Tradition and Innovation. **Chan, C.**	Site-specific Seismic Hazard Analyses in Oklahoma Addressing Both Tectonic and Induced Seismicity. **Wong, I. G.**, Thomas, P., Lewandowski, N., Hartleb, R., Lindvall, S., Zandieh, A., Darragh, B., Kayastha, M., Yenihayat, N., Levish, D., Gutierrez, A.
11:45 AM– 2:00 PM		Lunch Break		11:45 AM– 2:00 PM		Lunch Break	

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9
	Improving the State of the Art of Earthquake Forecasting Through Models, Testing and Communication (see page 1402).	**Network Seismology: Recent Developments, Challenges and Lessons Learned** (see page 1429).	**Innovative Applications of Seismic Nodal Technology for Hazard Mitigation and Earth System Monitoring** (see page 1405).
2:00 PM	STUDENT: ETAS With Anisotropy in the Spatial Distribution of Aftershocks. **Han, M.**, Mizrahi, L., Wiemer, S.	MAXI3D: A Novel Offshore Earthquake Location Workflow for the Endeavour Segment of the Juan De Fuca Ridge. **Hutchinson, J.**, Heesemann, M., Krauss, Z., Wilcock, W. S. D., Zhang, M.	Probing the Seismicity and Magmatic Plumbing System of Erebus Volcano Using Machine Learning Techniques and a Dense Near Summit Seismic Array. **Pena Castro, A. F.**, Schmandt, B., Garza Giron, R., Aster, R. C.
2:15 PM	Stress Shadows in Physics-based Forecasts of Aftershock Locations. **Hardebeck, J.**, Harris, R.	A Virtual Experiment to Quantify Gains in Explosion Monitoring Techniques. **Carmichael, J. D.**, Berg, E. M., Sarathi, R., Price, A., Young, C. J., Eras, S. J., Hodgkinson, K. M., Barno, J. G.	Nodal Deployment and Characterization of Microseismicity and Structure at Cape Modern Geothermal Field, Utah. **Nakata, N.**, Wu, S., Bi, Z., Chen, L., Soom, F., Titov, A., Dadi, S.
2:30 PM	Evaluation of 10 Years of UCERF3-ETAS Next-day Forecasts. **Serafini, F.**, Werner, M. J., Silva, F., Maechling, P. J., Milner, K., Field, E.	Local Magnitude Practices in the United States of America. **Hartog, J.**, Morton, E. A., Earle, P. S., Tepp, G., West, M. E., Savran, W. H., Marty, J., Walter, J., Chang, J. C., Vanacore, E., Savvaidis, A., Withers, M.	Nodal Arrays for Improved Tomography Imaging of the Ecuadorian Forearc and Insights Into Slip Behavior Controlling Process. **Wickham, A.**, Meltzer, A., Beck, S. L., Ponce, G., Roecker, S., Ruiz, M., Segovia, M., Hernandez, S., Garcia, A., Andramuno, M.
2:45 PM	ETAS-positive Parameter Sets for Three Southern California Earthquake Catalogs. **van der Elst, N.**	Revamping the Oklahoma Geological Survey Statewide Seismic Network for the Next Generation of Earthquake Monitoring. **Ogwari, P. O.**, Walter, J., Thiel, A., Gregg, N., Mase, B., Woelfel, I.	STUDENT: High-resolution Imaging of Fault Damage Zones Based on Multiple Ultra-dense Arrays in the Aftershock Zone of the 2023 Kahramanmaras Earthquake Sequence in Southern Türkiye. **Snook, M.**, Si, X., Mach, P., Adeboboye, O., Zor, E., Ergin, M., Cengiz Tapırdamaz, M., Açıkgöz, C., Büyük, E., Tarancıoglu, A., Sevim, F., Xu, H., Zhang, X., Wen, J., Song, X., Chen, J., Liang, C., Sandvol, E., Peng, Z.
3:00 PM	Challenges in Hazard and Risk Assessment for Seismicity in Volcanic Regions: Cases for Guadeloupe and Italy. **Velasquez, J.**, Crume, H. R., Woessner, J.	Network Design for Seismic Activity Monitoring in an Unconventional Oil Reservoir Exploitation Context. **Sánchez, G.**, García, R., Moreno, M., Moreno, S., Andújar, L., Gaitán, M., Sifón, R., Nicolía, V., Pirri, J., Aguiar, J. P.	Fault Geometry in the 2023-05-11 Mw 5.5 Lake Almanor, California, Earthquake Sequence, Revealed by Precise Aftershock Locations and Focal Mechanisms From a Nodal Deployment. **Yoon, C. E.**, Skoumal, R., Hardebeck, J., Catchings, R. D., Goldman, M., Chan, J. H., Sickler, R.
3:15–4:30 PM	Poster Break		

Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Advanced Geophysical Observations, Analytical Methods, and New Insights for Earthquake Swarms (see page 1312).	**Accuracy and Variability of Physics-based Ground Motion Modeling** (see page 1307).	**Mechanistic Insights into Fluid-induced Earthquakes from the Laboratory to the Field** (see page 1421).
2:00 PM	INVITED: The 2024 Mw7.5 Noto Peninsula Earthquake and Recent Earthquake Swarms in Japan Triggered by the Upward Migration of Deep Crustal Fluids. **Yoshida, K.**	Toward a Multi-scale Community Velocity Model for California. **Olsen, K. B.**, Yeh, T.	INVITED: Injection-induced Slow Slip Events in the Canadian Rockies. **van der baan, M.**, Samsonov, S. V., Vasyura-Bathke, H., Eaton, D. W., Han, H., Pradisti, R., Rojas Parra, J.
2:15 PM	STUDENT: Intermediate-depth Earthquakes Driven by Migrating Strain Localization in the Bucaramanga Earthquake Nest. **Tsuchiyama, A.**, Frank, W. B., Prieto, G. A.	Development of a Data-driven Near-surface Velocity Models for the San Francisco Bay Area: Stationary and Spatially Varying Approaches. **Lavrentiadis, G.**, Seylabi, E., Xia, F., Tehrani, H., Asimaki, D., McCallen, D.	STUDENT: Insights Into Fault Behavior in Southern Kansas From Stress Evolution Modeling of Multiple Induced Earthquake Sequences. **Ries, R.**, Beroza, G. C., Ellsworth, W. L.
2:30 PM	Benchmarking Remote Seismic Monitoring Against Local Seismic Monitoring of Hazardous Volcanoes: Application to the May 2021 Nyiragongo Eruption. **Deane, C. A.**, Yeck, W. L., Pesicek, J. D., Prejean, S. G., Earle, P. S., Shelly, D. R.	STUDENT: Velocity and Attenuation Models of a 18km Section of Mississippi Embayment Sediments. **Islam, S.**, Langston, C. A.	Importance of In-situ Stress Estimation in the Understanding of Induced Seismicity. **Han, H.**, van der baan, M.
2:45 PM	INVITED: Spatio-temporal Evolution of Seismicity Controlled by Damage Zone Architecture. **Cattania, C.**	SPE Rock-valley-direct-comparison Chemical Explosions Near-field 3D Ground Motion Simulations and Predictions. **Ezzedine, S. M.**, Vorobiev, O., Walter, W. R., Working Group, M.	Geomechanical Insights Into the Recent Mw 5+ Earthquakes in the Delaware Basin, West Texas. **Jin, L.**, Curry, W. J., Bolton, D. C., Hussenoeder, S. A.
3:00 PM	STUDENT: Characterization of Seismicity Rates on the Megathrust and Sliver Fault in Southern Mexico With Potential Relationships to Aseismic Slip. **Ventura-Valentin, W. A.**, Brudzinski, M. R., Fasola, S., Szucs, E., Graham, S.	STUDENT: Are Empirical Models Adequate for Risk Estimation? **Sharp, B. J.**, Olsen, K. B., Callaghan, S., Milner, K. R., Wang, Y.	Probing Frictional Properties of Delaware Basin Formations: Insights From Laboratory Experiments. **Magnani, M.**, Volpe, G., Mauro, M., Scuderi, M., Collettini, C.
3:15–4:30 PM	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9	Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Building and Decoding High-resolution Earthquake Catalogs With Statistical and Machine-learning Tools (see page 1343).	**ESC-SSA Joint Session:Seismology in the Global Oceans: Advances in Methods and Observations** (see page 1380).	**Geophysics in a Changing World: Monitoring Applications from Seismology and Beyond** (see page 1398).		**Scientific Machine Learning for Forward and Inverse Wave Equation Problems** (see page 1460).	**Accuracy and Variability of Physics-based Ground Motion Modeling** (see page 1307).	**Mechanistic Insights into Fluid-induced Earthquakes from the Laboratory to the Field** (see page 1421).
4:30 PM	INVITED: EarthquakeNPP: Benchmarking Neural Point Processes in California and China. **Stockman, S.**, Tian, W., Zhang, Y., Lawson, D. J., Werner, M. J.	The Cascadia Offshore Subduction Zone Observatory Infrastructure Project: A Year 2 Update. **Thompson, M.**, Wilcock, W. S. D., Harrington, M. J., Schmidt, D. A., Kelley, D. S., Tobin, H., Denolle, M. A., Khoo, M. S., Cram, G. S., Labrado, A. L., Manalang, D. A., McGuire, C., Tilley, J. W., Zumberge, M. A., Sasagawa, G. S.	Real-time Detection and Insights From the September 2024 Surprise Glacier, Alaska, Landslide Sequence. **Karasozen, E.**, West, M. E., Barnhart, K. R., Lyons, J., Nichols, T., Ohlendorf, S. J., Schaefer, L. N., Staley, D. M., Wolken, G. J.	4:30 PM	Helmholtz Neural Operator for Full Waveform Inversion Tomography of California. **Rodgers, A. J.**, Doody, C., Kong, Q., Zou, C., Azizzadenesheli, K., Ross, Z., Clayton, R.	STUDENT: Evaluating Bias in Simulated Ground Motions for Moderate Magnitude Earthquakes in Southern California: A Study Using the Graves-Pitarka Method. **K C, S.**, Nweke, C. C., Stewart, J. P., Graves, R.	INVITED: Studying Fluid-induced Earthquakes in the Bedretto Lab. **Wiemer, S.**
4:45 PM	INVITED: Denoising Score Matching for Online Change Point Detection. Zhou, W., **Xie, L.**, Peng, Z., Zhu, S.	PACSAFE: Preliminary Results from Deployment of Ocean Bottom Seismometers Off Canada's West Coast. **Hobbs, T. E.**, Schaeffer, A., Sun, T., Bostock, M., Nedimovic, M., Stacey, C., Cairns, G., Bosman, K., Thibodeau, J., Eville, V., Plourde, A., Dave, R., Finley, T., Oliva, S. J., Parkinson, F., Podhorodeski, A., Hughes, A., Yakuden, L., Carson, T., Kung, R., Lintern, G., Wang, K., Rohr, K., Kao, H., Nissen, E., Peacock, S., Zhang, M., Cassidy, J., Paul, C., Brillon, C.	Characterizing Analog Instrument Responses Relevant to Long-term Oceanic Microseism Analyses. **Lee, T. A.**, Aster, R. C., Ishii, M., Ishii, H., Simons, F. J.	4:45 PM	Simulating Seismic Wavefields Using Generative Artificial Intelligence. **Nakata, N.**, Nakata, R., Ren, P., Bi, Z., Lacour, M., Erichson, B., Mahoney, M. W.	STUDENT: 3D Broadband (0-25 Hz) Ground Motion Simulations for Statewide California. **Xu, K.**, Olsen, K. B.	Aftershocks and Ongoing Evolution of Seismicity Surrounding the Damaging 2024 M5.1 Prague Earthquake in Oklahoma. **Walter, J.**, Ogwari, P. O., Woo, J., Thiel, A., Mace, B., Gregg, N., Woelfel, I., Xiao, H., Ellsworth, W. L.
5:00 PM	Fault Geometries of the 2024 Mw 7.5 Noto Peninsula Earthquake From Hypocenter Clustering. Sawaki, Y., Shiina, T., Sagae, K., Sato, Y., Horikawa, H., Miyakawa, A., Imanishi, K., **Uchide, T.**	Detection, Characterization and Interpretation of Diverse Seismic Signals in Submarine Hotspot-ridge Interaction Settings. **Waldhauser, F.**, Wang, K., Wilcock, W. S. D., Zhang, M., Tolstoy, M., Tan, Y., Wang, P.	Global Frequency-dependent Primary and Secondary Band Microseism Change Since the Late 20th Century. **Aster, R. C.**, Ringler, A. T., Anthony, R. E., Lee, T. A., Simons, F. J.	5:00 PM	STUDENT: Efficient Solutions to the Acoustic Wave Equation Using Extreme Learning Machines With Domain Decomposition. **Ojoboh, E. P.**, Jingyi, C.	Simulation of Ground Motions for the November 11, 2019, Mw 4.9, Le Teil, France Earthquake Using a Hybrid Approach. **Li, W.**, Fatehi, A., Rizzo, P. C., Gutierrez, J. J.	On the Link Between Glacial Ablation in the Gongga Mountain, Southeastern Tibetan Plateau and the Aftershocks of the 2022 Moxi Earthquake (M6.8). Sun, Y., **Liu, M.**, Zhang, H., Shi, Y.
5:15 PM	STUDENT: Exploring the Origin of Temporal b-Value Variation: Insights From the 2016/17 Central Italy Sequence. **Corrado, P.**, Piegari, E., Herrmann, M., Marzocchi, W.	Seismotectonics of the Puerto Rico Subduction Zone: Leveraging Machine Learning Analysis of Ocean Bottom Seismometers. **Aziz Zanjani, A.**, DeShon, H. R.	Seismic and Gravity Imaging for Dam Design in a Complex Geologic Setting. **Levandowski, W.**, Clark, J., Scharnhorst, V., O'Connell, C. R. H., Steele, L., Mirzanejad, M.	5:15 PM	STUDENT: An End-to-end Physics-based Deep Learning Approach for Robust Seismic Inversion. **Wasih, M.**, Almekkawy, M.	How Many Earthquake-rupture Simulations Are Required to Quantify Epistemic Ground-Motion Variability? **Castro-Cruz, D.**, Anwar Aquib, T., Mai, P.	Geological CO2 Storage in Swiss Saline Aquifers: Numerical Simulations at Triemli and Insights From the Citru Pilot Project. **Gunatilake, T.**, Zappone, A., Zhang, Y., Zbinden, D., Schulz, R., Wiemer, S.
5:30 PM	STUDENT: Insights Into the 2020 Monte Cristo Range Earthquake Sequence From a Near-source Aftershock Deployment. **Zhang, M.**, Trugman, D. T., Scalise, M., Eckert, E., Zeiler, C. P.	Innovative Approaches to Subsea Orientation of Seismic Instrumentation. **Bainbridge, G.**, Li, Y., Dovlo, E., Perlin, M., Somerville, T., Pelyk, N.	Optical Detection of Modal Frequencies of Structures. **Castellaro, S.**	5:30 PM	Seismic Geotechnical Imaging Using Full-waveform Inversion and Physics-informed Neural Networks. **Mohammadi, K.**, Pu, Y.	Repeatable Source, Path and Site Effects on Ground Motion Variability Based on Dataset From the Central and Eastern United States. **Davatgari Tafreshi, M.**, Pezeshk, S.	Mechanical and Acoustic Response of Laboratory Fault-valve Media to Fluid Injections. **Yuan, C.**, Bell, A., Saló-Salgado, L., Du, Y., Denolle, M. A., Xiao, L., Weitz, D.
6:00–7:00 PM	Plenary Address: The USGS Earthquake Hazards Program: Science to Support Decision-Making			6:00–7:00 PM	Plenary Address: The USGS Earthquake Hazards Program: Science to Support Decision-Making		

Poster Sessions

1. Measurement of Seafloor Rayleigh Ellipticity From Unoriented Seismic Data and Its Significance for Seismic Imaging in the Ocean. **Ai, S.**, Akuhara, T.
2. Exploring Local Seafloor Pressure Changes Along the Nankai Trough: Insights Into Fluid Reservoir Dynamics. **Ariyoshi, K.**, Nagano, A., Hasegawa, T., Matsumoto, H., Takahashi, N., Hori, T., Aso, T.
3. Potential Tectonic Tremor Detected on a Single Ocean Bottom Seismometer Offshore Cascadia. **Krauss, Z.**, Wilcock, W. S. D., Creager, K.
4. From Autonomous Deployments to SMART Cables: Challenges and Innovations in Ocean Bottom Sensing. **Somerville, T.**, Jusko, M., Bainbridge, G., Laporte, M.
5. Student: Localizing Very Long Period (VLP) Enigmatic Microseismic Sources and Associated Gliding Tremors in the Gulf of Guinea Using Numerical Matched Field Processing. **Soni, Y.**, Pulliam, J.
6. Imaging of the Global Oceanic Lithospheric Structure With Probabilistic Deconvolution of SS Waves. **Zhang, Z.**, Olugboji, T.
7. Guralp Ocean Bottom Monitoring Solutions: Autonomous Nodes, Cabled Observatories and SMART. **Lindsey, J. C.**, Watkiss, N. R., Hill, P., Restelli, F.

8. Guralp Artius: A Revolutionary Broadband Node to Further Enable Passive Seismology. **Lindsey, J. C.**, Watkiss, N. R., Hill, P., Restelli, F.
9. Using Nodal Arrays for Fluvial Seismology Applications: Tracking Flow Fronts, Rockfalls and Bedload Transport. **Bilek, S.**, McLaughlin, J. M., Luong, L., Cadol, D., Laronne, J.
10. Apparent Large Seismic Velocity Variations Across the East Anatolian Fault, Turkiye. **Catchings, R. D.**, Goldman, M., Celebi, M. K., Chan, J. H., Sickler, R., Alver, F., Kilicarslan, O.
11. Revealing 3D Subsurface Structure of Paliki Peninsula, Kefalonia, Greece. **Garcia-Fernandez, M.**, Van Noten, K., Jiménez, M., Sakellariou, N., De Plaen, R., Kouskouna, V., Lecocq, T., Rodriguez-Diaz, S., Galanos, N.
12. Student: Urban Seismology in Cartago, Costa Rica Using Seismic Nodal Arrays to Uncover Faults. **Hajaji, S.**, Protti, M., Campos, N. A., Bodin, P., Nuñez, E.

13. Student: Unsupervised Spectral Clustering and Spectral Ratio Analysis of Earthquakes in Cushing, Oklahoma. **Hoefer, B. A.**, Chen, X., Ratre, P.
14. The Antics Large-N Seismic Deployment in Albania. **Rietbrock, A.**, Agurto-Detzel, H., Tilmann, F., Dushi, E., Frietsch, M., Heit, B., Kufner, S., Lindner, M., Rama, B., Schurr, B., Yuan, X.
15. An Initial Dense Seismic Array Study of Magmatic System Structure and Seismicity of the Three Sisters Volcanic Complex. **Schmandt, B.**, Herr, B., Zhou, Y., Lee, T.
16. Volcanic Tsunami and Its Prediction for Early Warning. **Song, Y.**

17. The Minimus Digitizer Platform: A User-friendly Ecosystem for Efficient Network Management and Seismic Station Configuration. **Lindsey, J. C.**, Watkiss, N. R., Hill, P., Restelli, F.
18. Improvements in Seismic Station Noise Levels Through Budget Boreholes. **Anthony, R. E.**, Litherland, M., Bainbridge, G., Parker, T., Johnson, W., Armendariz, K.
20. Orfeus-coordinated Seismological Datasets in the Euro-mediterranean Region and Beyond. **Cauzzi, C.**, Clinton, J. F., Crawford, W., D'Amico, S., Evangelidis, C., Haberland, C., Kiratzi, A. A., Luzi, L., Kolínský, P., Roumelioti, Z., Schaeffer, J., Sigloch, K., Sleeman, R., Strollo, A.
21. Upgrading the Liubeshka Station of the Ukrainian National Seismic Network: Modernization and Integration. **Farfuliak, L.**, Amashukeli, T., Mackey, K., Chiang, A., Burk, D., Kasey, A., Haniiev, O., Kuplovskyi, B., Prokopyshyn, V., Petrenko, K., Levon, D.
22. Implementing a Regional 1-D Velocity Model for Locating Earthquakes for Southern Texas. **Huang, D.**, Salles, V., Vallejo, K., Savvaidis, A.
23. AdriaArray – a Passive Seismic Experiment to Study Structure, Geodynamics and Geohazards of the Adriatic Plate. **Kolínský, P.**, Meier, T., AdriaArray Seismology Group, .
24. Next Generation Multidisciplinary Geophysical Monitoring Station. **Laporte, M.**, Perlin, M., Easton, D., Jusko, M., Pelyk, N., Somerville, T.
25. Station Operators Perspective as Input on the Development of the International Monitoring System Sustainment Strategy. **Pérez-Campos, X.**, Grobbelaar, M., Rocco, G.
26. Student: The Utility of Small Aperture Arrays for Assessing Subduction Zone Earthquakes: Insights From Temporary Nodal Deployments. **Quigley, C.**, West, M. E.
28. Evaluating the Performance of the Guralp Radian Posthole Seismometer Across Variable Tilt and Orientation Conditions. **Sandru, J.**, Bockholt, B.

30. System Monitoring, Telemetry Quality Control and DAS Testing at SCSN. **Stubailo, I.**, Biondi, E., Bhadha, R., Biasi, G., Alvarez, M., Watkins, M., Husker, A. L.
31. Challenges and Lessons Learned from Applying Machine Learning Models to Seismic Monitoring Across Diverse Tectonic Settings. Wang, K., **Waldhauser, F.**, Wang, H., Zhu, W.
32. The Southern California Seismic Network Earthquake Catalog: Completeness, Event Quality and Recent Improvements. Tepp, G., **Yu, E.**, Chen, S., Bhaskaran, A., Scheckel, N., Newman, Z., Jaski, E., Tam, R.

33. Developing Machine-learning-based Seismic Data Processing Tools for a Carbon Storage Site. **Chai, C.**, Maceira, M.
34. Student: Improving Earthquake Detection and Localization in Hawaii With Deep Learning and High-performance Computation. **Cheng, Z.**, Shen, Y.
35. Student: Towards a Deep Learning Approach for Short-term Data-driven Spatiotemporal Seismicity Rate Forecasting Using Standard and High-resolution Earthquake Catalogues. **Dervisi, F.**, Segou, M., Baptie, B., Poli, P., Main, I., Curtis, A.
36. Earthquake Source Depth Determination Using Single Station Waveforms and Deep Learning. **Li, W.**, Zhang, M.
37. Using Lossy Compression to Speed Up Seismic Event and Ambient Noise Analysis. **Martin, E. R.**, Issah, A. S., Brooks, G.
38. Student: Seasonal Variations in the Magnitude-frequency Distribution of California Earthquakes. **Petschek, E. R.**, Ebel, J. E.
39. High-resolution Aftershock Catalog of the 2023 Kahramanmaraş Earthquake Sequence Reveals Detailed Fault Structures in Southeastern Türkiye. **Si, X.**, Mach, P., Adeboboye, O., Gao, H., Sandvol, E., Zor, E., Ergin, M., Yalvac, O., Tapirdamaz, M., Tarancioglu, A., Sevim, F., Peng, Z.
40. Automatic Phase Picking Model for Ocean Bottom Seismic Data: Phasenet Model Trained Using Japanese S-net Data. **Uchide, T.**
41. Investigating Complex Seismogenic Structures in the Northern Longitudinal Valley, Eastern Taiwan Through an AI-based Catalog of the April 3, 2024 Mw 7.3 Hualien Earthquake. **Yang, H.**, Wu, E., Chen, H., Liu, C., Hsu, Y., Huang, H.
42. Student: Denoising Score Matching for Online Change Point Detection. **Zhou, W.**, Si, X., Xie, L., Peng, Z., Zhu, S.

43. Visualizing Cyclical Variations in Seismoacoustic Activity Using Circular Spectrograms. **Bowman, D. C.**, Malach, A. K., PE1 Experiment Team.
44. Cost-effective Groundwater Monitoring Using Nodal Geophones: Updates From a Case Study in the Upper Mississippi Embayment. **Carpenter, S.**, Rodriguez Cardozo, F. R., Schmidt, J. P., Braunmiller, J., Woolery, E. W., Wang, Z.
45. Seismic Site Characterization and Basin Depth Estimation Using Seismic Ambient Noises: An Example From the Hetauda Dun Valley, Nepal. **Chamlagain, D.**, Acharya, S., Dhakal, N. R., Neupane, P., DeShon, H. R.
46. Using Horizontal-to-vertical Spectral Ratio to Characterize Landslides in Complex Terrain. **Collins, E.**, Allstadt, K., Coe, J.
47. Rapid Seismic and Infrasonic Assessment of a Large Landslide in Denali National Park (Alaska) Aided by Aerial and Satellite Imagery and Numerical Flow Modeling. Toney, L., West, M. E., Karasozen, E., Staley, D. M., Capps, D., **Collins, E.**, Allstadt, K., McFarlin, H., Bellini, J., Haney, M., Fee, D., Lyons, J., Mangeney, A.
48. Joint Inversion of MASW and Ambient-noise HVSR Data for Estimating Shear Wave Velocity Profile in Warm Permafrost: A Case Study at Northway Airport, Alaska. **Dutta, U.**, Zhao, Y., Yang, Z.
49. Identification of Cavities in Karst Areas Using Seismic Ambient Noise. **Kristekova, M.**, Kristek, J., Moczo, P.
50. Student: Exploring Possible Tornado Seismic Signals From the December 10-11, 2021, Tornado Outbreak in the Central U.S. **Thompson, S. C.**, Carpenter, S., Wang, Z.
51. Student: High and Low Noise Models for Geophone Deployments: Toward Global Denoising Strategies and Enhanced Global Monitoring Capabilities. **Toro-Acosta, C.**, Gochenour, J. A., Zeiler, C. P.

52. Detection and Characterization of Ice-related Seismic Signals Using Distributed Acoustic Sensing Offshore Beaufort Sea, Alaska. **Aerts, J.**, Stanciu, C., Frederick, J., Herr, B., Baker, M., Abbott, R. E.
53. Subsurface Source Characterization Using Distributed Acoustic Sensing. **Cunningham, E.**, Marcillo, O., Chai, C., Maceira, M., Fratta, D., Wang, H.
54. Mapping Fault Dynamics: Very High Seismicity Detected Along the Kefalonia Transform Faul With DAS and Template Matching. Wang, Y., **Fichtner, A.**
55. Chirped-pulse DAS for Ambient Noise Tomography. Canudo, J., **Gella, D.**, Perciado-Garbayo, J., Sevillano, P.,

Subias, J., Gonzalez-Herraez, M., Martins, H. F., Gaite-Castrillo, B., Bravo-Monge, J. B., de Maria, I., Rodriguez-Plaza, M.

56. STUDENT: Submarine Volcano Monitoring With Distributed Acoustic Sensing at Kolumbo, Greece. **Klaasen, S. A.**, Hudson, T. S., Nomikou, P., Fichtner, A.

58. Aquifer Monitoring With DAS: A Case Study From Lyon Water Catchment. **Nziengui Bâ, D.**, Coutant, O., Lanticq, V.

59. A Hybrid Deep Learning Framework for Denoising Distributed Acoustic Sensing Data. **Oboue, Y. A. S. I.**, Chen, Y., Chen, Y.

60. Preliminary Shallow Seismic Imaging at Los Alamos National Laboratory Using Distributed Acoustic Sensing. **Rodriguez, E. E.**, Donahue, C. M., Maier, N.

61. STUDENT: Bayesian Inversion of Microseismic Events at the FORGE Geothermal Site. **Song, Y.**, Yuan, S., Martin, E. R.

62. STUDENT: Preliminary Analyses of Source Mechanism Effects on Fracture Dynamics in Mines Using Distributed Acoustic Sensing. **Vite Sanchez, R.**, Martin, E. R., Tourei, A., Shragge, J., Westman, E., Walton, G., Chapman, M. C., Ankamah, A.

63. STUDENT: Imaging the Fault Zone Structure of the Shanchio Fault in Taipei Metropolis Using Dark Fiber Distributed Acoustic Sensing. **Wang, C.**, Huang, H., Ha, V., Ku, C., Chen, P.

64. Fiber-optic Sensing of Repeating Icequakes and Firnquake Swarms at the South Pole. **Zhai, Q.**, Li, J., Yang, Y., Zhan, Z.

Testing, Testing 1 2 3: Appropriate Evaluation of New Seismic Hazard and Risk Models (see page 1474).

66. A New Empirical Probability Model for Surface Faulting Utilizing Width-rupture Ratio for Crustal Earthquakes. **Huang, J.**, Abrahamson, N.

67. Refining Seismogenic Source Models: Revisiting the Alboran Sea for an Updated Zesis Framework. Perea, H., **Jiménez, M.**, García-Fernández, M., García Mayordomo, J., Martínez Loriente, S., Canari, A.

68. STUDENT: Earthquake Source Modelling for Hazard Assessment of the Tonga and Vanuatu Subduction Zones. **Liao, Y.**, Fry, B., Williams, C. A., Howell, A., Nicol, A.

69. Significance of Non-ergodic Ground Motion Models in Seismic Loss Assessment. Wu, C., Cao, Y., **Seyhan, E.**

70. SIGMA3: A Further Step for the Reduction of Epistemic Uncertainties in PSHA. Daniel, G., Alsokhon, A., Alvarez-Sanchez, L. G., Arroucau, P., El Haber, E., Javelaud, E., Lefevre, M., Perron, V., **Traversa, P.**, Zentner, I.

Advancing Time-dependent PSHA and Seismic Risk Assessment: Accounting for Short- to Medium-term Clustering (see page 1335).

71. A Comparison of Earthquake Risk in the Western U.S.: Time-independent vs. Time-dependent Approaches. **Apel, T.**, Neely, J., Gupta, N.

72. What If? – A Look at How Partial Ruptures and Stress Transfer Can Be Incorporated Into Time-dependent PSHA. **Apel, T.**, Neely, J., Gupta, N.

73. Clustering in PSHA: A Study on Short Return Period Risk Assessments. **Crume, H. R.**, Velasquez, J., Farghal, N. S., Papadopoulos, A., Woessner, J.

74. Integrating Earthquake Clustering Into Probabilistic Seismic Hazard and Risk Assessments. **Graham, K.**, Gerstenberger, M. C., Christophersen, A., Rhoades, D.

75. Seismic Hazards in the Makran Accretionary Wedge, Pakistan. **Lisa, M.**

76. STUDENT: Probabilistic Seismic Hazard Analysis of the Shillong Plateau, Northeast India, Using Multiple Source Models and Logic Tree Approach. **Shahabuddin, M.**, Mohanty, W. K.

77. The U.S. Geological Survey's 2025 National Seismic Hazard Model for Puerto Rico and the U.S. Virgin Islands. **Shumway, A. M.**, Milner, K. R., Powers, P. M., Moschetti, M. P., Altekruse, J. M., Aagaard, B. T., Jobe, J. A. T., Briggs, R., Hatem, A. E., Llenos, A. L., Michael, A. J., Withers, K. B., Haynie, K. L., Herrick, J. A., Zeng, Y., Rezaeian, S., Jaiswal, K., Field, E. H., Pratt, T.

78. Time-lapse Study of Earthquake Focus as an Additional Risk Control System. **Zimin, M.**, Zimina, S., Zimin, M.

Accuracy and Variability of Physics-based Ground Motion Modeling (see page 1309).

79. Developing International Standards and Guidelines for Curating, Validating and Disseminating Simulated Ground-motion Data. **Aagaard, B. T.**, Askan, A., Rezaeian, S.

80. Sensitivity of Focal Mechanism and Depth of the 2024 M4.8 Tewksbury Earthquake to Seismic Velocity Model and the Impacts on Earthquake Ground Motions. **Boyd, O. S.**, Bozdag, E., Kehoe, H. L., Moschetti, M. P.

81. A New Ground Motion Model for Coastal Plain Region of the U.S Considering Sediment Thickness. Akhani Senejani, M., **Davatgari Tafreshi, M.**, Pezeshk, S.

82. Nonergodic Ground Motion Model for the Central and Eastern United States. **Davatgari Tafreshi, M.**, Pezeshk, S.

83. STUDENT: Linked Earthquake and Tsunami Hazard Modeling on Puget Sound's Crustal Faults. **Grossman, J. B.**, Wirth, E. A., Dunham, A., Stone, I., LeVeque, R. J., Adams, L. M., Wei, Y., Moore, C.

84. Strong Ground Motions From Large Earthquakes on the Creeping Hayward, Rodgers Creek and Calaveras Faults, California. **Harris, R. A.**, Barall, M., Parker, G., Hirakawa, E.

85. STUDENT: Development of a Peak Spectral Displacement Ground-motion Model Using Global HR-GNSS Observations. **Hensley, B.**, Sahakian, V. J., DeGrande, J., Crowell, B. W., Melgar, D.

86. Preliminary Results of 3D Site Response Analysis in the Norcia (Italy) Sedimentary Basin. **Linsalata, F.**, Puglia, R., Costanzo, A., Massa, M., Lovati, S., Smerzini, C., Pischiutta, M., Vanini, M., Parolai, S., d'Onofrio, A., Silvestri, F.

87. Ground Motion Characterization in Regions of "Intermediate" Attenuation. **Onur, T.**, Herrera, C., Chiang, A., Gok, R.

88. STUDENT: Region-specific Spatial Correlation Models for Ground Motion Intensity Measures in South Korea. **Ryu, B.**, Kwak, D.

89. Analysis of Seismic Waves Amplification in Sedimentary Basins Using 3D Wavefield Simulation. **Tian, Y.**, Tape, C.

90. Near-fault Strong-motion of the 2023 Mw7.8 Kahramanmaraş Earthquake: Insights Into High-frequency Radiation Mechanisms. **Wu, B.**, Li, B., Zhang, H., Huang, S., Li, G., Gabriel, A.

91. STUDENT: Validation of Shallow Crustal Structure in Northern California and Community Velocity Model Validation Using Ambient-noise-derived Rayleigh Wave Ellipticity and Receiver Functions. **Zaldivar Andrade, G. A.**, Kim, H., Lin, F., Taira, T.

Mechanistic Insights into Fluid-induced Earthquakes from the Laboratory to the Field (see page 1423).

92. Factors That Can Influence the Fault Activation Process: Examples From Wastewater-induced Sequences in Oklahoma and Geothermal Fields in Utah. **Chen, X.**, Mohammadi, A., Abercrombie, R. E., Asirifi, R., Nakata, N., Dadi, S.

93. Reassessing the North Texas Earthquake Catalog Using Machine Learning. **DeShon, H. R.**, Seldon, Y.

94. STUDENT: Relocating Induced Seismic Events to Evaluate the 2022 Hydraulic Stimulation Stages at Utah FORGE. **Goecker, A. M.**, Pankow, K. L., Karvounis, D., Dyer, B., Whidden, K.

95. A General Probabilistic Trans-dimensional Approach to Estimate Spatiotemporal Variations of Recorded Seismicity. **Gosselin, J. M.**, Kao, H., Dokht, R., Visser, R.

97. STUDENT: Improving Our Understanding of Seismogenic Faults and Operations That Have Induced Seismicity in the Eagle Ford Basin, Texas. **Kirchenwitz, J.**, Brudzinski, M. R.

98. Dynamic Triggering in the Geysers Geothermal Field by Two Recent Large Earthquakes. **Li, L.**, Yu, Y., Beroza, G. C., Ellsworth, W. L.

100. Investigating the Influence of Seasonal Groundwater Level Fluctuations on Localized Seismic Activity in Southwestern Taiwan. **Phoa, F.**, Sun, Y.

101. STUDENT: Linking Spatiotemporal b-Value Evolution to Physical Mechanisms Influencing EGS Induced Seismicity. **Salinas, M. P.**, Huang, Y.

102. Characterization of Shallow Seismic Sources in the Neuquén Province, Argentina. **Sánchez, G.**, Venerdini, A., García, R., Goebel, T., Pérez, I., López, L., Rufino, C., Kaufmann, C., Peña, M., Goubat, R., Romero, M., Guevara, J. M.

103. STUDENT: Understanding Rupture Directivity of Injection-induced Earthquakes: A Numerical Study Coupling Poroelastic Model With Rate-and-state Earthquake Cycle Simulator. **Tan, X.**, Lui, S. K. Y.

104. Repeating Earthquake Sequences in Induced Seismicity in West Texas. **Turner, A. R.**, Bolton, D. C.

From Physics to Forecasts: Advancements and Future Directions of Induced Seismicity Research (see page 1398).

105. STUDENT: Development of a Machine Learning-based Ground Motion Model for Induced Earthquakes in the Central and Eastern United States. **Alidadi, N.**, Pezeshk, S.

106. High-Resolution Seismic Monitoring Reveals the State of Stress in the Delaware Basin. **Baig, A. M.**

108. STUDENT: Seismicity in Sichuan, Southwestern China, 2009-2019: Interaction of Hydraulic Fracturing Induced Earthquakes Characterized by the Nearest-Neighbor Distance Approach. **Zhou, Y. Y.**, Niu, F. F.

Advanced Geophysical Observations, Analytical Methods, and New Insights for Earthquake Swarms (see page 1313).

109. STUDENT: Reexamining Historical Yellowstone Swarms Using a Relocated Earthquake Catalog From 1995-2023. **Czech, T. L.**, Farrell, J., Lomax, A.

111. Investigating an Earthquake Swarm in Ohio: Reactivation of a Large Precambrian Fault With a Destructive Past? **Fox, J.**

112. STUDENT: Seismic Swarm Dynamics in the Atacames Region, Ecuador. **Garcia, A.**, Meltzer, A., Wickham, A., Hernandez, S., Ruiz, M., Ponce, G., Segovia, M., Vaca, S., Andramuno, M., Beck, S. L.

113. STUDENT: Improved Characterization of Earthquake Sequence Patterns in the Mexican Subduction Zone Using Seismogram Correlation to Enhance Detection of Smaller Seismicity. **Khalkhali, M.**, Brudzinski, M. R., Ventura-Valentin, W. A., Fasola, S.

114. STUDENT: Microseismicity and Fault Structure in the Daliangshan Subblock within the Southeastern Tibetan Plateau. **Ma, J.**, Meng, L., Ding, L., Ai, Y.

115. STUDENT: Automated Detection and Characterization of Swarms and Mainshock-aftershock Sequences in Nicaragua and Costa Rica. **Miesse, L.**, Brudzinski, M. R., Ventura-Valentin, W. A.

116. Seismicity Characterisation in the Mount Cameroon Region. **Ndibi Etoundi, D.**, Mbossi, E., Taki-Eddine Rahmani, S., Ateba, B.

117. STUDENT: Rapid Migration of Seismic Swarms in the Central-north Ecuadorian Subduction Zone Revealed by Deep Learning and Dense Seismic Arrays. **Ponce, G.**, Meltzer, A., Wickham, A., Beck, S. L., Ruiz, M., Hernandez, S., Garcia, A., Andramuno, M.

118. STUDENT: Geophysical Case Studies of Buildings in Tehran Against Earthquakes. **Shahshahani, S. S. S.**

119. STUDENT: Investigating Potential Relationships Between Rates of Seismicity, Strain Accumulation, and Slow Slip in the Oaxaca Region of Mexico. **Szucs, E.**, Brudzinski, M. R., Graham, S., Cabral-Cano, E., Ventura-Valentin, W. A., Khalkhali, M.

Adventures in Social Seismology: Ethical Engagement, Earthquake Early Warnings, Operational Forecasts, and Beyond (see page 1340).

120. Schoolshake: Inspiring the Next Generation, Increasing Community Resilience and Conducting Research Through a School-based Seismograph Network. **Brillon, C.**, Schaeffer, A., Nissen, E.

121. Preliminary Multilingual Survey Results on Earthquake Early Warning and San Diego County's SD Emergency Multi-hazards App to Improve Equity in Disaster Risk Reduction. **Brudzinski, M. R.**, Sumy, D., Gomez, K., Olds, S., Briceno, Y., Jordan, P., Robles, M., Rea, S.

122. The Propagation of Seismic Waves, Misinformation and Disinformation From the 2024-10-05 M 4.5 Iran Earthquake. **Fernando, B.**, Maguire, R. R., Fernandez, B., Karimi, S., Koenck, E., Ekström, G., Rivlin, T., Labedz, C.

123. Self-developed Low-cost Shaking Table and Other Educational Tools as an Itinerant Laboratory for Seismic Engineering Educational Purposes: The Case of the LabIt. Pozos-Estrada, A., **García-Soto, A.**, Nava-Gónzalez, R., Hernández-Martínez, M., Cortes-Portillo, D., Nuñez-Matos, J., Gómez-Castillo, A., Cortez-Loreto, J., Barba-Zárate, D., García-Rodríguez, C.

124. Assessing the Usability of Near-Real-Time Earthquake Information for Supporting Impacted Communities. **Macías, M. A.**, Loos, S., Reddy, E., Wald, D. J., Knodel, E., McGowan, S., Marano, K.

125. ShakeAlert's Contribution to Social and Behavioral Sciences: A Retrospective. **McBride, S. K.**, deGroot, R., Terbush, B., Vinnell, L., Stanley, S. M.

126. STUDENT: Defining Aspects of the Seismology Learning Ecosystem by Exploring Introductory Seismology Courses and the Seismology Skill Building Workshop. **Meyer, E. H.**, Hubenthal, M., Haberli, G., Brudzinski, M. R., Ventura-Valentin, W. A.

127. STUDENT: Intercultural Praxis: A Tool for Engaging With Misinformation on Earthquake Risk. **Pope, I. E.**

128. What "Did You Feel It?" Data Can Tell Us About Earthquake Early Warning Performance. **Saunders, J. K.**, Wald, D. J., McBride, S. K., Quitoriano, V.

129. STUDENT: Navigating Healthcare, Family Well-Being and Cultural Adaptation: The Experiences of South Asian Mothers on F1/F2 Visas in Urban U.S. Communities. **Sikder, P.**

131. Long-term Communication of Aftershock Forecasts: the Canterbury Earthquake Sequence in New Zealand. **Wein, A. M.**, McBride, S. K., Christophersen, A., Becker, J. C., Doyle, E. E. H., Gerstenberger, M. C., Potter, S. H.

Improving the State of the Art of Earthquake Forecasting Through Models, Testing and Communication (see page 1403).

132. Forecasting Ground Motion Intensity Time Series with a Generative Pre-trained Transformer. **Clements, T.**, Cochran, E., Baltay, A., Yoon, C. E., Minson, S., Schneider, M.

133. A Deep Learning Application to Model the Full Distribution of Higher-order Aftershock Numbers in the ETAS Framework. **Mizrahi, L.**, Jozinović, D.

134. Towards Operational Earthquake Forecasting in Switzerland. **Mizrahi, L.**

135. The Influence of Magnitude Determinations on b-Values. **Mizrahi, L.**, Schorlemmer, D.

136. Evaluating the Forecasting Performance of U.S. Geological Survey Aftershock Forecasts. **Schneider, M.**, Barall, M., Hardebeck, J., Michael, A. J., Page, M., van der Elst, N.

Scientific Machine Learning for Forward and Inverse Wave Equation Problems (see page 1461).

137. Auto-linear: A Self-supervised Framework for Robust Subsurface Imaging Through Latent Space Correlations. Feng, Y., Chen, Y., **Lin, Y.**

138. Extensions for the Reversibility of First-arrival Travel-times using PINNs. **Nowack, R. L.**

139. Methods for Preemptively Optimizing Geophone Array Size for Measurement of Subsurface Volumes using Machine Learning and Synthetic Data From Numerical Simulations. **Welsh, D. W.**, Heylmun, J., Cardenas, D. P.

140. Akinet: A Physics Informed Neural Network for Building a Short-period Global Dispersion Model. **Xue, S.**, Swar, S. K., Olugboji, T.

Late-breaking on Recent and Future Large Earthquakes (see page 1415).

141. STUDENT: Sequence Analysis of the M7.1 South Halmahera Earthquake on July 14, 2019: Hypocenter Relocation, Moment Tensor and Static Stress Changes. **Ali, Y. H.**, Priyobudi, P., Daryono, D.

142. STUDENT: Local Magnitude (Ml) Calibration and Seismic Attenuation in the Ethiopian Rift Valley: Implications for the 2024–2025 Earthquake Swarm. **Aregawi, A. B.**

143. Detailed Analysis of the February 21, 2025 Sechelt Mw 4.7 Earthquake. **Brillon, C.**, Mulder, T., Schaeffer, A., Paul, C., Kao, H., MacLeod, R., Cassidy, J., Bent, A. L.

144. Satellite Geodetic Measurement of the Coseismic and Postseismic Displacements from the January 2025 Mw 7.1 South Tibet Earthquake. **Fielding, E. J.**, Zinke, R., Peltzer, G., Speed, C., Bato, G. M.

145. Remote Observations of Surface Rupture and Fault Kinematics in the January 7, 2025, Southern Tibet Plateau Earthquake. Reitman, N., **Jobe, J. A. T.**, Barnhart, W., Briggs, R., DuRoss, C., Goldberg, D., Hanagan, C., Hatem, A., Lynch, E., Nicovich, S., Powell, J.

146. The 2024 M7.0 Offshore Cape Mendocino Sequence: Insights from Enhanced Catalogs of Earthquake Locations, Focal Mechanisms and Repeating Events. **Song, J.**, Rong, B., Taira, T., Zhu, W.

147. Sequence Characteristics and Seismogenic Structure of the 2025 Xizang Dingri M6.8 Earthquake. An, Y., Zhang, Y., **Yang, H.**

148. Source and Impact Characterization of the M7.3 2024 Port Vila, Vanuatu, Earthquake. **Yeck, W. L.**, Goldberg, D., Allstadt, K., Cerovski-Darriau, C., Fry, B., Massey, C., Wald, D. J., Earle, P. S., Jaiswal, K., Barnhart, W., van der Elst, N., Shelly, D. R.

Wednesday, 16 April 2025—Oral Sessions

Presenting author is indicated in bold.

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9	Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Performance and Progress of Earthquake Early Warning Systems Around the World (see page 1446).		**Earth's Structure from the Crust to the Core** (see page 1359).		**The Landscape Record of Earthquakes and Faulting** (see page 1408).	**Recent Advances in Modeling Near-source Ground Motions for Seismic Hazard Applications** (see page 1455).	**Advances in Reliable Earthquake Source Parameter Estimation** (see page 1324).
8:00 AM	INVITED: Shakealert Version 3, Current Status and Future Possibilities. **McGuire, J. J.**		STUDENT: Investigating Along-strike Differences in Crust and Upper Mantle Structure of the Central Andes Through High-resolution Receiver Functions. **Bradford, J. M.**, Beck, S. L., Mahanti, S., Kiser, E., Howe, H., Tauber, S., Porter, R., Fernandez, M., Trad, M., Saez, M., Leon-Rios, S., Comte, D., Roecker, S.	8:00 AM	Quantifying the Erasure of Earthquakes From Desert Landscapes: Implications for Interpreting the Geomorphic Record of Faulting in Hazard Assessment. **Rodriguez Padilla, A. M.**, Zuckerman, M., Arrowsmith, R.	Orientation Dependence of Probabilistic Seismic Hazard Results From Physics-Based Simulations. **Poulos, A.**, Hirakawa, E., Parker, G. A., Baltay, A.	Revising the Iaspei Ground Truth List. Gallacher, R., **Garth, T.**, Harris, J., Bondár, I., McLaughlin, K. L., Storchak, D. A.
8:15 AM	Shakealert Earthquake Early Warning: Testing New Vs30 With Population Weighted Values, New Epic With Bayesian Priors, and Finder Triggering With CE Stations. **Smith, D. E.**, McGuire, J. J., Jha, S., Lux, A. I.		Seismic Imaging of the Ecuadorian Margin Lithosphere Using Teleseismic Receiver Functions Analysis and Ambient Noise Tomography. **Li, C.**, Beck, S. L., Delph, J., Ericksen, B., Meltzer, A., Lynner, C., Ruiz, M., Hernandez, S., Segovia, M., Vaca, S.	8:15 AM	Rock, River, Record: Reading the Geomorphic Record of Seismic Cycles Through Bayesian Inversion of River-incised Landscapes. **Oryan, B.**, Gailleton, B., Olive, J., Malatesta, L. C., Jolivet, R.	Modeling of Ground-motion Amplitude Saturation at Large Magnitudes and Short Distances. **Pinilla Ramos, C.**, Abrahamson, N., Graves, R., Ben-Zion, Y., Sung, C., Bayless, J.	Importance of Accurate Earth Models and Network Geometry for Earthquake Location. **Savvaidis, A.**, Lomax, A., Parastatidis, E., Dommisee, R., Huang, D.
8:30 AM	EEW Station Connectivity (Latency) Is Shockingly Low. Here's How We Know. **Terra, F.**, Stubailo, I.		Upper Mantle Structure Beneath the Mongolian Region From Multimode Surface Waves: Implications for the Western Margin of Amurian Plate. **Ganbat, B.**, Yoshizawa, K., Sodnomsambuu, D., Munkhuu, U.	8:30 AM	INVITED: Using Mapped Tectonic Faults as a Record of Past Earthquakes to Predict Future Surface Rupture Location. **Scott, C. P.**, Madugo, C., Arrowsmith, R., Zuckerman, M.	Ground Motion Variability and Near-fault Amplification: Insights From Modeling of the Central Italy Earthquake Sequences. **Akinci, A.**, Pitarka, A., Artale Harris, P., De Gori, P.	INVITED: Improving First-order Seismic Characterization Through Calibrated Earthquake Locations. **Karasozen, E.**, Bergman, E. A., Benz, H. M.
8:45 AM	Development and Testing of an Alaska Earthquake Testsuite Within Epic. **Williamson, A. L.**, Lux, A. I., Henson, I., Akimov, A., Allen, R. M.		The Wave Gradiometry Method: Theory and Applications for Imaging 3D Velocity, Anisotropy and Attenuation. **Liang, C.**, Cao, F.	8:45 AM	STUDENT: Lacustrine and Terrestrial Paleoseismic Records of the Twin Lakes Fault Near Mt Hood, Oregon, USA. **Culhane, N. K.**, Streig, A. R., Bennett, S. E. K., Gavin, D., Peterson, J. V., Metens, A., Lally, K., Henderson, C., Schwarzbart, S., Wagner, B., Murphy, M.	Developing a Near-fault Non-ergodic Ground Motion Model for the Ridgecrest, CA, Area. **Meng, X.**, Pinilla Ramos, C., Kottke, A. R., Ben-Zion, Y.	INVITED: The Body-wave Magnitude mb: An Attempt to Rationalize the Distance-depth Correction Q(delta, H). **Okal, E. A.**, Saloor, N.
9:00 AM	From Shakealert to Post-earthquake Assessment – Applied Technologies to Improve Situation Awareness in Buildings. **Franke, M.**, Parrott, B., Skolnik, D. A.		Unraveling Serpentinite Distribution in the Subduction Zone of NW South America. **Vargas, C. A.**, Caneva, A.	9:00 AM	Constraining Past Earthquakes in the NMSZ Using Sediment Records of Three Separate Lakes. **Rodysill, J.**, Carter, M., Seidenstein, J.	A Slip-based Directivity Model. **Rowshandel, B.**	Extending Coda Envelope Moment Magnitudes to Remote Regions of Canada for Improved Hazard Assessment. **Bent, A. L.**, Mayeda, K., Roman-Nieves, J. I., Barno, J. G.
9:15–10:30 AM	Poster Break			9:15–10:30 AM	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Performance and Progress of Earthquake Early Warning Systems Around the World (see page 1446).		**Earth's Structure from the Crust to the Core** (see page 1359).	**The Landscape Record of Earthquakes and Faulting** (see page 1408).	**Recent Advances in Modeling Near-source Ground Motions for Seismic Hazard Applications** (see page 1455).	**Advances in Reliable Earthquake Source Parameter Estimation** (see page 1324).
10:30 AM	INVITED: How Did People React to the Early Warning During the M7.8 Kahramanmaras-Pazarcik (Türkiye) Earthquake? **Bossu, R.**, Finazzi, F., Fallou, L., Cotton, F.		chinalgq_v1.0: Seismic Lg-wave Attenuation Model in China. **He, X.**, Zhao, L., Xie, X., Zhang, L., Liu, Z., Yao, Z.	Geodetic Imaging of Strain Partitioning Between the Megathrust and Crustal Faults in Cascadia. **Elston, H. M.**, Loveless, J. P., Crowell, B. W.	STUDENT: Beyond -1 Geometric Spreading in the Near-field: Insights From Theory and Simulation. **Marcou, S.**, Dreger, D. S.	Sparse Fault Representation Based on Moment Tensor Interpolation. **Thurin, J.**
10:45 AM	Earthquake Impacts on Traffic Safety Using Crowdsourced and Police Reported Accident Data. **Chupp, W. L.**, Daniel, D., Fox, E., McGuire, J. J., McBride, S. K., deGroot, R.		INVITED: Surface Wave Constraints on Crustal Structure Beneath Elysium Planitia. **Maguire, R. R.**, Kim, D.	INVITED: STUDENT: Insights From 3D DEM Models Into Along-strike Variability of Ground Surface Ruptures Observed in Thrust and Reverse Fault Earthquakes. **Chiama, K.**, Plesch, A., Shaw, J. H.	Physically-based Non-ergodic Event Terms in the 2023 U.S. National Seismic Hazard Research and Development Model. **Petersen, M. D.**, Zeng, Y., Abrahamson, N., Sung, C., Rukstales, K., Moschetti, M. P., Baltay, A.	Numerical Simulations Reproduce Characteristics of Distributions of Non-double-couple Components in Global Moment Tensor Catalogs. **Rösler, B.**, Stein, S., Ringler, A. T., Vackář, J.
11:00 AM	Real Time Characterization of Earthquakes in the Mexican Subduction Zone Based on a Seismogeodetic Network. **Suarez, G.**, Santiago, J., Espinosa, D.		An Overview of the Crustal and Uppermost Mantle Structure and Tectonics of Asia. **Mooney, W. D.**	Constraints on Geometry of the San Joaquin Hills Blind Thrust Fault, Orange County California U.S.A, From Quaternary Geology and Recent Earthquakes. **Grant Ludwig, L.**	Modeling the Rupture Dynamics of Strong Ground Motion (> 1 g) in Fault Stepovers. **Lozos, J.**, Akçiz, S., Ladage, H.	Moment Tensor Uncertainty Analysis for the 2017 Hojedk, Central Iran, Earthquakes Using 1D and 3D Green's Function. **Rodriguez Cardozo, F. R.**, Braunmiller, J., Ghods, A., Sawade, L., Orsvuran, R., Bozdag, E.
11:15 AM	Enhancing Earthquake Early Warning With Real-time Ground Motion Assimilation for Rupture Directivity Effects via Kalman Filter. **Huang, Y.**, Huang, H.		Imaging the Crustal Structure of Fiji and Its Surrounding Regions From Seismic Receiver Functions. **Zhang, Y.**, Mooney, W. D., Hu, H.	Unearthing Slickenlines on the 2016 Rupture of the Kekerengu Fault and Paleosurface Ruptures of the Alpine Fault, New Zealand: Testing the Veracity and Utility of the Rupture-propagation-direction / Curved-slickenline Hypothesis. **Van Dissen, R. J.**, Kearse, J., Barth, N., Little, T. A., Kaneko, Y., Howarth, J.	Ground-motion Processing of Near-fault Ground Motions Preserving Forward Directivity and Fling Effects: An Application to the 2022 Chishang, Taiwan, and 2023 Pazarcik, Türkiye Earthquake Sequences. **Lavrentiadis, G.**	STUDENT: Determining Small Earthquake Focal Mechanisms Using 360° S-wave Polarization. **Han, S.**, Kim, Y.
11:30 AM	Improving Detections by Reducing Problematic Triggers in the Epic Earthquake Early Warning Algorithm. **Lux, A. I.**, Henson, I., Akimov, A., Allen, R. M.		STUDENT: Three-dimensional Least-squares Migration of Teleseismic Receiver Functions and Its Application to the Qaidam Basin. **Zuo, P.**, Chen, Y., Wu, L., Cao, F.	Shear Wave Velocity Measurements in Fine Grained Soils With Muted Surface Fault Displacement Following the February 2023 Kahramanmaraş, Türkiye Earthquake. **Mason, H. B.**, Wood, C. M., Ayhan, B. U., Clahan, K. B., Coin, B. A., Seçen, B., Uray, E., Asimaki, D., Lavrentiadis, G., Simpson, A. B.	Application and Adaptation of Global Ground Motion Models to the Eastern Caribbean Lesser Antilles. **Hudson, K. S.**, Lockhart, J. M., Hudson, M. B., Stewart, J. P.	INVITED: How S/P Amplitude Ratio Data Can Bias Focal Mechanism Estimates. **Trugman, D. T.**
Noon–2:00 PM	Annual Business and Awards Luncheon			Annual Business and Awards Luncheon		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9
	Data-driven and Computational Characterization of Non-earthquake Seismoacoustic Sources (see page 1354).		**Earth's Structure from the Crust to the Core** (see page 1359).
2:00 PM	STUDENT: Catching the Sonic Boom From the NASA's OSIRIS-REx Capsule Re-entry. **Bazargan, S.**, Horton, S., Mitra, I., Islam, S., Langston, C. A.		Full-waveform Modeling Explains Surface-wave Diffraction Patterns Observed on Large Dense Seismic Networks. **Kolínský, P.**, Loeberich, E., Long, M. D.
2:15 PM	STUDENT: Coupled Seismic and Acoustic Waves Generated by Satellite Starlink-2382's Reentry. **Eickhoff, D.**, Ritter, J.		Ambient Noise Tomography Along the Mexican Volcanic Belt. **Dominguez, L. A.**, Perton, M., De la Cruz-López, C. A., Real, J. A.
2:30 PM	Seismoacoustic Source Characterization and Uncertainty Quantification. **Berg, E. M.**, Koch, C., Wynn, N. R.		Upper Mantle Anisotropy in North America and the Pacific From Global Adjoint Tomography. **Bozdag, E.**, Orsvuran, R., Peter, D., Lebedev, S.
2:45 PM	Inversion of Helicopter Characteristics Using Infrasound Data. **Marcillo, O.**, Lees, J. M.		AK112: Full Waveform Inversion Tomography of Alaska Improves Waveform Fits While Imaging Crustal, Mantle and Slab Structure. **Rodgers, A. J.**
3:00 PM	STUDENT: Estimating an Airborne Dipole Source Using 3D Wavefield Simulations and Seismic Stations on the Ground. **McPherson, A.**, Tape, C., Bishop, J. W., Fee, D.		INVITED: Constraints on Mantle Dynamics From a Massive Seismic Dataset. **Wolf, J.**
3:15– 4:30 PM	Poster Break		

Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Unusual Earthquakes and Their Implications (see page 1475).	**Station Installations and Site Conditions, a Quest for Improved Strong Motion Database** (see page 1466).	**Advances in Reliable Earthquake Source Parameter Estimation** (see page 1324).
2:00 PM	Challenges Created by Unusual Earthquakes for Operational Tsunami Assessment and Response. **Ohlendorf, S. J.**	The Origin of Unusually High Earthquake Strong Motion Recordings at Three California Stations. **Graizer, V.**	A Deep Learning Approach for Non-binarizing the Impulsive/Emergent Phase Labels. **Park, Y.**, Alfaro-Diaz, R. A., Carmichael, J. D., Delbridge, B. G.
2:15 PM	Characteristics of Intermediate and Deep-focus Earthquakes Along the Tonga Subduction Zone Revealed by Cross-correlation Earthquake Relocation. **Aziz Zanjani, F.**, Wiens, D. A., Wysession, M. E., Wei, S. S.	STUDENT: Site-specific Ground Motion Response Analysis for Bridges in Western Tennessee. **Alidadi, N.**, Pezeshk, S.	Coda Calibration Technique for Reliable Moment Magnitudes and Source Characterization in SW USA and NNSS. **Barama, L.**, Chiang, A., Gok, R.
2:30 PM	Low Aftershock Productivity of the 2017 Delaware Earthquake. **Pearson, K. M.**, Lekic, V., Wagner, L.	Combining Empirical Approaches to Address the Site-specific Seismic Hazard Estimation: Application to Three Populated Cities and an Area of Two Nuclear Facilities in France. Perron, V., Buscetti, M., Grendas, I., Hollender, F., Douste-Bacque, I., Burlot, R., Regnier, J., **Traversa, P.**	Using 3D Crustal Velocity Models and Multiazimuth Back Projection to Image Rupture Processes of Intermediate-sized Earthqukes. **Zhu, H.**, Yang, J.
2:45 PM	Satellite Optical Image Correlation Measurements for a Moderate Magnitude Thrust Earthquake: The January 2024 Wushi (Aykol), China Mw 5.7 Aftershock. **Hanagan, C. E.**, Jobe, J. A. T., Reitman, N., Hatem, A. E.	Importance of Using 3-component F-K Methods for Processing Ambient Vibration Array (AVA) Measurements for Improved Site Characterization. **Hollender, F.**, Cox, B. R., Ohrnberger, M., Wathelet, M., Rischette, P., Cornou, C.	Broadband Spectral Characteristics of Moderate-sized Earthquakes Using Nearby Recordings. Ji, C., **Archuleta, R. J.**
3:00 PM	Revisiting an Enigma on California's North Coast: The Seismotectonics of the M6.5 Fickle Hill Earthquake of December 1954. **Hellweg, M.**, Lee, T. A., Dreger, D. S., Lomax, A., Hagos, L., Haddadi, H., McPherson, R., Dengler, L., Hough, S. E.	INVITED: 20 Years After the Sesame Guidelines: Should Anything Be Changed? **Castellaro, S.**	INVITED: Random and Systematic Uncertainties in EGF Spectral Ratio Analysis and Their Implications for Source Scaling. **Abercrombie, R. E.**, Chen, X., Huang, Y.
3:15– 4:30 PM	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9
	Fifty Years and Beyond of Broadband Seismic Instrumentation: Performance, Precision and Uncertainties (see page 1393).		**Earth's Structure from the Crust to the Core** (see page 1359).
4:30 PM	Low-uncertainty SI-traceable Seismic Measurements. **Chijioke, A.**, Allen, R., Pratt, J., Reschovsky, B.		Global Mantle Imaging With the Multi-mode Body Wavefield. **Olugboji, T.**, Zhang, Z., Carr, S., Legre, J.
4:45 PM	Methods for Laboratory Seismometer Calibration Traceable to the Si – a Current Overview of Challenges and Solutions. **Bruns, T.**, Klaus, L., Yan, N.		Sequencing Postcursors of P and S Core-diffracted Waves: Implications for the Hawaiian Mega-ULVZ Properties. **Kim, D.**, Song, J., Dobrosavljevic, V., Lekic, V.
5:00 PM	Challenges in Seismometer Electrical Calibration. **Merchant, B. J.**		Global Observations of Melt-induced Low Velocity Zones Surrounding the Mantle Transition Zone. **Frazer, W.**
5:15 PM	Advancements in Quality Assurance for the Comprehensive Nuclear-test-ban Treaty International Monitoring System and Calibration Challenges for Seismic and Infrasound Technologies. **Doury, B.**, Campus, P., Kramer, A., Le Blanc, J.		A New Constraint on Vp and Vs in the Uppermost Mantle From Late Coda. Ritsema, J., **Liu, M.**
5:30 PM	Calibration Techniques in the Manufacture and Field Use of Seismic Instruments. **Bainbridge, G.**, Townsend, B., Laporte, M.		STUDENT: Investigating the Intrinsic Attenuation of Large Low Velocity Provinces. **Cunion, D. M.**, Lekic, V.
6:00–8:00 PM	Joyner Lecture and Reception		

Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Predictability of Seismic and Aseismic Slip: From Basic Science to Operational Forecasts (see page 1452).	**Station Installations and Site Conditions, a Quest for Improved Strong Motion Database** (see page 1466).	**Seismology for the Energy Transition** (see page 1462).
4:30 PM	The Time-saturation of Tectonic Tremor With Low-frequency Earthquakes. **Song, C.**, Rubin, A. M.	INVITED: STUDENT: Geologically Informed Non-ergodic Site Effects Model for California Enhanced With Geotechnical Measurements. **Roberts, M. E.**, Baise, L. G., Nie, S., Kaklamanos, J., Meyer, E. H., Zhan, W.	De-risking Deep Geothermal Energy Projects: The Deep and GeoTwins Approach. **Wiemer, S.**, Lanza, F.
4:45 PM	INVITED: A Unified Fracture Mechanics Model for Fault Slip Throughout the Seismic Cycle: Interseismic Decoupling, Precursory Transients and Earthquake Nucleation. **Cattania, C.**, Verwijs, R., Cui, X.	Temporal and Directional Variations in Shallow Seismic Velocities and Vp/Vs Ratio: Insights From a Borehole Array. **Roumelioti, Z.**, Hollender, F., Grendas, I., Theodoulidis, N.	Fiber Optic Seismic Vector, Acoustic, Pressure, Strain and Temperature Sensor Combinations Are Setting New Standards for Geothermal, CCUS, and UGS Reservoir Characterization and Monitoring. **Paulsson, B. N. P.**, Wylie, M. T. V., He, R.
5:00 PM	STUDENT: The Search for Time-dependent Coupling Changes in Southern Cascadia. **Roy, A.**, Jackson, N. M.	Are Seismological Signals Recorded at Free-field? Recommendations for Taking Better Account of Installation Conditions When Using Existing Databases and for Installing New Stations. Rischette, P., **Hollender, F.**, Theodoulidis, N., Roumelioti, Z., Perron, V., Traversa, P., Buscetti, M., Douste-Bacque, I., Konidaris, A.	Towards Thermo-hydro-mechanical Constitutive Models for Deep Geothermal Reservoirs: Experiments on Thermal Cracking Under Stress With Near-field Acoustic Sensing. **Holtzman, B. K.**, O'Ghaffari, H., Beaucé, E., Mittal, T., Barth, A., Mok, U., Peč, M.
5:15 PM	INVITED: Earthquake Predictability, Insight From Dynamical Models of Earthquake Sequences. **Avouac, J.**, Kaveh, H., Shrestha, R., Stuart, A.	Ground Motion Models Uncertainties and Variability: The Impact of Seismic Station Installation Conditions. **Traversa, P.**, Hollender, F., Rischette, P., Buscetti, M., Perron, V.	Detectability of a CO2 Well Leakage using Amplitudes of Ambient Seismic Signals on DAS. **Glubokovskikh, S.**, Lyu, B., Collet, O., Shashkin, P., Gurevich, B., Pevzner, R.
5:30 PM	Automatic Speech Recognition Predicts Contemporaneous Earthquake Fault Displacement. **Johnson, C.**, Johnson, P.	Site Amplification and Crustal Attenuation in the CEUS: Joint Tomographic Models for Ground Motion Analysis. **Mahanama, A.**, Cramer, C., Levandowski, W.	Learning Permeability from Acoustic Emission with Distributed Acoustic Sensing. **Donahue, C. M.**, Johnson, C. W.
6:00–8:00 PM	Joyner Lecture and Reception		

Poster Sessions

1. STUDENT: Landscape Response to Deformation in the Northern Ecuadorian Forearc. **Andramuno, M.**, Meltzer, A., Alvarado, A., Wickham, A., Ponce, G., Garcia, A., Ruiz, M.

2. A Multi-scale Look Utilizing Seismic Reflection Profiles and Paleoseismic Trenching Across Quaternary Active Faults in the Kittitas Valley, Washington, USA. **Angster, S. J.**, Stephenson, W. J., Sherrod, B. L., Huddleston, G., Lahser, J.

3. Near-fault-observation in a Seismic Gap Area: The Case of Mt. Morrone-Maiella Fault System (Central Italy). **Anselmi, M.**, De Gori, P., Bagh, S., Menichelli, I., Fonzetti, R., Chiarabba, C.

4. Lidar Analysis of an Elevated Marine Terrace Along the Olympic Peninsula, Washington State, USA. **Briggs, R.**, Sherrod, B. L., Kelsey, H., Angster, S. J., Grant, A.

5. Geophysical Investigation of a Quaternary Fault Beneath the National Mall and Memorial Parks in Washington DC. **Counts, R.**

6. Left-lateral Faulting Beneath the Monte Cristo Range, West-central Nevada. **Hatem, A. E.**, Briggs, R., Hanagan, C. E., Reitman, N., Elliott, A., Collett, C., Acree, A.

7. Paleoseismic Trenching Reveals Multiple Recent Earthquakes on the Great Southern Puerto Rico Fault Zone. **Lynch, E. M.**, Jobe, J. A. T., Briggs, R., DuRoss, C. B., Nicovich, S., Hanagan, C. E., Tan, M., Ortega Díaz, V., Gray, H., Strickland, L. E., Hughes, K., López Venegas, A. M.

8. STUDENT: Geomorphic Characterization of Fault Creep in the San Francisco Bay Area, California. **Martin, H.**, Rowe, C. D., Koehler, R. D.

9. STUDENT: Preliminary Insight Into Volcanic and Tectonic Controls on Crustal Deformation Near Ljósufjöll, Snæfellsnes Peninsula, West Iceland. **Owens, E. R.**, De Pascale, G. P.

10. Expression of the Creeping San Andreas Fault at the Topo Creek Site. **Philibosian, B.**, Vermeer, J., Trexler, C., Elliott, A., Alongi, T., Hammer, M., DeLong, S. B., Hanagan, C. E.

11. 30 Years of Landscape Response Following the 1992 Landers, CA, Earthquake. **Reitman, N.**, Arrowsmith, R., Rhodes, D., Hatem, A. E., Schwarz, M., Zuckerman, M., Powell, J. H.

13. Evidence for Dextral-transpressional Quaternary-active Faults in the Northern Central Valley, California. **Jobe, J. A. T.**, Besana-Ostman, G., Klinger, R., Crowell, B. W., Cataldo, K.

14. Surface Rupture From an Aftershock: Remote Observations From the January 2024 Wushi (Aykol) Earthquakes, China. **Jobe, J. A. T.**, Hanagan, C. E., Hatem, A. E., Barnhart, W., Goldberg, D., Yeck, W. L.

15. STUDENT: Deciphering the Multi-fault System of the 2024 Mw 7.4 Hualien, Taiwan Earthquake Using Combined Seismic, Geodetic and Insar Datasets. **Fagan, C.**, Huang, M.

16. Deep Lithospheric Rupture and Dual-mechanism Transition During the 2024 Mw 7.4 Calama Earthquake, Chile. **Jia, Z.**, Mao, W., Flores, M., Ruiz, S., Potin, B., Becker, T. W., Moreno, M., Barra, S., Báez, J., Ceroni, D., Cabrera, L.

17. A New Perspective on the Origin of Seismic and Tectonic Activity of the Sichuan Basin, Central China. **Su, Z.**, Wang, E., Zhang, B.

18. STUDENT: Tidally Modulated Icequakes Along a Ross Ice Shelf Rift in Antarctica. **Udell-Lopez, K.**, Huang, M., Schlossnagle, Z., Schmerr, N., Harkleroad, E., Eisl, S., Hurford, T.

19. STUDENT: 3D Dynamic Rupture Modeling of the 2021 Haiti Earthquake Used to Constrain Stress Conditions and Fault System Complexity. **Yin, H. Z.**, Marchandon, M., Haase, J. S., Gabriel, A., Douilly, R.

20. Implications of a Reverse Polarity Earthquake Pair on Fault Friction and Stress Heterogeneity Near Ridgecrest, California. **Shearer, P.**, Senobari, N. S., Fialko, Y.

21. Earthquake Source Spectra Estimates Vary Widely for Two Ridgecrest, California, Aftershocks Because of Differences in Attenuation Corrections. **Shearer, P.**, Vandevert, I., Fan, W., Abercrombie, R. E., Bindi, D., Calderoni, G., Chen, X., Ellsworth, W. L., Harrington, R., Huang, Y., Knudson, T., Rossbach, M., Satriano, C., Supino, M., Trugman, D. T., Yang, H., Zhang, J.

22. Update and Future Plans for the International SCEC/USGS Community Stress Drop Validation Study. **Abercrombie, R. E.**, Baltay, A.

23. STUDENT: Focal Mechanism and Uncertainty Estimation in Data-sparse Settings. **Agaba, V.**, van der Lee, S., Babirye, P.

24. STUDENT: Source and Along-path Seismic Parameters of S-waves From Earthquakes in the Central-northern Gulf of California, Mexico. **Azua Flores, J. M.**

25. The International Seismological Centre (ISC) Earthquake Toolbox for MATLAB: Interactive Access to Earthquake Observations and Parameters. **Garth, T.**, Gallacher, R., Leptokaropoulos, K., Poiata, N.

26. STUDENT: Upper Plate Control on Earthquake Stress Drop: Comparison Between High and Low Ground Velocity Zones in Costa Rica. **Hajaji, S.**, Chaves, E. J.

27. STUDENT: Micro-EQpolarity: Transfer Learning for Microseismic P-wave First-motion Polarity Determination and Its Application in the Western Canada Sedimentary Basin (WCSB). **Hu, J.**, Chen, Y., Chen, Y., Yu, H., Zhang, F., Li, X.

28. STUDENT: Refining Stress Drop Measurements Using Spectral Asymptotes: Insights From the Ridgecrest Sequence. **Knudson, T.**, Ellsworth, W. L., Beroza, G. C., Shaw, B. E.

29. STUDENT: Earthquake Energy Calculations From Seismogeodetic Data. **Kunwer, H. M.**, Newman, A., Hirshorn, B., Bock, Y.

30. Mb Magnitude Station-station Spatial Correlations and Station Mb Biases. **McLaughlin, K. L.**

31. STUDENT: The Influence of 3D Velocity Models on Seismic Moment Tensor Estimation in Alaska. **McPherson, A.**, Tape, C., Onyango, E., Chow, B., Peter, D.

32. STUDENT: Joined Double Difference Earthquake Location and Estimation of Vp/Vs-Ratio from Earthquake Clusters. **Ostermeier, R.**, Rietbrock, A.

33. Kinematic Slip Model of the Mw7.0 December 5, 2024 Offshore Cape Mendocino Earthquake. **Pollitz, F. F.**, Guns, K.

34. STUDENT: Evaluating Scaling Relationships From Reliable, Insar-derived Earthquake Source Parameters. **Rivera, K. M.**, Funning, G.

35. Regionalized Earthquake Source Models of Subduction Interface Earthquakes. **Skarlatoudis, A.**, Thio, H., Somerville, P.

36. Quantitatively Assessing the Importance of Three-dimensional Structure for Finite Fault Inversions. **Small, D. T.**, Fadugba, O., Sahakian, V. J., Melgar, D.

37. STUDENT: Using a High- to Low-frequency Spectral Ratio to Distinguish Variations in Earthquake Source Properties. **Vandevert, I.**, Shearer, P., Fan, W.

38. Source Characterization of Complex Earthquakes via Subevent Decomposition: Application to Apparent-repeating Earthquakes. **Yoshida, K.**

39. Robust Earthquake Location Using Random Sample Consensus (RANSAC). **Zhu, W.**, Rong, B., Jie, Y., Wei, S.

40. STUDENT: Use of Repeating Earthquakes to Discriminate Slow Earthquakes in the Central Pacific Subduction Zone of Costa Rica. **Campos, N. A.**, Chaves, E. J.

41. Synchronization Among Characteristic Earthquakes. **Dascher-Cousineau, K. D.**, Bürgmann, R.

42. Rupture Propagation Dynamics in Branch Fault Systems: A Case Study of the San Andreas–Garlock Fault Junction Applying a Machine Learning Approach. Niyogi, S., **Ghosh, A.**, Marschall, E., Douilly, R., Oglesby, D.

43. Bayesian Inference of Stress Evolution in Rate-and-state Governed Faults Constrained by Seismicity Rate Observations. **Jiang, Y.**, Trugman, D. T., González, P. J.

44. Synergizing Seismo-geodetic Coupling and Slip Models with Optimal Transport and Machine Learning to Determine if Megathrust Earthquake Ruptures are Slip-deficit Controlled. **Oryan, B.**, Gabriel, A.

45. STUDENT: Role of Foreshock Sequences in Triggering the 2016 Mw 6.9 Fukushima Mainshock. **Pun, H.**, Lui, S. K. Y., Kato, A.

46. Sliding and Healing of Frictional Interfaces That Appear Stationary. **Sirorattanakul, K.**, Larochelle, S., Rubino, V., Lapusta, N., Rosakis, A. J.

47. STUDENT: Towards an InSAR Catalog of Creep Events on the Imperial Fault. **Tan, M.**, Materna, K., Bilham, R., Gittins, D.

48. STUDENT: Ultrasonic Probing of Slow Slip Fronts in a M-scale Laboratory Fault. **Van Linn, J.**, McLaskey, G. C.

49. STUDENT: How Did the 2016 Mw 7.8 Kaikōura Earthquake Affect the Megathrust Earthquake Potential in the Hikurangi Subduction Zone? **Yun, J.**, Wong, J., Gabriel, A., Fialko, Y., Wallace, L. M., Williams, C. A.

50. Rupture Process and Ground Motion Complexity of the February 6, 2023, Mw 7.8 Kahramanmaraş Earthquake in Türkiye: Insights from Analysis of Deterministic Broad-band Simulations using a Regional 1D Velocity Model. **Akinci, A.**, Pitarka, A., Artale Harris, P., Tsuda, K., Graves, R.

51. STUDENT: Kinematic Source Variability in Ground-motion Simulations and Implications for Seismic Hazard Analysis. **Aquib, T.**, Cruz, D., Mai, P.

52. STUDENT: Nonergodic Seismic Hazard Assessment Based on Multi-cycle Earthquake Simulations. **Aspiotis, T.**, Zielke, O., Mai, P.

53. Linear and Nonlinear Site Effects at Several Sites in the Noto-hanto Area in Japan and Its Possible Cause as 2D/3D Deep Basin Resonance. **Kawase, H.**, Nakano, K., Ito, E., Wang, Z.

54. Modeling Path Effects From 3D Velocity Structure in the San Francisco Bay Area. **Nye, T.**, Parker, G. A., Hirakawa, E., Baltay, A., Withers, K. B., Moschetti, M. P.

55. A Near-source Saturation Model for EAS Based on the NGA-west3 Database. **Parker, G. A.**, Baltay, A., Atkinson, G. M., Boore, D. M., Buckreis, T. E., Stewart, J. P.

56. Regional Variations in the Site-amplification Variability. **Pretell, R.**, Katuwal, S., Kuo, C.

57. Student: Quantifying Uncertainties in Earthquake Source Models: Implications of Slip Distribution Variations and Fault Parameters on Ground Motion Studies. **Sunday, E. U.**

58. Methods for Evaluating and Improving Rupture Directivity Modeling in Seismic Hazard Assessment. **Withers, K. B.**, Kelly, B., Bayless, J., Moschetti, M. P.

59. Student: Assessment of Site-specific Features in and Around Varanasi City, Uttar Pradesh, India, Using Microtremor Measurements. **Yadav, A. K.**, Sengupta, P.

Station Installations and Site Conditions, a Quest for Improved Strong Motion Database (see page 1469).

60. Identifying Site Resonance in the Central and Eastern U.S. Using HVSR: Insights From Ambient-noise and Earthquake S-wave Energy Sources and Implications for Site Characterizations. **Carpenter, S.**, Wang, Z.

61. Vertical Arrays Drilled Passing Through an Active Fault With Very Short Recurrence Interval – Investigations and Preliminary Observations. **Kuo, C.**, Chang, Y.

62. Estimation of Vs Profiles from Strongmotion Records. **Leyton Flórez, F.**

63. Student: Development of a Linear Site Amplification Model for the CEUS based on Physiographic Province and Sediment Thickness: Incorporating Lessons from Station Placement Biases. **Meyer, E. H.**, Baise, L. G., Nie, S., Zhan, W., Kaklamanos, J., Roberts, M. E.

64. Student: Geologically Informed Non-ergodic Site Effects Model for the Western US Outside of California. **Roberts, M. E.**, Baise, L. G., Nie, S., Kaklamanos, J., Meyer, E. H., Zhan, W.

65. 100m-Resolution Site Condition Map of China. **Xie, J.**

Data-driven and Computational Characterization of Non-earthquake Seismoacoustic Sources (see page 1355).

66. Probabilistic Tsunami Hazard Assessment in the Southern Atlantic. **Arcos, M. E. M.**, Youngs, R. R., Neveling, J., Roberds, W., Dunga, N.

67. Student: Evaluating Synthetic Acoustic Waveforms From Fire Sources Using 3D Finite Difference Method. **Bauer, I. A.**, Lees, J. M., Marcillo, O., Yedinak, K. M.

68. Student: A Novel Physics-guided Contrastive Learning Strategy for Seismic Signal Analysis. **Kara, D.**, Bhattacharyya, J., Goldman, G. H., Kaplan, L., Abdelzaher, T.

69. Advancing Geophysical Data Training With MsPASS and GeoLab. **Bravo, T.**, Pavlis, G., Wang, I., Weekly, R., Wilson, S., Hamilton, A., Haberli, G., Johnson, S., Trabant, C., Hubenthal, M.

70. Deep Clustering of Ambient Volcanic Seismicity: An Example at Erebus Volcano, Antarctica. **Chaput, J.**, Rick, A., Emerson, T.

71. Student: Seismic Reflection Imaging of Fluid-filled Sills in the West Eifel Volcanic Field, Germany. **Eickhoff, D.**, Ritter, J., Hloušek, F., Buske, S.

72. Student: Dense Seismic Noise Measurements for the Assessment of Site Response Variabilities: Application to a Liquefiable Site in the Po Plain. **El Hitti, J.**, Régnier, J., Cultrera, G., Di Giulio, G., Minarelli, L., Gélis, C., Lenti, L., Langlaude, P., Pernoud, M., Ignacio Bustos, J., Schibuola, A., Riccio, G.

73. Scaling Implications of Terrestrial Impact of Meteors: Cratering, Ejecta and Cloud Formation, Induced Ground Motions. **Ezzedine, S. M.**

74. Seismoacoustic Tracking and Characterisation of Space Debris Re-entries. **Fernando, B.**

75. Student: Fast Probabilistic Seismic Hazard Analysis Through Adaptive Importance Sampling. **Houng, S.**, Ceferino, L.

76. Data-informed Polarization Analysis to Improve Seismic Discrimination and Source Characterization. **Kintner, J. A.**, Alfaro-Diaz, R. A., Carmichael, J. D.

77. A Moment-based Correction for Non-stationarity in Random Vibration Theory. Seifried, A., Bahrampouri, M., **Kottke, A. R.**, Toro, G. R.

78. Waveform Modeling of Acoustic-seismic Interactions Using a Hybrid Wavenumber Integration Method. **Langston, C. A.**

79. Thermo-mechanical Modeling of Deformation Sources Driving Seismicity at Campi Flegrei Caldera. **Nardoni, C.**, De Siena, L.

81. Student: Urban Acoustics and Infrasonic Detection of Crowd Noise. **Saunders, J.**, Lees, J. M.

82. Exploring Sensitivity of Infrasound Signal Predictions to Atmospheric Inputs. **Schaible, L. P.**, Silber, E. A.

83. Student: Classification of Aircraft Type Using Seismic Data in Alaska. **Seppi, I.**, Tape, C., Fee, D.

84. Tsunami Warning Cancellation Using Data Assimilation Approach. **Wang, Y.**

85. Making the Cloud Accessible for Geophysical Research: EarthScope's Path for Cloud Adoption and Workflow Migration. **Wilson, S.**, Weekly, R., Bravo, T., Hamilton, A., Trabant, C.

Earth's Structure from the Crust to the Core (see page 1364).

86. Toward an Accessible Framework for Synthesizing Solid Earth Models Across Multiple Scales. **Ajala, R.**, Kolawole, F., Share, P., Sahakian, V. J., Delph, J., Hooft, E., He, B.

87. Student: Exploring the Mackenzie Mountains Lithosphere: 3D P Wave Velocity Tomography and Thermal Structure. **Bankher, A.**, Schutt, D. L., Rawlinson, N.

89. Student: Imaging Lateral Boundaries in the San Bernardino and San Gabriel Basins With Scattered Phases in Ambient Noise Data. **Bird, E.**, Biondi, E., Clayton, R.

90. Toward a Radially and Azimuthally Anisotropic Adjoint Model for the Middle East. Orsvuran, R., **Bozdag, E.**, Gok, R., Chiang, A., Tarabulsi, Y., Hosny, A., Yousef, K., Mousa, A.

91. Student: Seismic Imaging of Kilauea East Rift Zone Magma Reservoirs Using Receiver Functions. **DaSilva, S.**, Shen, Y., Farrell, J., Lin, F., Wei, X., DaSilva, S.

93. Student: High-resolution 3D Seismic Imaging and Aftershock Catalog for the 2021 Mw 7.2, Nippes, Haiti Earthquake. **Doreme, G.**, Douilly, R., Monfret, T., Symithe, S. J.

94. Student: Enhancing the Observability of Precritical PKiKP Phases with Polarization Filters and Incoherent Array Processing. **Geng, J.**, Koper, K. D.

95. Student: Full Waveform Inversion for Homogeneous 21-parameter Anisotropic Materials. **Gupta, A.**, Chow, B., Tape, C.

96. Student: Validation of a Tilted Transversely Isotropic Model of Alaska Using 3D Seismic Wavefield Simulations. **Gupta, A.**, Tape, C., Liu, C.

97. Preliminary Results from the Active/Passive San Francisco Volcanic Field Nodal Seismic Experiment in Northern Arizona. **Kiser, E.**, Mahanti, S., Bradford, J. M., Porter, R., Chindandali, P., Li, C., Phillips, J., Richardson, C., Santra, P., Tauber, S., Ward, G., Juarez-Zuniga, A., Flanigan, J., Moitra, P.

98. Seismic Structure of the Lithosphere in SW Austratila Based on New Data From the Western Australia Array. **Levin, V.**, Yuan, H., Murdie, R., Miller, M. S., Gessner, K.

99. Effects of Olivine Fabric Type on Seismic Anisotropy in the Mantle Wedge: A Wavefield Modeling Case Study. **Loeberich, E.**, Wolf, J., Long, M. D.

100. Student: Crustal Imaging of the Southern Central Andes by Seismic Autocorrelation of Nodal Seismic Data. **Mahanti, S.**, Kiser, E., Bradford, J. M., Beck, S. L., Leon-Rios, S., Roecker, S., Tauber, S., Porter, R., Fernandez, M., Comte, D., Trad, S., Saez, M.

101. Student: Imaging the Moho Topography Beneath the Northern Canadian Cordillera from Virtual Deep Seismic Sounding. **Sanusi, S. O.**, Pilia, S., Schutt, D. L., Rawlinson, N.

102. Student: Full-waveform Tomography of Europe and Western Asia and Full-waveform Moment Tensor Inversions. **Schiller, C. J.**, Noe, S., van Herwaarden, D. P., Boehm, C., Thrastarson, S., Rodgers, A. J., Barrera-López, P., Marty, P., Fichtner, A.

103. Large Lithospheric Seismic Velocity Variations Across the Northern Canadian Cordillera. **Schutt, D. L.**, Porritt, R., Estève, C., Audet, P., Gosselin, J. M., Scheffer, A., Aster, R. C., Freymueller, J. T., Cubley, J. F.

106. Tectonic Imprints of Multiscale Craton Margin Deformation on the Continental Lithosphere of the Korean Peninsula From Regional Seismicity, Seismic Traveltime and Waveform Tomography. **Song, J.**, Rhie, J., Kim, S.

107. Student: Making Love Visible in Noise: Enhanced Surface Wave Detection Using Slepian Tapers. **Swar, S. K.**, Olugboji, T.

108. Seismic Computational Platform for Empowering Discovery (Scoped): Software, Containers, Workshops, Science. **Tape, C.**, Bozdag, E., Denolle, M. A., Waldhauser, F., Wang, Y.

109. Crustal Structure Beneath Carpathian-panonian Region by Ambient Noise Tomography and Teleseismic P Wave Coda Autocorrelation. **Thapa, H.**, Vlahovic, G.

110. Constraining Slab Geometry and Seismic Velocity Structure From Tillamook to Portland, Oregon. **Wirth, E. A.**, Trehu, A. M., Stone, I., Hooft, E., Ward, K.

111. Hessian Vector Product in Transversely Isotropic Media. **Xie, Y.**, Sen, M.

112. Anisotropic Kilometer-scale Structures With a Near-zero Poisson's Ratio on the Japan Subduction Zone Plate Interface. Huang, Y., Ide, S., Kato, A., Yoshida, K., Jiang, C., **Zhai, P.**

Performance and Progress of Earthquake Early Warning Systems Around the World (see page 1449).

114. Installation and Optimization Advances in Earthquake Early Warning System (Rast-Vs) for Business Continuity and Public Safety in Mexico. **Avila, J. M.**, Yegres, L. A., Vargas, Z. J.

115. Enhancing Earthquake Early Warning with FinDer: Advances in Rapid Finite-source Modeling, Performance Evaluation, and New Features. **Böse, M.**, Saunders, J., Thompson, M., Andrews, J., Hartog, J., Felizardo, C., Ceylan, S.

116. Student: Testing DAS-integrated Earthquake Early Warning in Northern California: Design and Implementation. **Gou, Y.**, Allen, R. M., Nof, R. N., Henson, I., Lux, A. I., Pardini, B., Zhu, W., Taira, T.

117. Real-time Correction of Ground Motion Amplification for a Rapid Seismic Intensity Reporting System. Jeong, S., Oh, J., **Kwak, D.**

118. An End-to-end Approach for Earthquake Early Warning Using IoT and Deep Learning. **Kwon, Y.**, Lee, J., Park, E., Lee, H., Ahn, J.

120. Mitigating Noise in Real-time GPS Positions to Improve Reliability of Geodetic Magnitude Estimates in the ShakeAlert Earthquake Early Warning System. **Manaster, A. E.**, Murray, J. R., Murray, M. H., Ulberg, C., Santillan, M., Scrivner, C., Melbourne, T., Szeliga, W., Crowell, B. W.

121. Real-time GNSS Data in ShakeAlert: Potential Improvements for Subduction Megathrust Earthquakes Through Network Design and Distributed Slip Models. **Murray, J. R.**

122. STUDENT: Evaluating the Impact of Earthquake Early Warning Systems on Casualty Reduction: A Global Framework With a Focus on Central America. **Orihuela, B.**, Clinton, J. F., Papadopoulos, A., Danciu, L., Boese, M.

123. The Value of Distributed Acoustic Sensing for Earthquake Early Warning in Southern California. Biondi, E., **Saunders, J. K.**, Tepp, G., Yu, E., Banda, E., Zhan, Z., Husker, A. L.

124. STUDENT: Evaluating the Effectiveness of Past and Present Seismic Arrays in Detecting Off-shore Earthquakes in Cascadia. **Sparks, A.**, Hartog, J., Hutko, A.

125. Testing Cascadia and San Andreas Fault-specific Finder Templates with the 5 December 2024 M7 Offshore Cape Mendocino Earthquake and Scenario Earthquakes. **Thompson, M.**, Hartog, J., Böse, M., Saunders, J. K., Felizardo, C., Andrews, J.

Seismology for the Energy Transition (see page 1463).

127. STUDENT: Ambient Noise Tomography for Natural Hydrogen Exploration: A Case Study From the Gawler Craton, South Australia. **Dong, S.**, Jiang, C., Eakin, C. M., Wallenius, S., Miller, M. S., Moresi, L., Heinson, G., H2EX Ltd.

128. Improving Event Depth Constraint of a Local-scale Surface Seismic Network With Downhole DAS. **Dzubay, A. J.**, Friberg, P., Stachnik, J.

129. STUDENT: DAS-recorded Microseismic Monitoring in Geothermal Field Stimulation With Waveform Imaging and Deep Learning. **Frigerio, J. O.**

130. The Problem of Uncontrolled Impacts on Natural Spheres. **Kerimov, I.**, Kerimov, S.

131. Find the Fluid: Using Cutting Edge-sensing to Track Geothermal Fluid and Gas Migration Underneath Sulfur Springs in the Valles Caldera. **Maier, N.**, Donahue, C. M.

132. STUDENT: Denoising Seismic Migration Images Using ConvNeXt-style Neural Networks. **McNease, J. D.**, Huang, L., Zheng, Y.

133. Utah FORGE 2024 Stimulations: Improvement of Surface-based Microseismic Mapping of Fracture Zones via Nodal Geophone Patches. Niemz, P., **Pankow, K. L.**, Isken, M. P., Whidden, K., McLennan, J., Moore, J.

134. Shear Wave Velocity Structure and Moho Depth Beneath the Virginia Coastal Plain (VCP) From Fundamental-mode Rayleigh-wave Group-velocity Measurements. **Parija, M. P.**, Chapman, M. C., Biswal, S., Conley, E., Ogunleye, J., Pollyea, R. M.

135. A Novel Passive Source Basin Scale Seismic Monitoring Approach of Carbon Storage Sites. **Tian, Y.**, Yang, X.

136. Using Machine Learning to Enhance Microseismicity Monitoring and Support Carbon Storage Initiatives in Oklahoma. **Xiao, H.**, Walter, J., Ogwari, P. O., Thiel, A., Gregg, N., Mace, B.

137. Seismic Monitoring Analogs for Hydrothermal Processes in Controlled Fracture Networks. **Yuan, C.**, Saltiel, S., Mittal, T., Barth, A., Beaucé, E., Holtzman, B. K.

Fifty Years and Beyond of Broadband Seismic Instrumentation: Performance, Precision and Uncertainties (see page 1394).

138. Comparison of the Performance of a Wide Range of Sensors in Various Applications in the Field of Earthquake Engineering, From Low-noise to 2 G. **Hollender, F.**, Perron, V., Rischette, P., Langlais, M., Douste-Bacque, I.

139. Guralp Stratis - a Commercial 6 Degree of Freedom Seismometer for Academic and Research Applications. **Lindsey, J. C.**, Watkiss, N. R., Hill, P., Restelli, F.

Thursday, 17 April 2025—Oral Sessions

Presenting author is indicated in bold.

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9		Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Exploring Planetary Interiors and Seismology: Observations, Models, Experiments and Future Missions (see page 1383).	**Advancements in Forensic Seismology and Explosion Monitoring** (see page 1316).	**Numerical Modeling in Seismology: Theory, Algorithms and Applications** (see page 1441).			**Earthquakes, Lithospheric Structure, and Dynamics in Stable Continental Region** (see page 1375).	**Challenges and Opportunities in Constraining Ground-motion Models from Physics-based Ground-motion Simulations** (see page 1346).	**Earthquake-triggered Ground Failure: Data, Hazards, Impacts and Models** (see page 1372).
8:00 AM	Reading a Marsquake Seismogram: A Case Study of S1222a. **Lekic, V.**, Kim, D., Maguire, R. R., Irving, J. C. E., Schmerr, N.	A New Paradigm for Nuclear Explosion Monitoring of Test Sites and Broad Areas: Full Waveform Inversion Tomography and Moment Tensor Inversion With 3D Greens Functions. **Rodgers, A. J.**, Gebraad, L.	Physics Informed Meshing for Accelerating the 3D Indirect Boundary Element Method Computation of Imaginary Part of Green's Function at the Source. **Sanchez-Sesma, F. J.**, Spurlin, J. H., Baena-Rivera, M., Valverde-Guerrero, I. R., López Sugahara, O., González, J. G.		8:00 AM	Imaging Intraplate Faults in Puerto Rico With New Aeromagnetic Data: The Roles of Fault Reactivation and Tectonic Inheritance. **Shah, A. K.**, Jobe, J. A. T., Briggs, R., Lynch, E. M., Pratt, T., Ten Brink, U., Wilson, F.	INVITED: Incorporating Results From Numerical Simulations Into Ground-motion Models. **Abrahamson, N.**	STUDENT: Earthquake-induced Landslides Susceptibility and Controlling Factors in Vancouver Island, British Columbia, Canada. **Pino-Rivas, C. A.**, Sepulveda, S. A., LeSueur, P.
8:15 AM	INVITED: Quantitative Assessment of Atmospheric and Teleseismic Excitation of a 2.4 Hz Resonance in Insight Data From Mars. **Panning, M. P.**, Pou, L., Kedar, S., Asimaki, D.	Bayesian Optimal Experimental Design With Constraints for Seismo-acoustic Sensor Networks. **Catanach, T. A.**, Callahan, J. P.	Dynamic Earthquake Rupture and Tsunami Modeling for the Gulf of Aqaba. **Li, B.**, Mai, P.		8:15 AM	A Railway-spotters Guide to Earthquakes: Coseismic Slip, Dynamic Strain and Ground Motion Intensity. **Bilham, R.**, Hough, S. E., Bulut, F.	Toward Utilization of Physics-based Simulations in Seismic Hazard Assessment: Insights From Japan Experiences. **Iwaki, A.**, Morikawa, N., Maeda, T., Fujiwara, H.	STUDENT: Sea Level Rise Effects on Earthquake-induced Soil Liquefaction. **Kota, M. L.**, Brandenberg, S. J., Maple, M., Gallien, T.
8:30 AM	Lems-A3: The Lunar Environmental Monitoring Station—a Seismometer Station for the Moon Deployed by Artemis III Astronauts. **Schmerr, N.**, Benna, M., McCall, N., DellaGiustina, D., Marusiak, A., Bray, V., Bailey, H., Byrne, P., Avenson, B., Kim, D., Artemis III Science Team.	Bayesian Inference for the Seismic Moment Tensor Using Regional Waveforms and Teleseismic-P Polarities with a Data-derived Distribution of Velocity Models and Source Locations. **Chiang, A.**, Ford, S., Pasyanos, M., Simmons, N.	Implications of the Recent Findings for Practical Calculations and Designing the Time-domain Finite-difference Schemes. Kristek, J., Valovcan, J., **Moczo, P.**, Galis, M., Kristekova, M.		8:30 AM	Velocity and Fault Structure of the New Madrid Seismic Zone. **Powell, C.**, Langston, C. A.	INVITED: Epistemic Uncertainties in Seismic Source Modeling for Finite-fault Ground-motion Simulations. **Mai, P.**	Duration Matters: Impacts of Ground Motion Selection on Seismic Slope Displacement Analyses. **Cabas, A.**, Chowdhury, I., Kaklamanos, J., Kottke, A. R.
8:45 AM	INVITED: Along-trajectory Infrasound Signals Generated by the OSIRIS-REx Sample Return Capsule Re-entry. Silber, E. A., **Bowman, D. C.**	From Source to Receiver: Numerical Simulations of Underground Explosions, Cavity and Chimney Formations, Subsurface Gas Transport and Prompt Atmospheric Releases. **Ezzedine, S. M.**, Velsko, C., Vorobiev, O., Sun, Y., Hao, Y., Herbold, E., Balco, G., Myers, S. C.	Bento: Benchmark for Assessing Topographic Site Effects Through 3D Numerical Simulations. Bou Nassif, A., Maufroy, E., Chaljub, E., Rischette, P., Cornou, C., Bard, P., El Haber, E., **Hollender, F.**		8:45 AM	INVITED: High-resolution Seismic Imaging of Crustal and Upper Mantle Structures Across the Southern Eastern North American Passive Margin. **Li, C.**, Yu, C., Gao, H.	Implications of the SCEC/USGS Community Stress Drop Validation Study for Physics-based and Empirical Ground Motion Modelling. **Baltay, A.**, Abercrombie, R. E., Parker, G. A.	Liquefaction and Ground Failure Considerations During Long-duration, Subduction Zone Earthquakes. **Carey, T. J.**, Fayaz, Z.
9:00 AM	Examining Acoustic Arrivals From the OSIRIS-REx Capsule Reentry Recorded on a Large-N Infrasound Array. **Wynn, N. R.**, Silber, E. A., Bowman, D. C.	Variable Global Grid Refinement and Prediction Using RSTT Model. **Ranasinghe, N. R.**, Begnaud, M. L., Rowe, C. A., Myers, S. C., Young, B.	STUDENT: Modeling of HVSR for an Inhomogeneous Medium Over a Varying Lateral Interface Using 3D IBEM and the Diffuse Field Concept. **López Sugahara, O.**, Santoyo, M., Sánchez-Sesma, F.		9:00 AM	Indications of Earthquake Activity in Northeastern North American from Native Americans. **Ebel, J. E.**	Ground Motion Simulations Based on Source Slip Distribution, Fourier Amplitude and Phase Models for the Chilean Subduction Zone. **Montalva, G. A.**, Osses, M., Leyton Flórez, F., Ojeda, J.	STUDENT: Synergic Use of Radar and Optical Sensor Data for Mapping Earthquake Triggered Landform Changes. Azeem, A., Atif, S., **Ahmad, A.**
9:15–10:30 AM	Poster Break				9:15–10:30 AM	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9		Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Visualization and Sonification in Solid Earth Geosciences, What's Next? (see page 1478).	**Advancements in Forensic Seismology and Explosion Monitoring** (see page 1316).	**Numerical Modeling in Seismology: Theory, Algorithms and Applications** (see page 1441).			**Earthquakes, Lithospheric Structure, and Dynamics in Stable Continental Region** (see page 1375).	**Challenges and Opportunities in Constraining Ground-motion Models from Physics-based Ground-motion Simulations** (see page 1346).	**Why Ignore the Structure? Soil-structure Interaction and Site Response at Local and Regional Scales** (see page 1479).
10:30 AM	Shakemovie: Rapid Post-earthquake Animation of Near-fault Ground Shaking. **Graves, R.**	STUDENT: Integrating Machine Learning for Near-real-time Earthquake Monitoring and Public Notification. **Rakotoarisoa, A.**, Razafindrakoto, H.	Implications of Recent Advances in Anelastic Seismic Ray-tracing Algorithms for Alluvium-basin Response and Seismic-tomography Models of the Crust and Mantle. **Borcherdt, R. D.**		10:30 AM	Deep Quakes Beneath the Moho: Insights From the Wind River Basin, Wyoming. **Woo, J.**, Chen, T.	Characterizing Ground Motion Through Multi-fault Dynamic Rupture Simulations in Central New Zealand. **Li, D.**, Bora, S., Benites, R., Thingbaijam, K., Howell, A., Williams, C. A., Yuan, S., Kaiser, A., Manea, E., Hill, M., Gerstenberger, M. C.	Vs30-Fd Relationship for Measured-Vs30 Stations in the Western United States. Yong, A., Kottke, A. R., **Hudson, K.**, Matsushima, S., Stephenson, W. J., Bonilla, F., Martin, A., Hassani, B.
10:45 AM	Optimizing Earthquake Ground Motion Visualizations to Enhance Public Understanding and Preparedness. Kuratle, L., **Kilb, D.**, Gabriel, A., Rekoske, J. M.	An Efficient Subspace Detector for Rayleigh Waves, Demonstrated Against Explosions. **Carmichael, J. D.**, Kintner, J. A., Alfaro-Diaz, R. A.	Finite-domain Full-waveform Ambient Noise Inversion for Structure and Source Parameters. **Keating, S.**, Fichtner, A., Zunino, A.		10:45 AM	INVITED: The Seismic Sources of Northeastern US: New Insights Into Their Detailed Geological Structure and Reactivation Mechanics. **Kolawole, F.**, Ajala, R., Foster-Baril, Z., Beaucé, E., Kim, W., Waldhauser, F., Seeber, L.	Evaluation of Uncertainties Using Simulations of Small Earthquakes for the Northern California Velocity Model Adopted for the Cybershake Study 24.8. **Pinilla Ramos, C.**, Ben-Zion, Y., Abrahamson, N., Su, M., Maechling, P. J., Callaghan, S., Tang, H., Meng, X.	Probabilistic Seismic Assessment of Nuclear Power Plants. **Wang, L.**, Gutierrez, S.
11:00 AM	Sonic and Visual Representations of Seismic Data, Coupled to Machine Listening and Pattern Discovery. **Holtzman, B. K.**, Barth, A., Beaucé, E.	Differential Seismic Phase Detection Probability as a Potential Attribute for Discrimination of Explosions and Earthquakes. **Schmandt, B.**, Duan, C., Maguire, R. R.	Leveraging Boundary Integral Equations for Efficient, Fully-dynamic Simulation of Earthquakes and Aseismic Slip on Fault Networks. **Ciardo, F.**, Romanet, P.		11:00 AM	Long-term Erosion as a Catalyst of Shallow Seismicity in Stable Continental Regions – a Global View. **Mazzotti, S.**, Malcles, O., Vernant, P., Grosset, J., Damon, A., Vergeron, X.	Aleatory Variability and Epistemic Uncertainty from Physics-based Ground-motion Simulations as part of Probabilistic Seismic Hazard Analysis. **Liou, I. Y.**, Abrahamson, N., Cotton, F.	STUDENT: Sub-regional Site Response for the San Francisco Bay Area. **Mohammed, S. A.**, Shams, R., Buckreis, T. E., Nweke, C. C., Brandenberg, S. J., Stewart, J. P.
11:15 AM	Sonifying Seismic Data on the Go, for Research and STEM Engagement. **van der Lee, S.**, Tejedor, H., Marzen, M., Ranadive, O., Anderson, J., Schirbel, L.	Probabilistic Source Type Analysis with Applications to Seismic Source Classification. **Alvizuri, C. R.**	A Velocity Structure Model for Ground Motion Simulation in Japan. **Koketsu, K.**, Miyake, H., Suzuki, H.		11:15 AM	Old News Papers, New Felt Reports, New Earthquakes, New Ways to Look for Old Earthquakes. **Moran, N. K.**	Site Response High-frequency Frontiers and the Added-value of Site-Specific Earthquake Record-based Measurements of Velocity and Attenuation. **Pilz, M.**, Zhu, C., Cotton, F.	City-scale Assessment of Site and Basin Effects in Selected CEUS Sedimentary Basins: Memphis and New York City. **Kaklamanos, J.**, Guzman, I. M., Sachs-Walor, G. A., Meyer, E. H., Baise, L. G.
11:30 AM	Sonification and Visualization of High-resolution Earthquake and Tremor Catalogs. **Peng, Z.**, Hyde, R., Kato, A.	Seismic Source Characterization: Context to Confidence. **Alfaro-Diaz, R. A.**, Kintner, J. A., Carmichael, J. D.	Earthquake Rupture Propagation and Arrest in a Highly Variable Stochastic Stress Field. **McLaskey, G. C.**, Kammer, D. S., Ke, C. Y.		11:30 AM	Well Logs from the South Florida Basin. **McNutt, S. R.**, Herbert, T. A.	Assessing the Applicability of the Use of Simulation Results in Non- Ergodic GMMs for Areas Without Empirical Data. **Sung, C.**, Abrahamson, N.	Investigation of Basin Effects in Po Plain in Italy: A Case Study From 2012 Emilia Earthquake Sequence. **Paramasivam, B.**, Seyhan, E.
11:45 AM– 2:00 PM	Lunch Break				11:45 AM– 2:00 PM	Lunch Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9		Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
	Earthquake Shaking and the Geologic Record: Triggered Phenomena and Preserved Fragile Geologic Features (see page 1370).	**Advancements in Forensic Seismology and Explosion Monitoring** (see page 1316).	**New Directions in Environmental, Seismic Hazard and Mineral Resource Exploration Studies** (see page 1436).			**Exploring the Complexity of Fault Discontinuities** (see page 1386).	**Challenges and Opportunities in Constraining Ground-motion Models from Physics-based Ground-motion Simulations** (see page 1346).	**Macroseismic Intensity: Past, Present and Future** (see page 1417).
2:00 pm	Evaluating the New Zealand National Seismic Hazard Model 2022 with Fragile Geologic Features. **Stirling, M. W.**, Pratt, T.	New Constraints on Seismic Source Type Evident in 3D Waveform Inversions, Application to Remote Historical Nuclear Explosions in Western China. **Kintner, J. A.**, Modrak, R., Nelson, P. L.	STUDENT: Construction of 3D Finite Element Meshes from Drone Images: A Step Towards a Non-destructive Testing Framework for Engineering Structures and Their Response to Earthquakes. **Delaney, E. T.**, Marty, P., Gebraad, L., Zunino, A., Fichtner, A.		2:00 pm	How Wide Are Faults? **Rowe, C. D.**, Hatem, A. E.	Development of a Non-ergodic Ground Motion Model for the Groningen, Netherlands Region Based on a Hybrid Empirical and Simulation Dataset. **Lavrentiadis, G.**, Oral, E., Asimaki, D.	Making the Case for Implementing the International Macroseismic Scale (IMS) in the United States. **Wald, D. J.**, Hortacsu, A., Quitoriano, V., Ortiz-Millan, M., Tremayne, H., Porter, K. A., Silva, V.
2:15 pm	Paleoseismic Records of the Dead Sea Reveals Climatic Modulation of Seismicity Along the Continental Transform Faults. Marco, S., Wdowinski, S., Lu, Y., Le Blanc, A., **Higgins, M.**	Characterization of Road Construction Explosions Recorded Along an Ocean-bottom Fiber With Distributed Acoustic Sensing. **Viens, L.**, Delbridge, B. G., Beckett, J.	INVITED: Ambient Noise Tomography (ANT) as a Scalable Data Platform for Machine-learning Driven Mineral Discovery. **Muir, J.**, Olivier, G., Reid, A.		2:15 pm	Building Non-planar 3D Fault Models From Earthquake Hypocenters. **Alongi, T.**, Elliott, A., Skoumal, R., Hatem, A. E., Shelly, D. R.	STUDENT: Estimating Systematic Source, Site, and Path Effects in Non-ergodic Ground Motion Models: Insights From the Turkish Ground Motion Database. **Liu, C.**, Macedo, J.	The U.S. Contribution to the International Macroseismic Scale. **Porter, K. A.**, Hortacsu, A., Wald, D. J.
2:30 pm	Directivity Effect of the 1976 Guatemala Earthquake Observed in Lacustrine Turbidites. **Maurer, J.**, Obrist-Farner, J., Gibson, D., McEnaney, T., Eckert, A., Kenney, W.	The Source Physics Experiment and Distributed Acoustic Sensing. **Porritt, R.**, Stanciu, C., Luckie, T., Abbott, R. E.	INVITED: STUDENT: Producing a State-wide Ground Deformation Map of Alaska With Satellite Remote Sensing. **Atkins, C. M.**, Lucy, J. T., Werth, S., Shirzaei, M.		2:30 pm	Sentinel-1 InSAR Analysis Reveals Longer Periods of Creep and the Segmentation of Enriquillo Plantain Garden Fault Following the 2021 M7 Nippes, Haiti. **Higgins, M.**, Wdowinski, S.	Non-ergodic Site Model for Ground Motion Analysis: Incorporating Regionalization, Kappa and Basin Effects. **Nie, S.**, Baise, L. G.	Towards the Integration of Field and Web-based Macroseismic Surveys in Italy. **Rovida, A.**, Antonucci, A., Bernardini, F., De Rubeis, V., Ercolani, E., Graziani, L., Locati, M., Rossi, A., Sbarra, P., Sorrentino, D., Tertulliani, A., Tosi, P.
2:45 pm	3D Mapping and Dynamic Analysis of Precariously Balanced Rocks for Fragility Modeling. Chen, Z., Rodge, D., Mahalle, A., **Arrowsmith, R.**, Das, J., Wittich, C., Madugo, C., Kottke, A. R.	Reviewing Seismoacoustic Coupling Mechanisms for Infrasound From Underground Explosions. **Kim, K.**, Green, D. N., Bowman, D. C., Blom, P. S., Bishop, J. W.	Subsurface Geologic Controls on Seismic Site Response Across the Continental United States. **Kehoe, H. L.**, Boyd, O. S., Moschetti, M. P., Bozdağ, E., Caylor, E. A.		2:45 pm	Fault Geometric Complexity and Displacements of 2016 Kaikōura Earthquake Surface-ruptures, New Zealand. **Nicol, A.**, Howell, A., Walsh, J., Mouslopoulou, V., Boulton, C., Parker, M.	Research, Development and Implementation Priorities for Ground-motion Characterization in USGS Earthquake Hazards Program Hazard, Risk Assessment and Forecast Products. **Aagaard, B. T.**, Baltay, A., Moschetti, M. P., Thompson, E. M., Luco, N., Boyd, O. S., Grant, A., Graves, R., Hirakawa, E., Hough, S. E., Kehoe, H. L., Makdisi, A. J., Parker, G. A., Petersen, M. D., Powers, P. M., Rezaeian, S., Stephenson, W. J., Stone, I., Wald, D. J., Wirth, E. A., Withers, K. B., Yong, A.	Exploring the Capabilities of Llms for Earthquake Science: A Case Study on Macroseismic Intensity Measurement. **Mousavi, S.**
3:00 pm	Rapid Assessment of Precariously Balanced Rocks Using UAVs and 3D Semantic Structure from Motion. **Chen, Z.**, McPhillips, D., Scharer, K., Ross, Z.	Assessment of Seismoacoustic Signals From Wavefield Experiments at a Nuclear Facility in Texas. **Park, J.**, Arrowsmith, S., Clarke, J., Hayward, C., Chai, C., Marcillo, O., Maceira, M., Thomas, J. O., Cunningham, J.	Probabilistic Seismic Hazard Assessment in Namibia. **Kadiri, U. A.**, Sitali, M., Midzi, V.		3:00 pm	The Impact of Pre-existing Weaknesses on Early Strike-slip Fault Evolution. **Cooke, M. L.**, Ramos Sánchez, C.	Uncertainty in Ground-motion Forecast: A Perspective From New Zealand National Seismic Hazard Model Revision. **Bora, S.**, Bradley, B., Gerstenberger, M. C., Kaiser, A.	INVITED: STUDENT: A New Intensity Data Set and Intensity Prediction Equation for Crustal Earthquakes in the Western United States. **Fathian Sabet, A.**, Sung, C., Abrahamson, N.
3:15– 4:30 pm	Poster Break				3:15– 4:30 pm	Poster Break		

Time	Holiday Ballroom 1	Holiday Ballroom 4–6	Key Ballroom 9	Time	Key Ballroom 10	Key Ballroom 11	Key Ballroom 12
		Advancements in Forensic Seismology and Explosion Monitoring (see page 1316).	**New Directions in Environmental, Seismic Hazard and Mineral Resource Exploration Studies** (see page 1436).		**Compiling Active Faults for Improved Hazard Modeling from Cascadia to Alaska** (see page 1352).	**Modern Waveform Processing and Engineering Datasets - Accessibility, Quality Control, and Metadata** (see page 1426).	
4:30 PM		Seismoacoustic Yields of Local to Near-regional Distance Explosions Using Distributed Acoustic Sensing (DAS). **Delbridge, B. G.**, Viens, L., McLaughlin, J. M., Luong, L., Ta, T., Cadol, D., Bilek, S.	Ten Days of Continuous Aftershock Hum Following the 2019 Ridgecrest, California, Mainshocks Observed With Borehole Seismometers. **Shearer, P.**, Senobari, N. S.	4:30 PM	Crustal Stress in Alaska and NW Canada: New Insights Into Intraplate Deformation and Fault Slip Potential. **Levandowski, W.**, Ruppert, N.	INVITED: Recent Improvements and Lessons Learned From Processing Ground Motions at the U.S. Geological Survey. **Thompson, E. M.**, Aagaard, B. T., Hearne, M., Smith, J. A., Worden, C. B., Smith, K., Schleicher, L. S., Steidl, J. H., Kottke, A. R.	
4:45 PM		Possible Double Bolide Measured Across the Idaho National Laboratory Broadband Seismic Network. **Bockholt, B.**, Langston, C. A.	Seismic Hazard from the Aftershocks of Subduction Interface Earthquakes. **Onur, T.**, Herrera, C., Cassidy, J., Seemann, M.	4:45 PM	Current State of Paleoearthquake Data for the Alaska Range. **Bemis, S. P.**, Koehler, R. D.	STUDENT: Exploring the Utility of Earthquake Spectra Collected From Smartphones for Ground-motion Modeling. **Marcou, S.**, Allen, R. M.	
5:00 PM		STUDENT: Cardinal: Seismic and Geoacoustic Array Processing. **Ronac Giannone, M.**, Arrowsmith, S., Silber, E. A.	STUDENT: Does the Mississippi Embayment Edge Have Any Effect on Site Amplification? **Abbasi Hafshejani, Z.**, Cramer, C., Pezeshk, S.	5:00 PM	Active Faulting in Western Canada: Definition and Review of Current Knowledge. **Hobbs, T. E.**, Clague, J. J., Harrichhausen, N., Finley, T., Douglas, K., Schaeffer, A., Barrie, J. V., Mendoza, R. B., Leonard, L. J., Zaleski, M., Journeay, J. M., Kolaj, M., Podhorodeski, A., Styron, R.	The Next-generation ESM: Generating Reference Earthquake Data Sets from High-quality Semi-automated Waveform Processing. **Luzi, L.**, Mascandola, C., Felicetta, C., Lanzano, G., Russo, E., Clinton, J. F., Cauzzi, C., Bienkowski, J., Sleeman, R., Marmureanu, A., Predoiu, A., Ktenidou, O. J., Melis, N., Theodoulidis, N., Konstantinidou, K., Hollender, F., Perron, V., Riga, E., Manakou, M., Cambaz, D., Hancilar, H., Roumelioti, Z., Sokos, E., Jerše Sharma, A., Zupancic, P., Vanneste, K., Mihaljevic, J., Weatherill, G., Rupakhety, R., Tepeuğur, E.	
5:15 PM		STUDENT: Leveraging Seismic Particle Motion of Air-to-ground Coupled Waves to Investigate the Structure of the Shallow Subsurface. **Scamfer, L. T.**, Fee, D., Bishop, J. W., Haney, M., Macpherson, K. A.	Analytical Approximations for Propagating Epistemic Uncertainty and Modeling Virtual Faults for Areal Sources in Seismic Hazard Analysis. **Lacour, M.**, Abrahamson, N.	5:15 PM	CRESCENT CFM: Building a Community Fault Model for the Cascadia Subduction Zone. **Fildes, R. A.**, Streig, A. R., Amos, C., Bennett, S. E. K., Hatem, A. E., Meigs, A., Roland, E., Styron, R., Tobin, H., Ledeczi, A., Lucas, M.	Australian Ground-motion Records Portal. **Ghasemi, H.**, Allen, T.	
5:30 PM		Diurnal and Weekly Acoustic Background Noise Fluctuations in the Vicinity of the P-tunnel Complex at the Nevada National Security Site. **Bowman, D. C.**, Malach, A. K., Wharton, S., Turley, R. S., Schalk, W. W., White, R. L., PE1 Experiment Team.	Does Detailed Site Characterization and Ground Response Analysis Change Projected Building Damage Estimates? Sanon, C., **Baise, L. G.**, Kaklamanos, J.	5:30 PM	Seismicity Relocations Between 2016 and 2019 Near the 1872 Entiat Earthquake in Central Washington. **Wu, Q.**, Wong, I. G., Cakir, R., Gray, B., Bubeck, A.	Deep Learning-based Approaches to Assess Waveform Quality for Engineering Applications. **Zaker Esteghamati, M.**, Namin, A., Kottke, A. R.	

Poster Sessions

Earthquake-triggered Ground Failure: Data, Hazards, Impacts and Models (see page 1373).

1. Regionalized Geospatial Liquefaction Model for California Using Bayesian Logistic Regression. Shirzadi, H., **Baise, L. G.**, Moaveni, B.
2. STUDENT: Site-characterization Vis-À-vis Surface-consistent Probabilistic Seismic Hazard From Kashmir Himalaya to Northwest Himalaya. **Bind, A.**, Nath, S., Sengupta, P.
3. Earthquake Damage Assessment Empowered by AI Remote Sensing: Case Studies in 2023 M7.8 Kahramanmaraş Earthquake, 2023 M6.0 Jishishan Earthquake and 2025 M7.1 Southern Tibetan Plateau Earthquake. **Hu, X.**, Yu, X., Xu, Y., Song, Y., Lin, F.
5. Nonergodic-based Risk Assessment of Liquefaction-induced Ground Damage. **Macedo, J.**, Liu, C.
6. Mathematical Support for Slope Processes Risk Zoning Using Data About Possible Earthquakes. **Zimin, M.**, Kondratyeva, N., Zimin, M.

Why Ignore the Structure? Soil-structure Interaction and Site Response at Local and Regional Scales (see page 1481).

7. STUDENT: Evaluating Soil-structure Interaction and Site Response in Urban Excavation: Insights From the I-495 Project Next. **Faizan, A.**, Halata, M.
8. STUDENT: Nonlinear Dynamic Analysis of RC Structures and Soil Structure Interaction Effects. **Haghani, M.**
9. STUDENT: Application of Bayesian SPAC to Estimate Vs30 and Classify Soils in Ponce, Puerto Rico. **Herazo, M.**, Vanacore, E., Pachhai, S., Martínez-Cruzado, J. A.
10. Toward Neural Network Based Automated Structural Health Monitoring With MyShake Smartphones. **Kumar, U.**, Marcou, S., Allen, R. M.
11. STUDENT: Incorporating Uncertainties Into Vs-delta Kappa_0 Corrections. **Lee, J.**, Barba, D., Cabas, A.
12. Nonlinear Site Response Observed by the NDHU Downhole Array During the April 2, 2024 Taiwan M7.4 Earthquake. **Lin, C.**, Kuo, C., Hsieh, H., Wang, Y., Huang, J.
13. STUDENT: Willamette Valley Site Characterization With HVSR. **Mann, C. A.**, Sahakian, V. J.
14. Cosmos Site Characterization Working Group: Achievements and Perspectives, From the Determination of Soil Properties to the Consideration of Topography and Installation Effects. **Pilz, M.**, Askan, A., Hollender, F.
15. Shear-wave Velocities in the Bellingham and Everett Basins, Washington State: Insights From Multimethod Characterization With krSPAC and Active-source Linear Arrays. **Stephenson, W. J.**, Lindberg, N. S., Leeds, A., Holland-Goon, K., Odum, J. K.

Macroseismic Intensity: Past, Present and Future (see page 1419).

17. The Scientific Value of Internet Macroseismic Data in Operational Seismology. **Bossu, R.**, Cheny, J., Issartel, S., Landès, M., Roch, J., Roussel, F., Steed, R., Ucciani, G.
18. A Proposed Canadian National Annex to the International Macroseismic Scale. **Hobbs, T. E.**, Porter, K. A., Wald, D. J., Onur, T., Crane, S.
19. To Intensity and Beyond: On the Limits of the Conventional Macroseismic Intensity Scale. **Hough, S. E.**
20. INVITED: STUDENT: Using "Did You Feel It?" Data to Map Spatially Variable Site Amplification in the Central and Eastern United States: Lessons From the 2024 M 4.8 Tewksbury, New Jersey, Earthquake. **Meyer, E. H.**, Baise, L. G., Kaklamanos, J., Nie, S., Roberts, M. E., Zhan, W.
21. Guidelines on Using (Uncertain) Macroseismic Data in ShakeMap. **Quitoriano, V.**, Worden, C. B., Thompson, E. M., Wald, D. J.
22. The Effect of Structural Damage on Shakemap. Vitale, A., **Rosti, A.**, Giorgio, M., Iervolino, I.
23. Twenty Years of EMS-98 Practice in Italy: A Successful Experience. **Rovida, A.**, Tertulliani, A., Antonucci, A., Arcoraci, L., Azzaro, R., Berardi, M., Bernardini, F., Camassi, R., Castellano, C., D'Amico, S., Del Mese, S., Ercolani, E., Fodarella, A., Graziani, L., Locati, M., Maramai, A., Pessina, V., Rossi, A., Tuvè, T.
24. Constraints of the Non-ergodic Path Effects for Short Distances in GMMs using the Modified Mercalli Intensity Data. **Sung, C.**, Abrahamson, N.

Earthquake Shaking and the Geologic Record: Triggered Phenomena and Preserved Fragile Geologic Features (see page 1371).

25. A New Type of Paleoseismic Evidence From Lake Sediments. **Morey, A. E.**
26. New Methods for Analyzing Precariously Balanced Rocks in the Eastern U.S. **Pratt, T.**, Stirling, M. W., McPhillips, D., Figueiredo, P.
28. Developing a New Intensity Measure for USGS's ShakeMap: Cumulative Absolute Velocity (CAV). **Smith, K. K.**, Thompson, E. M., Worden, C. B., Wald, D. J.
29. Precariously Balanced Rocks in Northern New York and Vermont, U.S.A.: Ground-motion Constraints and Implications for Fault Sources. **McPhillips, D.**, Pratt, T.

Temporally Variable Records of Earthquake Behavior and Considerations for Seismic Hazard Analyses (see page 1470).

30. INVITED: Disentangling Slip-rate Variability in Time and Space at the Cucamonga Fault, Southern California, USA. **McPhillips, D.**, Scharer, K., Mere, A. M.
31. Wasatch Fault Zone Paleoseismic Rupture Models. **DuRoss, C. B.**, Hatem, A. E., Wong, I. G., Schwartz, D., McDonald, G., Hiscock, A., Kleber, E., Lund, W.
32. Earthquake and Slip-rate History of the Middle Branch of the Northern Anatolian Fault, Türkiye. **Harrichhausen, N.**, Aykut, T., de Sigoyer, J., Klinger, Y., Yıldırım, C., Baka, Ç., Allemand, A., Wenqian, Y., Karakaş, M.
33. Assessment of Legacy Fault Studies and New Geological Mapping: Towards Improving Seismic Hazard Models at Yucca Mountain, Nevada. **Koehler, R. D.**, Faulds, J. E., Vlcan, J.
34. STUDENT: Reconstructing Vertical Deformation Using Stratigraphy and Microfossils to Infer Megathrust Rupture History on Sitkinak Island, Alaska. **Nowak, T.**, Dura, T., Engelhart, S., Koehler, R. D.
35. INVITED: Short-term Variations in Earthquake Production in the Southern San Andreas Fault System Due to Lake Level Variations in Lake Cahuilla, Salton Trough, California: Implications for Short-term Slip Rate Variability. **Rockwell, T. K.**
36. The Secondary Zone of Subsidence (SZS) During Subduction Zone Interseismic Deformation and Its Implications for Megathrust Earthquake Potential. **Wang, K.**, Luo, H., Feng, L., Hill, E.
37. Non-ergodic Probabilistic Fault-displacement Hazard Analysis. **Liou, I. Y.**, Abrahamson, N.

Challenges and Opportunities in Constraining Ground-motion Models from Physics-based Ground-motion Simulations (see page 1350).

39. Simulation of Physics-based 0-10 Hz Ground Motion Using High-performance Computing Supporting Refinements to Regional Ground Motion Models for the Central Eastern U.S. Pitarka, A., **Graizer, V.**, Aguiar, A., Rodgers, A. J.
40. Estimation of the Horizontal Site Amplification Factors at Sites in the Noto-hanto Area in Japan based on the Microtremor Horizontal-to-vertical Spectral Ratios: A Special Case for the Vertical Amplification Correction Function. **Ito, E.**, Nakano, K., Kawase, H., Matsushima, S., Bao, Y.
41. STUDENT: Advancing Seismic Site Response Predictions: Integrating Vs Gradients and Vs Contrasts. **Katuwal, S.**, Pretell, R.

42. STUDENT: Tamp1.5: Estimating the Effect of Site-specific Kappa on High-frequency Ground Motion Utilizing Elastic Response Spectral Shapes. **Largent, M.**, Abrahamson, N.
44. Validation of Two New CyberShake Studies in California. **Meng, X.**, Graves, R., Callaghan, S., Milner, K. R.
45. Incorporating Stress Drop into Non-ergodic Ground Motion Models. **Nie, S.**, Wang, Y.
46. Basin Identification Using the Continuous Wavelet Transform on Digital Elevation Models for Seismic Hazard Analysis. **Nie, S.**, Baise, L. G.
47. Evaluating the Relationship Between Slip and Slip-velocity on Large-magnitude Ruptures Based on Surface Displacement. **Pinilla Ramos, C.**, Abrahamson, N.

Modern Waveform Processing and Engineering Datasets - Accessibility, Quality Control, and Metadata (see page 1427).

48. STUDENT: A Curated Database of High Quality Microtremor HVSR From U.S. Permanent Seismic Stations. **Anbazhagan, B.**, Vantassel, J. P., Rodriguez-Marek, A.
49. STUDENT: An Updated Review of Ground Motion Flatfiles in the Chilean Subduction Zone. **Bastias, N.**, Montalva, G. A., Leyton Flórez, F., Heresi, P., Dominguez, H.
50. Marsquakes Then and Now: Revisiting Viking With Insight. **Charalambous, C.**, Fernando, B., Lazarewicz, A., Nakamura, Y., Pike, T.
52. Operational Response Insights from the December 2024 Cape Mendocino, California Earthquake Waveform Data Processing and Quality Review. **Schleicher, L. S.**, Steidl, J. H., Blair, L., Terra, F., Hagos, L., Brody, J., Shao, H., McClain, A., Bradshaw, R., Dhar, M., Amador, V., Marcus, J., Luna, E., Carrasco Rodriguez, V., Childs, D., Kinkaid, K., Smith, J., Haddadi, H., Croker, D.
53. Ground Motion Dataset Verification and Validation, Insights Into Unexpected Sources of Uncertainties Associated to Ground Motion Modeling. **Traversa, P.**, Buscetti, M., Perron, V., Rischette, P., Hollender, F., Arroucau, P.
54. Usability of Records by China Earthquake Early Warning Network for Ground Motion Model Development. **Xie, J.**, Wang, W., Li, X.

Advancing Seismic Hazard Models (see page 1332).

55. Subduction Zones in USGS National Seismic Hazard Models. **Altekruse, J. M.**, Powers, P. M.
56. Geologic and Seismotectonic Data for the 2026 American Samoa and Mariana Islands National Seismic Hazard Model Update. **Herrick, J. A.**, Briggs, R., Hatem, A. E.,

Jobe, J. A. T., Ten Brink, U., Stephenson, W. J., Lindberg, N. S., Leeds, A. L., Lynch, E. M., Powell, J. H., Miller, N. C.

57. Sensitivity of Seismic Hazard Models to Catalog Magnitude Conversion Relations. **Llenos, A. L.**, Shelly, D. R., Shumway, A. M.

58. The USGS 2025 Puerto Rico and U.S. Virgin Islands Earthquake Rupture Forecast. **Milner, K. R.**, Hatem, A. E., Briggs, R., Jobe, J. A. T., Llenos, A. L., Michael, A. J., Shumway, A. M., Field, E. H., Haynie, K. L.

60. Comparing Site-specific Seismic Hazard Analyses with the National Seismic Hazard Model for the Central and Eastern U.S. **Wong, I. G.**, Zandieh, A., Darragh, B., Kayastha, M., Chowdhury, I., Lewandowski, N., Thomas, P., Wu, Q., Yenihayat, N.

61. Update of the Lower Seismogenic Depth Model for Western U.S. Earthquakes. **Zeng, Y.**, Petersen, M. D., Boyd, O. S.

Earthquakes, Lithospheric Structure, and Dynamics in Stable Continental Region (see page 1377).

62. The February 2024 M4.1 Earthquake Offshore Cape Canaveral, Florida. **Braunmiller, J.**, Rodriguez Cardozo, F. R., Thompson, G., McNutt, S. R.

63. STUDENT: A New Fault Characterization in Lajas Valley, Southwestern Puerto Rico. **Justiniano, C.**, Vanacore, E., Pratt, T., López Venegas, A. M.

64. Stress and Slip Potential of Quaternary Faults and Possible Tectonic Features in the Central and Eastern U.S. **Levandowski, W.**

65. New Seismotectonic Models of Metropolitan France and Neighboring Intraplate Regions for Seismic Hazard Assessment. Jeandet, L., Jomard, H., **Mazzotti, S.**

66. Long-term Erosion as a Catalyst of Shallow Seismicity in Stable Continental Regions – Examples of Metropolitan France. **Mazzotti, S.**, Malcles, O., Vernant, P., Grosset, J., Damon, A., Le Bec, R.

67. Three Earthquakes in the Baltimore Gneiss. **McLaughlin, K. L.**

68. Spatial Distribution of the Mohorovičic Discontinuity Beneath Northeastern Mexico Based on Receiver Functions From Acceleration and Velocity Records. Montalvo-Lara, C. E., **Pérez-Campos, X.**, Montalvo-Arrieta, J. C.

69. STUDENT: Maryland Seismicity: Insights From Moment Tensor Inversion With a Sparse Seismic Network. **Ravinsky-Gray, Y. A.**, Lekic, V.

70. STUDENT: Magnetotelluric (MT) Upper Mantle Resistivity Structure of the Mississippi Embayment and Alabama-Oklahoma Lineament. **Sarker, K.**, Cramer, C.

71. Event Detection and Hypocenter Uncertainty Analysis of Induced Earthquakes the Rome Trough, West Virginia. **Schmidt, J. P.**, Carpenter, S., Wang, Z.

72. STUDENT: Reassessing Tectono-structural Units and Crustal Thickness Variations in Southwest Cameroon Using Gravity and Seismic Data. **Stephane Landry, K.**, Franck Eitel, K.

73. Source Characteristics of the 2020 Mw 5.1 Sparta, North Carolina, Earthquake Sequence. **Wu, Q.**, Chapman, M. C.

74. 3D Shear-wave Velocity Structure of the North American Midcontinental Lithosphere. **Yang, X.**, Stevens Goddard, A., Liu, L., Li, H., Ridgway, K., Marshak, S.

Compiling Active Faults for Improved Hazard Modeling from Cascadia to Alaska (see page 1353).

76. STUDENT: Mapping New Subsurface Faults in the Butte Valley, Northern California. **Neupane, P.**, Magnani, M., Fedotova, A., Claramunt, A. V., Aggul, D.

77. STUDENT: Origins of the Purcell Mountains Swarm. **Noel, S. K.**, West, M. E.

78. Deep Learning-driven Seismicity Catalog of the Cascadia Region. Niksejel, A., **Zhang, M.**

Exploring the Complexity of Fault Discontinuities (see page 1387).

79. STUDENT: Refining 3D Fault Geometry for the Hayward-calaveras Fault Connection in the Bay Area of Northern California. **Castaneda, K.**, Madden, E.

80. Creeping Through a Stepover: Top-down View From Geomorphology, Seismology, and Geodesy. **Hanagan, C. E.**, DeLong, S. B., Reitman, N., Liu, Z., Alongi, T., Scott, C. P.

81. STUDENT: Plate Boundary Geomechanical Model of Northern California Bay Area. **Johnson, N. S.**, Tran, A., Truong, S., Madden, E.

Advancements in Forensic Seismology and Explosion Monitoring (see page 1320).

82. Distributed Acoustic Sensing Technology in Seismological Monitoring: A Validation Through Numerical Modeling of 3D Wave Propagation. **Bianchi, I.**, Campus, P.

83. Characterization of Multi-yield Controlled Chemical Explosions Using Infrasound. Silber, E. A., **Bowman, D. C.**, Kim, K.

84. Moment Tensor Inversion Analysis of DPRK6 Nuclear Events Using CTBTO/IMS Data. **Chi Durán, R.**

85. Time-variable Moment Tensor Inversion Applied to Seismic Data Collected at the PE1-A Experiment. **Darrh, A.**, Preston, L. A.

86. Exploring Paired Neural Networks to Identify Similar Waveforms. **Emry, E. L.**, Donohoe, B., Tibi, R., Young, C. J., Ramos, M. D., Conley, A. C.

87. Using Unsupervised Deep Learning to Denoise Data From Distributed Acoustic Sensing. **Headen, J. M.**, Tibi, R., Hodgkinson, K. M.

88. Accurate Modeling of Seismic Waveforms of PE1-A Explosion. **Larmat, C. S.**, Rougier, E., Knight, E., Euser, B., Syracuse, E.

89. Recovery and Digitalization of Semipalatinsk Test Site Nuclear Explosions From Legacy Analog Seismograms. **Mackey, K.**, Burk, D., Berezina, A., Shiman, D., Yeginbekova, N., Abdrakhmatov, K.

90. STUDENT: Source Characterization of Nuclear Tests From Reloaded Tunnels in Degelen Mountain From High-quality Digitalized Seismic Data. **Martinetti, L. B.**, Mackey, K.

91. Examination of the Rock Valley Flower Structure Effects on Earthquake Wave Propagation. **Pennington, C. N.**, Matzel, E., Pitarka, A., Price, A., Walter, W. R.

92. Examining Seismicity Surrounding the PE1-A Chemical Explosion With a Dynamic Correlation Processor. **Pyle, M. L.**, Aguiar, A., Team, P.

93. STUDENT: A Comprehensive Analysis on Global Bolide Infrasound. **Ronac Giannone, M.**, Silber, E. A., Sawal, V.

94. mtuqorg: A Modular Approach to Moment Tensor Estimation and Uncertainty Quantification With MTUQ. **Thurin, J.**, Modrak, R., McPherson, A., Rodriguez Cardozo, F. R., Braunmiller, J., Ding, L., Liu, Q., Kintner, J. A., Hu, J., Tkalčić, H., Tape, C.

95. Using Nonlinear Thresholding of Stockwell Transforms to Denoise Seismic Waveforms. **Tibi, R.**

96. Analog Geophysical Data [From Nuclear Tests]: Which Digitization Software Should I Use? How Can I Leverage the Power of AI for Forensic Analysis of Analog Data? **Walker, R.**, Soto-Cordero, L.

97. The Source Physics Experiment on Seismic Waves Generated by Explosions: Results and Future Plans. **Walter, W. R.**, Snelson, C. M., Abbott, R. E., Whittaker, I. C., Pyle, M. L., Bodmer, M., Pine, J., Alger, E., Carr, C. G., Falliner, J., Pennington, C. N., Bonner, J.

98. Seismoacoustic Explosive Yield Estimation Using Ground-coupled Airwaves Recorded on a Local Seismic Network. **Wynn, N. R.**, Koch, C., Berg, E. M.

99. Seismoacoustic Signals from the Tropicana Implosion. Wright, M., Walker, G., **Zeiler, C. P.**, Eckert, E.

Exploring Planetary Interiors and Seismology: Observations, Models, Experiments and Future Missions (see page 1385).

102. What, When, Why? An Overview of InSight Operations on Mars and Available Datasets. **Horleston, A. C.**, Stähler, S. C., Stott, A. E., Ceylan, S., Euchner, F., Clinton, J. F., Brunet, E., Lognonné, P., Panning, M. P., Pike, T., Banerdt, W. B.

103. A New Lunar Crustal Thickness Constrained by Converted Seismic Waves Detected Beneath the Apollo Seismic Network. **Kim, D.**, Lekic, V., Wieczorek, M. A., Schmerr, N., Collins, G. S., Panning, M. P.

104. STUDENT: Exploring Uncertainty of Single-station Focal Mechanism Inversions of Cerberus Fossae Marsquakes. **Moore, C.**, Maguire, R. R.

105. STUDENT: Studying the Coupling of Unburied Distributed Acoustic Sensing (DAS) for Lunar Seismology. **Probst, S. N.**, Zandanel, A., Gao, K., Ollila, A. M., Lanza, N. L., Robertsson, J. O. A., Donahue, C. M.

106. A Transdimensional Framework for Array-based Seismic Phase Detection and Characterization. **Zhang, Z.**, Lekic, V.

New Directions in Environmental, Seismic Hazard and Mineral Resource Exploration Studies (see page 1438).

107. Seismic Studies in Southern Nevada Using a Low-cost Raspberry Shake Network. **Bonner, J. L.**, Ichinose, G.

108. STUDENT: Machine Learning-based Seismogenic Zones for Seismic Hazard Estimation in Mexico. **Contreras-Alvarado, L.**, Ramírez-Guzmán, L., Iglesias-Mendoza, A.

109. Nodal Seismometer Recordings of Aftershocks of the 5 December 2024 Mw 7.0 Offshore Cape Mendocino Earthquake. **Goldman, M.**, Catchings, R. D., Sickler, R., Chan, J. H., Criley, C. C., Erdem, J. E., Sawi, T., McPherson, B., Stockdale, K.

110. Predicting Site Amplification in New Zealand Using Measured and Inferred Proxies. **Manea, E.**, Kaiser, A., Wotherspoon, L., Stolte, A., Hill, M., Gerstenberger, M. C.

111. STUDENT: Dynamic Triggering of Earthquakes in Costa Rica. **Hajaji, S.**, Chaves, E. J.

112. Comparing Ambient Noise Methods for Estimating Dispersion Curves at the Local-to-regional Scale. **Harding, J. L.**, Gauvain, S. J., Preston, L. A.

113. Inter-station Approaches to Identify Repeated Seismic Sources. **Hawthorne, J.**

114. STUDENT: Shear Wave Velocity Profiling in Urban Areas Using Micro-array Microtremor HVSR Inversion and SPAC Method. **Kim, J.**, Kwak, D.

115. STUDENT: Probing Seismicity Secrets With Five Nodal Arrays Around the San Jacinto Fault. **Morioka, T.**, Brenguier, F., Cochran, E., Fan, W., Higueret, Q., Hollis, D., Shearer, P., Vernon, F., Vidale, J., Wang, R., Zhang, H.

116. STUDENT: Investigating the Subsurface Structure of the Chestnut Hill Embankment Dam Using the Ground Penetrating Radar (GPR) Method. **Olawoyin, V. T.**, Ebel, J. E.

117. STUDENT: Investigating Tremor-like Episodes at Salt Domes Used for Underground Energy Storage in the US Gulf Coast. **Ramotso, K.**, Persaud, P.

118. STUDENT: Shear Wave Imaging by Inverting Surface Wave Dispersion Curves Extracted From Train Induced Vibrations and Urban Traffic Noise. **Soni, Y.**, Pulliam, J., Zhang, R., Quiros, D.

Numerical Modeling in Seismology: Theory, Algorithms and Applications (see page 1444).

119. AxiSEM3D - Fast, Efficient Seismic and Acoustic Synthetics for Complex 3D Models. **Fernando, B.**, Leng, K., Wolf, J., Nunn, C., Long, M. D., Nissen-Meyer, T.
120. Computer Programs in Seismology – 50 Years of Progress. **Herrmann, R. B.**
121. Multidomain FDM/PSM Hybrid Method for Elastic Wave Simulation. Sun, W., **Zhang, W.**
122. STUDENT: Estimation of Ground Motion Through Deconvolution-linear Scaling-convolution Method. **Kim, M.**, Ryu, B., Kwak, D.
123. STUDENT: Evaluation of Velocity Models of Sichuan-Yunnan Region on Strong Ground Motion Simulation. **Li, T.**, Zhang, W.

124. Unraveling Supershear Dynamics of the 1995 Mw 7.2 Multi-segment Nuweiba Earthquake in the Gulf of Aqaba. **Li, B.**, Mai, P., Ulrich, T., Cahli, S., Gabriel, A., Klinger, Y., Jónsson, S.
125. STUDENT: CRAM3D-SPECFEM3D Hybrid Simulations of Seismic Waves from Nuclear Explosion Based on Interface Discontinuity. Du, N., Liu, T., Stevens, J., O'Brien, M., Ryan, K., **Liu, Q.**
126. STUDENT: Waveform Modeling of Hydroacoustic Records From Autonomous Mermaid Floats. **Pipatprathanporn, S.**, Simons, F. J., Du, N., Liu, Q.
127. Yield and Depth of an Explosion From Regional Seismograms With Source Complexity—Illustration of the Effectiveness Using Synthetic Seismograms. **Saikia, C. K.**
128. STUDENT: Fully-dynamic Seismic Cycle Simulations in Co-evolving Fault Damage Zones Controlled by Damage Rheology. **Zhai, P.**, Huang, Y., Liang, C., Ampuero, J.