SCEC ANNUAL MEETING

2025

SEPTEMBER 7-10, 2025

HILTON PALM SPRINGS

STATEWIDE CALIFORNIA
EARTHQUAKE CENTER

Statewide California Earthquake Center (SCEC)

With funding from the National Science Foundation, U.S. Geological Survey, and other sources, SCEC collaborates with academic, government, industry, and other organizations to: (1) Gather and analyze data from field observations and laboratory experiments. (2) Develop system-level models and simulations of earthquake processes to synthesize knowledge as a physics-based understanding of seismic hazard. (3) Communicate that understanding to expand knowledge and reduce earthquake risk.

The Statewide California Earthquake Center builds on SCEC's legacy of leveraging cutting-edge research, interdisciplinary collaborations, and a systems-level approach. SCEC now focuses on the entire San Andreas Fault System which allows us to: **Address key science questions** in a broader tectonic context, **Strengthen partnerships** across disciplines to improve earthquake science and hazard analysis, and **Engage a wider range of participants**, from academia and government to the public.

13:00 - 16:00 SCEC Annual Meeting Check-In, *Hilton Lobby*

13:00 - 16:00 Poster Setup: Group A, *Plaza Ballroom and Hilton Lobby*

13:00 - 16:00 **Grounds for Funding: A Strategic Coffee Chat**, *by appointment*

Meet with USC's Director of Research Advancement and Strategic Initiatives, Dr. Heidi Smith Parker, for practical insights into today's evolving funding landscape. Tailored for early career researchers, this opportunity offers the chance to ask questions, receive direct feedback on your proposals, and explore strategies for aligning with funder priorities while adapting to new expectations.
Sign up at: www.scec.org/events/2025-grounds-for-funding

13:30 - 15:00 **"Quake Heroes" Film Screening**, *Horizon Ballroom*

Host: Mark Benthien (USC)

This 55-minute documentary film portrays how neighbors, firefighters, scientists, nurses, engineers and the media helped people in the aftermath of the 1994 Northridge earthquake. Through interviews, live-action reenactments, news footage, and SCEC animations and safety guidance, a very compelling and motivational story is told. A brief discussion will be held at the completion of the film, including how attendees can request screenings for their institution or other organizations in their communities.

16:00 - 17:30 **Session 1: The State of SCEC**, *Horizon Ballroom*

This opening session kicks off the annual meeting with an update from the Director on the Center's recent milestones and upcoming priorities. The External Advisory Council will offer perspectives on navigating the changed landscape, followed by highlights from SCEC teams on outreach, education, and community engagement initiatives. The science leadership will then present recent achievements, including updates on the SCEC Community Earth Models—setting the stage for deeper exploration in subsequent discussions and poster sessions.

Moderators: Tran Huynh (USC) and Gaby Noriega (USC)

16:00 - 16:20 State of SCEC from the Director, Yehuda Ben-Zion (USC) & Ahmed Elbanna (USC)

16:20 - 16:30 Report from the Board of Directors, Rachel Abercrombie (Boston University)

16:30 - 16:40 Report for the External Advisory Council, Steve Bohlen (LLNL)

16:40 - 16:55 Community Engagement & Workforce Development, Mark Benthien (USC), Tran Huynh (USC), & Gaby Noriega (USC)

16:55 - 17:15 SCEC Research Highlights, Greg Beroza (Stanford) and Alice Gabriel (UCSD)

17:15 - 17:30 SCEC Community Earth Models, Scott Marshall (Appalachian State) & Patricia Persaud (Arizona)

17:30 - 18:30 **Distinguished Speaker:** Tom Rockwell (SDSU) on "Off-Fault Deformation and Seismic Hazard: Insights into Variations Across Southern California's Strike-Slip Faults and Their Implications for Maximum Magnitude (Mmax)"

18:30 - 20:00 Group Dinner, *Hilton Poolside*

20:00 - 22:00 **Poster Viewing 1 (Group A)**, *Plaza Ballroom and Hilton Lobby*

20:00 - 22:00 **Grounds for Funding: A Strategic Coffee Chat**, *Plaza Ballroom Foyer*

07:00 - 08:00 Continental Breakfast, *Hilton Poolside*

07:00 - 08:00 **SCEC Transitions Program Breakfast Club**, *Tapestry Room*

08:00 - 10:00 **Session 2. Forecasting Earthquakes with Continuous Data: From Lab to Field,** *Horizon Ballroom*

Advances in tools like DAS, fiber-optic geodesy, continuous waveform analysis, and AI are transforming earthquake forecasting and hazard assessment. This session surveys how we can leverage continuous data for nowcasting, forecasting, or precursor identification—from lab experiments to field-scale applications—and explores new frontiers in real-time monitoring and predictability science.

Moderators: Max Werner (Bristol) and W. Ashley Griffith (Ohio State)

08:00 - 08:15 Remarks for the USGS, Gavin Hayes, Senior Science Advisor for Earthquake and Geologic Hazards

08:15 - 08:30 Session Introduction and Overview, Max Werner (Bristol) & W. Ashley Griffith (Ohio State)

08:30 - 09:00 The Potential of Earthquake Forecasting with Fiber-Optic Sensing, Jiaxuan Li (Houston)

09:00 - 09:30 Heterogeneous high frequency seismic radiation from dynamic rupture interactions with a normal stress bump, Sara Beth Cebry (USGS)

09:30 - 10:00 Collaboration Planning Discussion

10:00 - 10:30 **Live Poster Lightning Talks (Group A)**, *Horizon Ballroom*

10:00 - 12:00 **Poster Viewing 2 (Group A)**, *Plaza Ballroom and Hilton Lobby*

10:30 - 13:00 **Grounds for Funding: A Strategic Coffee Chat**, *by appointment*
Sign up at: www.scec.org/events/2025-grounds-for-funding

12:00 - 13:30 Group Lunch, *Hilton Poolside, Terrace Restaurant, Tapestry Room*

14:00 - 16:00 **Session 3. Risky Communications: New Approaches to Talking about Earthquakes in a Challenging World**, *Horizon Ballroom*

In an era where social media influencers, AI-generated news, and misinformation often outpace traditional science communication, how do we effectively convey earthquake hazard and risk to promote community resilience? This session explores innovative strategies for engaging diverse audiences through emerging platforms, navigating misinformation, and rethinking the role of trusted voices in a rapidly evolving media landscape.

Moderators: Brian Olson (CGS) and Lisa Grant Ludwig (UC Irvine)

14:00 - 14:15 Remarks for the Cal OES, Jose Lara, Seismic Hazards Branch Chief

14:15 - 14:30 Session Introduction and Overview, Brian Olson (CGS) & Lisa Grant Ludwig (UC Irvine)

14:30 - 15:00 Navigating Earthquake Information in the Age of AI: What Science Communicators Need to Know About News and AI Generated Earthquake Content, Samantha Stanley (UC Berkeley)

15:00 - 15:30 Do consumers of news secretly love earthquakes? Hear from a reporter on strategies to get out good, accurate information to the public, Rong-Gong Lin (LA Times)

15:30 - 16:00 Collaboration Planning Discussion

16:30 - 18:00 **Poster Viewing 3 (Group A):** *Plaza Ballroom and Hilton Lobby*

18:00 - 20:00 Poster Switch Out: Group A posters removed by 6:00 pm. Group B posters installed by 8:00 pm.

18:30 - 20:00 Group Dinner, *Hilton Poolside*

20:00 - 22:00 **Poster Viewing 4 (Group B)**, *Plaza Ballroom and Hilton Lobby*

20:00 - 22:00 **Grounds for Funding: A Strategic Coffee Chat**, *Plaza Ballroom Foyer*

Tuesday, September 9 www.scec.org/meetings/2025/am

07:00 - 08:00 Continental Breakfast, *Hilton Poolside*

08:00 - 10:00 **Session 4. Machine Learning, Artificial Intelligence, Big Data and Digital Twins for Earthquake Science,** *Horizon Ballroom*

The growing intersection of computational power, big data, machine learning, and geoscience is transforming how we understand and model earthquake processes. This session explores cutting-edge computational approaches—such as digital twins for fault systems, AI applications, and novel data integration methods—that are advancing earthquake science toward more comprehensive predictive capabilities.

Moderators: Daniel Trugman (UNR) and Gareth Funning (UC Riverside)

08:00 - 08:15 Remarks for the NSF, Luciana Astiz, Program Director

08:15 - 08:30 Session Introduction and Overview, Daniel Trugman (UNR) & Gareth Funning (UC Riverside)

08:30 - 09:00 Toward Trustworthy AI for Earth Science: Lessons from Climate Modeling and a Vision for Earthquake Science, Karianne Bergen (Brown)

09:00 - 09:30 Enhanced earthquake detection with graph neural networks: Applications to northern California seismicity, Ian McBrearty (Stanford)

09:30 - 10:00 Collaboration Planning Discussion

10:00 - 10:30 **Live Poster Lightning Talks (Group B)**, *Horizon Ballroom*

10:00 - 12:00 **Poster Viewing 5 (Group B)**, *Plaza Ballroom and Hilton Lobby*

12:00 - 13:30 Group Lunch, *Hilton Poolside, Terrace Restaurant, Tapestry Room*

14:00 - 16:00 **Session 5. The Influence of Fault Rheology from Tremor to Rupture**, *Horizon Ballroom*

This session explores how material properties and fault rheology influence earthquake nucleation, rupture propagation, and seismic hazard. Drawing on experimental rock mechanics, in-situ and remote observations, and numerical modeling, we will address topics such as strain localization, inelastic off-fault deformation, pore pressure evolution, and the roles of damage and healing in earthquake cycles, and how they affect earthquakes and faulting across scales.

Moderators: Amanda Thomas (UC Davis) and Wenyuan Fan (UCSD)

14:00 - 14:15 Remarks for the FEMA, Jon Foster, Senior Earthquake Program Manager

14:15 - 14:30 Session Introduction and Overview, Amanda Thomas (UC Davis) & Wenyuan Fan (UCSD)

14:30 - 15:00 California's Geological Framework and Consequent Fault-System Behavior, Mike Oskin (UC Davis)

15:00 - 15:30 Do fault material properties and rheology govern shallow slip behavior in strike-slip fault systems? Alexis Ault (Utah State)

15:30 - 16:00 Collaboration Planning Discussion

16:30 - 18:00 **Poster Viewing 6 (Group B)**, *Plaza Ballroom and Hilton Lobby*

18:00 - 20:00 Poster Switch Out: Group B posters removed beginning 6:00 pm.

18:30 - 20:00 Group Dinner, *Hilton Poolside*

07:00 - 08:00 Continental Breakfast, *Hilton Poolside*

08:00 - 10:00 **Session 6. Understanding Rupture Dynamics and Improving Physics-Based Ground Motion Simulations,** *Horizon Ballroom*

Understanding dynamic rupture, including directivity effects and rupture speed, is central to predicting strong ground motions and to understanding earthquake physics. This session features insights from the Mw 7.5 Mandalay, Myanmar earthquake and their relevance to California, along with recent advances in physics-based ground motion simulations. We explore their rupture characteristics, ground motion observations, and implications for California fault systems.

Moderators: Roby Douilly (UC Riverside) and Domniki Asimaki (Caltech)

08:00 - 08:15 Remarks for the PG&E, Albert Kottke, Geotechnical Earthquake Engineer

08:15 - 08:30 Session Introduction and Overview, Roby Douilly (UC Riverside) & Domniki Asimaki (Caltech)

08:30 - 09:00 Probing Rupture Dynamics and Ground Motion Signatures from Induced and Natural Earthquakes, Elisa Tinti (Sapienza)

09:00 - 09:30 Simulating Seismic Wavefields using Generative Artificial Intelligence, Rie Nakata (LBNL, ICSI)

09:30 - 10:00 Collaboration Planning Discussion

10:00 - 10:30 Recess: Take a break!

10:30 - 12:00 **The Path Ahead: Co-Envisioning SCEC's Next Phase,** *Horizon Ballroom*

With a new Center Director appointed, SCEC will enter its next chapter in 2026. Ahmed Elbanna will share his vision for the future amid a changing environment, funding constraints, and emerging opportunities. He will outline strategies for advancing earthquake science, education, outreach, and preparedness in California and beyond—emphasizing interdisciplinary collaboration, community engagement, and societal resilience.The session will conclude with an open forum inviting the community to help shape SCEC's future priorities.

Moderators: Greg Beroza (Stanford) and Alice Gabriel (UCSD)

10:30 - 10:45 Session Introduction and Overview, Greg Beroza (Stanford) & Alice Gabriel (UCSD)

10:45 - 11:30 A Vision for the Future, Ahmed Elbanna (USC)

11:30 - 11:45 Collaboration Planning: Shaping SCEC's future priorities for advancing earthquake science, education, outreach, and preparedness in California and beyond

11:45 - 12:00 **Closing Remarks** from the SCEC Director, Yehuda Ben-Zion (USC)

Poster Sessions

www.scec.org/meetings/2025/am/posters

Posters are divided into two groups: Group A (odd-numbered posters) and Group B (even-numbered posters). Each group has three dedicated poster sessions. Posters are on display in the Plaza Ballroom and Hilton Lobby.

Sunday, September 7

20:00 - 22:00 Poster Group A

Monday, September 8

10:00 - 10:30 Group A Live Lightning Talks

10:00 - 12:00 Poster Group A

16:30 - 18:00 Poster Group A

20:00 - 22:00 Poster Group B

Tuesday, September 9

10:00 - 10:30 Group B Live Lightning Talks

10:00 - 12:00 Poster Group B

16:30 - 18:00 Poster Group B

All posters also have a virtual “poster space” in the online SCEC Annual Meeting platform, open September 7-17. Go to the online poster gallery to view posters and videos, message authors, or leave feedback.

Seismology

Posters 001-058

GROUP A

001 Bimaterial Effect and Favorable Energy Ratio Enable Supershear Rupture in the 2025 Myanmar Quake, *Liuwei Xu, Lingsen Meng, Zhang Yunjun, Yidi Wang, Yanchen Yang, Changyang Hu, Huihui Weng, Wenbin Xu, Elizabeth Su, and Chen Ji*

003 Improving Iso-surface Depth (z1.0) Estimates for California Sites from Measured Profiles and Geology-Based Proxy Models for Ground Motion Studies, *Rashid Shams, Chukwuebuka Nweke, Tristan Buckreis, Scott Brandenberg, and Jonathan Stewart*

005 Learning Complex Fault Structures from Hypocenter Distributions via Point Cloud Segmentation, *Yanlan Hu, and Gregory Beroza*

007 On the origin of seismic signals from concerts and its potential use to monitor stadium health, *Shane Zhang, Huiyun Guo, Abellaine Murti, Parisa Vazira, Flora Lo, Jacob Chow, Ariel Raymond, Qiushi Zhai, Igor Stubailo, Gabrielle Tepp, Monica Kohler, and Zhongwen Zhan*

009 Favorable tidal stress triggers more tremors with higher energies, *Siyuan Zhang, Heidi Houston, Shuye Huang, and Binhao Wang*

011 S/P Amplitude Ratios with Distributed Acoustic Sensing, *Robert Skoumal, James Atterholt, Andrew Barbour, and Jeanne Hardebeck*

013 Induced Seismicity in Southeastern New Mexico, *Justin Rubinstein*

015 Ground motion variability observed in the 2019 Ridgecrest, California earthquake sequence, *Elizabeth Cochran, Grace Parker, Sarah Minson, and Annemarie Baltay*

017 Seismogeodetic early warning system: A step forward in tsunami and earthquake warning and mitigation, *Jonatan Glehman*

019 Evaluating earthquake early warning performance using "Did You Feel It?", *Jessie Saunders, and David Wald*

021 Variability and reliability of stress drops from the SCEC/USGS Community Stress Drop Validation Project, *Annemarie Baltay, and Rachel Abercrombie*

023 Faults and fractures of the Salton Sea geothermal field revealed by interferometry of an earthquake swarm, *Eric Matzel, Dennise Templeton, and Christina Morency*

025 Fault geometry from 12 years of relocated earthquakes (2013-2025) near Lake Almanor, Northern California, aided by a nodal deployment, *Clara Yoon, Robert Skoumal, Jeanne Hardebeck, Rufus Catchings, Mark Goldman, Joanne Chan, and Robert Sickler*

027 Source parameter estimation using the Coda Calibration Tool in the Korean Peninsula and Yellow Sea region (2.2 < Mw < 5.5), *Minkyung Son, Kevin Mayeda, Jorge Roman-Nieves, Tae Seok Oh, and Chang Soo Cho*

029 Fault Fabric in Relation to Seismicity and Fault Geometry in the San Andreas - Cascadia Transition Zone, *Debi Kilb, and Vera Schulte-Pelkum*

031 Correlation between fault fabric strength and creep suggests rock type as a controlling parameter, *Vera Schulte-Pelkum, Debi Kilb, and Thorsten Becker*

033 Fiber-Imaged Supershear Dynamics in the 2024 Mw7 Mendocino Fault Earthquake, *James Atterholt, Jeff McGuire, Andrew Barbour, Connie Stewart, and Morgan Moschetti*

035 Characterizing the spatial and temporal behavior of deep tectonic tremor along the Nankai Trough, *Sirena Motter, Gaspard Farge, and Emily Brodsky*

037 Eikonal Travel-time Tomography of the Los Angeles Basin, *Eli Bird, Ettore Biondi, Robert Clayton, and Zhongwen Zhan*

039 Evaluation of Distributed Acoustic Sensing Phase Pick Quality and Performance for Operational Earthquake Monitoring, *Gabrielle Tepp, Nytica Artiaga, and Ettore Biondi*

041 Insights into Seismic Site Response in San Fernando and San Gabriel Basin using Geomorphometric Parameters, *Ana Sotelo Romero, Rashid Shams, and Chukwuebuka Nweke*

043 3D San Fernando Valley and Los Angeles Basin Depth Map from Receiver Functions Guided by Gravity Measurements, *Valeria Villa, Robert Clayton, and Patricia Persaud*

045 Variations in mechanical properties control segmentation of oceanic transform faults, *Fengzhou Tan, Wenyuan Fan, Peter Shearer, Mark Behn, and Jeff McGuire*

047 Insights into fault behavior in southern Kansas from stress evolution modeling of multiple induced earthquake sequences, *Rosamiel Ries, Gregory Beroza, and William Ellsworth*

049 Seismic Noise Analysis: Assessing Station Data Quality in the Southern California Seismic Network, *Dev Raja, Igor Stubailo, and Gabrielle Tepp*

051 Earthquake site response across tectonically complex regions of the continental United States, *Haiyang Kehoe, Oliver Boyd, James Atterholt, Morgan Moschetti, Ebru Bozdag, and Emilia Caylor*

053 Aftershock imaging with a rapid response array for the April 14, 2025 magnitude 5.2 Julian, California earthquake, *Binayak Parida, Abhijit Ghosh, Shankho Niyogi, Heather Ford, Guadalupe Bravo, Ashley Stroup, Adam Margolis, Axel Periollat, Shiori Nakaya, and Rebecca Leung*

055 Temporal evolution of local seismicity along the Sagaing fault with reference to the March 2025 M7.7

057 Leveraging a Multi-Task Deep Learning Model to Enhance the California Statewide Earthquake Focal Mechanism Catalog, *Junhao Song, Weiqiang Zhu, and Bo Rong*

GROUP B

002 Long-term repeating earthquakes and physical drivers of the 2022 Ferndale and 2024 Offshore Cape Mendocino earthquake sequences, *Saeed Mohanna, Grant Kawamoto, Lingsen Meng, Max Liu, John Wellik, and Roland Bürgmann*

004 Fluid-Abundant Subduction–Transform Fault Interactions During the 2024 Mw 7.0 Mendocino Earthquake, *Jinzhi Ma, Elizabeth Su, Liuwei Xu, and Lingsen Meng*

006 From fire to fault: Public reactions to the 2025 Los Angeles wildfire alerting as a model for aftershock earthquake early warning response, *Allen Husker, Sandra Vaiciulyte, Jessie Saunders, and Lynn Hulse*

008 Seismologically Lossless Compression of Distributed Acoustic Sensing Data via Compressive Sensing: Taiwan MiDAS Case Study, *Yang Ma, Lingsen Meng, and Yen-Yu Lin*

010 Dynamic triggering of earthquakes at Coso and Ridgecrest, California, *Yu-Fang Hsu, Xiaofeng Meng, and Yehuda Ben-Zion*

012 The Rock Valley Direct Comparison: Deep Core Drilling in a Unconstrained Fault Zone and Seismometer Emplacement, *Colin Pennington, William Walter, Catherine Snelson, Robert Abbott, A. Christian Stanciu, Andrew Miller, Jessie Pine, C Freimuth, Ken Gaynor, Chris Carr, Jonathan Falliner, C Jewell, Ethan Alger, Matthew Dietel, Jessie Bonner, Ken Smith, and Moira Pyle*

014 Determination of the path of optic cable using the high-sampled data of the distributed acoustic sensing, *Hobin Lim, Byoungjoon Yoon, Sang-Jin Choi, and Kwan-Hee Yun*

016 Coupled flow and geomechanics modeling of ground deformation and fault stability at the Wilmington Field, CA, 1936-2020, *Lluis Salo-Salgado, Josimar Silva, Andreas Plesch, John Shaw, and Ruben Juanes*

018 False Positives in the Identification of Dynamic Earthquake Triggering, *Jeanne Hardebeck, Nicolas DeSalvio, Wenyuan Fan, and Andrew Barbour*

020 Lessons learned in the field: Collecting seismic data in Walker Lane, *Heather Ford, Roby Douilly, Ashley Stroup, Joseph Byrnes, and Delton Samuel*

022 Ps Receiver Functions in the Presence of Anisotropy, *Ashley Stroup, and Heather Ford*

024 Beamforming Out-of-Network Earthquakes on Short DAS Cable Subsegments for Earthquake Early Warning, *Theresa Sawi, Jeff McGuire, Andrew Barbour, Clara Yoon, and James Atterholt*

026 Detect water-saturation degrees within the fault zone during co-seismic damage and post-seismic heal, *Yong-Gang Li*

028 Validating and improving community velocity models using Rayleigh wave ellipticity, *Fan-Chi Lin, HyeJeong Kim, Konstantinos Gkogkas, Gabriela Zaldivar Andrade, Robert Clayton, and Taka'aki Taira*

030 Spatiotemporal Seismicity Patterns and Strain Release in Active Magma-Poor Rifts, Resolved with a Machine-Learning-Enhanced Earthquake Catalog, *Meritxell Colet, Folarin Kolawole, Rasheed Ajala, Felix Waldhauser, and Kaiwen Wang*

032 Deployment of a nodal array to capture two earthquake clusters near Malibu, California, *Hao Zhang, Elizabeth Cochran, Xiaozhuo Wei, and Zhongwen Zhan*

034 Conjugate faulting in the Gorda plate and its influence on the southern Cascadia subduction thrust, *Bo Rong, Weiqiang Zhu, and Roland Bürgmann*

036 Distinguishing Spatial Variations in California Earthquake Dynamics Using a High- to Low-Frequency Spectral Ratio, *Ian Vandevert, Peter Shearer, and Wenyuan Fan*

038 Spatiotemporal Clustering and Migration of Seismicity in the Delaware Basin: Insights into the Causal Mechanisms of Induced Basement Earthquakes, *Yijian Zhou, Krittanon Sirorattanakul, Zijun Fang, Jaewoo An, Jeff Nunn, and Jean-Philippe Avouac*

040 Volcanic or tectonic origin? A case study of the 2025 Santorini-Amorgos sequence, *Xing Tan, William Ellsworth, Gregory Beroza, Stephanie Prejean, and Jeremy Pesicek*

042 An Enhanced Earthquake Catalog for the 2020 Monte Cristo Range Sequence Derived from Machine Learning Processing of a Dense Aftershock Deployment, *Maia Zhang, Daniel Trugman, Michelle Scalise, Eric Eckert, and Cleat Zeiler*

044 Probing Seismicity Secrets with Five Nodal Arrays around the San Jacinto Fault, *Taiga Morioka, Florent Brenguier, Elizabeth Cochran, Wenyuan Fan, Quentin Higueret, Dan Hollis, Peter Shearer, Frank Vernon, John Vidale, Ruoyan Wang, and Hao Zhang*

046 Leveraging Multi-Phase and Multi-Method Spectral Ratio Analysis for Robust Stress Drop Estimation, *Trey Knudson, William Ellsworth, Gregory Beroza, and Bruce Shaw*

048 Seismicity bursts stand out from background seismicity in Southern California, *Nicolas DeSalvio, Wenyuan Fan, Andrew Barbour, and Jeanne Hardebeck*

050 Characterizing Broadband Source Spectra of Moderate Earthquakes: Revising Site Response Uncertainty and Its Impact on Source Parameters, *Chen Ji, and Ralph Archuleta*

052 Enhancing Seismic Event Association: Leveraging Signal Similarity and Correlation Detection with Machine Learning, *Louisa Barama, Ana Aguiar, and Moira Pyle*

054 Ambient Noise Full Waveform Inversion with Neural Operators, *Caifeng Zou, Zachary Ross, Robert Clayton, Fan-Chi Lin, and Kamyar Azizzadenesheli* Myanmar earthquake sequence, *Shankho Niyogi, and Abhijit Ghosh*

056 3D Least-Squares Migration of Teleseismic Receiver Functions and Its Application, *Pengfei Zuo, and Yunfeng Chen*

058 Seismic Simulations for Structure and Source Characterization in the Bay Area: Foundations for ML Acceleration of Waveform Modelling, *Claire Doody, Jiun-Ting Lin, Qingkai Kong, Luis Vazquez, Caifeng Zou, Youngsoo Choi, Arthur Rodgers, Kamyar Azizzadenesheli, Zachary Ross, and Robert Clayton*

Tectonic Geodesy

Posters 059-083

GROUP A

059 The 2025 Mw7.7 Mandalay, Myanmar, earthquake: extremely long and uniform rupture part of a fault supercycle, *Solène Antoine, Rajani Shrestha, Chris Milliner, Kyungjae Im, Chris Rollins, Kang Wang, Kejie Chen, and Jean-Philippe Avouac*

061 Using Sentinel-1 InSAR time series to characterize postseismic motions around the 2021 Mw 5.3 Calipatria earthquake, Imperial Valley, CA, *Katherine Guns, Kathryn Materna, and Andrew Barbour*

063 How Can Fault Slip Inversions Be Reliable? Insights from Bayesian Analysis of the 2019 Ridgecrest Earthquakes and Afterslip, *Xiong Zhao, and Junle Jiang*

065 GNSS/InSAR/UAVSAR Integration for 3-D Deformation Field and fault creep rates in California, *Zheng-Kang Shen, and Zhen Liu*

067 Identification of Previously Unmapped Faults using Phase Gradient Interferometry Nearby Major Earthquakes, *Rubi Garcia-Gonzalez, David Sandwell, and Yehuda Bock*

069 Linking Fault Slip and Near-Surface Deformation on the Southern San Andreas Fault at Mecca Hills, *Asenath Kwagalakwe, Eileen Evans, Gladys Pantoja, and Allen Gontz*

071 Complete fault kinematics of the creeping faults in central California - San Andreas Fault and Calaveras Fault, *Li-Chieh Lin, and Gareth Funning*

073 Total Surface Displacement from Geodetic Imaging Refines Fault Scaling Relations for Continental Strike-Slip Earthquakes: Implications for shallow slip deficits and Constant Stress Drops, *Chris Milliner, Jean-Philippe Avouac, Brian Chiou, and Rui Chen*

075 A closer look at interseismic creep and postseismic deformation on the Pütürge segment of the East Anatolian Fault, *Celeste Hofstetter, Seda Özarpacı, and Gareth Funning*

077 Kinematics of Creep Events on the Imperial Fault, *M. Morow Tan, Kathryn Materna, Roger Bilham, and Daniel Gittins*

079 Seasonal to Multiannual Creep Rate Changes Along the Hayward, Rodgers Creek, and Maacama Faults, *Danielle Lindsay, Taka'aki Taira, and Roland Bürgmann*

081 Surface displacements and megathrust slip of the M8.8 2025 Kamchatka earthquake from Sentinel-1 and ALOS-2 InSAR, *Gareth Funning, and Axel Periollat*

083 Updating GNSS measurements of postseismic deformation after the 2019 Ridgecrest earthquake sequence and site positions in the central Mojave Desert, *Katie Baraggiotta, Gareth Funning, and Karlee Rivera*

GROUP B

060 An Ensemble of Block Models Applied to Southern California, *Monica Diaz, and Eileen Evans*

062 The potential for improved ShakeAlert earthquake early warning using real-time distributed slip models, *Jessica Murray*

064 Updating the central San Andreas fault creep record with alignment array and differential lidar measurements at high spatial resolution, *Catherine Hanagan, Stephen DeLong, Jessie Vermeer, and Travis Alongi*

066 Disentangling on-fault and off-fault contributions to geodetic strain rates in California, *Nicolas Castro Perdomo, and Kaj Johnson*

068 An ensemble approach to tectonic block models: new capabilities and applications, *Eileen Evans, Jayson Sellars, Abigail Travers, Monica Diaz, and Jack Loveless*

070 Earthquake-triggered displacements in the central Salton Trough reveal wide range of slip modes, *Kathryn Materna, and M. Morow Tan*

072 Insights and Emerging Directions from Force-Balance Based Joint Inversion of GNSS and InSAR, *Mradula Vashishtha, William Holt, and Jeonghyeop Kim*

074 Source model of surface deformation and seismicity at the Campi Flegrei, *Jinhui Cheng, Mateo Acosta, and Jean-Philippe Avouac*

076 Intra-Frame Deformation Model: Improving the spatial resolution of vertical land motions through InSAR/GNSS integration, *Lavoisiane Ferreira, Yehuda Bock, David Sandwell, and Aubrey Bennett*

078 Investigating earthquake scaling relationships from InSAR-derived source parameters, *Karlee Rivera, and Gareth Funning*

080 Refining interseismic velocity field around the Anza seismic gap with campaign GNSS data, *Cornelius Waldhausen, Yuri Fialko, and Yehuda Bock*

082 Intra-Frame Deformation Model for the Western U.S. versus the epoch-date subnetwork approach, *Aubrey Bennett, Yehuda Bock, Lavoisiane Ferreira, Peng Fang, Zhen Liu, Angelyn Moore, Joe Roberts, Roland Hohensinn, and David Sandwell*

Plate Boundary System (PBS) — Posters 084, 086

GROUP B

084 Tectonic corridors of the northern San Andreas plate boundary system: Developing a new framework crustal deformation model, *Matthew Herman, and Kevin Furlong*

086 Analysis of the 2025 Kamchatka, Russia earthquake sequence: Preliminary results, *Kazuyoshi Nanjo, Joe Yazbeck, and John Rundle*

Stress and Deformation Over Time (SDOT) — Posters 088-100 (even numbers)

GROUP B

088 Tectonic pump as an upward elevator for microbes in the accretionary prism of subduction zones, *Zhengze Li, Sylvain Barbot, and Karen Lloyd*

090 Joint Characterization of Transient Deformation and Repeating Earthquakes in California, *Junle Jiang, and Taka'aki Taira*

092 Using repeating earthquake sequences and geodetic data to build a statewide creep rate model, *Norma Contreras, and Gareth Funning*

094 Viscoplastic fault rock properties from creep experiments on naturally damaged rocks from the San Andreas Fault, *Nairong Du, and Hiroki Sone*

096 Testing the Role of Plasticity on the Frictional Strength of Calcite Gouge with Increasing Normal Stress, *Sophia Wright*

098 Viscoplastic rheology for characterizing the bulk rheology of fault zone rocks, *Hiroki Sone, Mayukh Talukdar, and Zirou Jin*

100 Stress Changes on the San Andreas Fault due to Groundwater Fluctuations in the Central Valley, *Molly Zebker, David Sandwell, Adrian Borsa, and Yehuda Bock*

Earthquake Geology — Posters 085-123 (odd numbers), 102-136 (even numbers)

GROUP A

085 Can Short Earthquakes Imitate the long Ones? Seismic Analysis of a Fault-Crossing Tunnel via ABAQUS Explicit with Focus on Displacements at Critical Points, *Ahmad Iqbal, and Yu Zhang*

087 Complex Spatial-Temporal Rupture Patterns of Reverse Faults: The Dunstan Fault, Otago, New Zealand, *Alex Travers, Mark Stirling, Andrew Gorman, Jonathan Griffin, and Dan Clark*

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In 2024, the Statewide California Earthquake Center (SCEC) adopted a new organizational structure to meet evolving scientific and programmatic needs. The SCEC leadership and staff are a dedicated and diverse group of scientists and professionals representing various career stages and institutions. They guide and support the Center activities by leveraging their expertise in earthquake research, education, administration, and community engagement.

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Core Institutions of SCEC allocate a minimum of $35,000 annually to support their own personnel and students in earthquake research, education and outreach, and other activities that align with the Center's mission. Core Institutions designate an Institutional Director to serve on the Board of Directors to help lead the Center.

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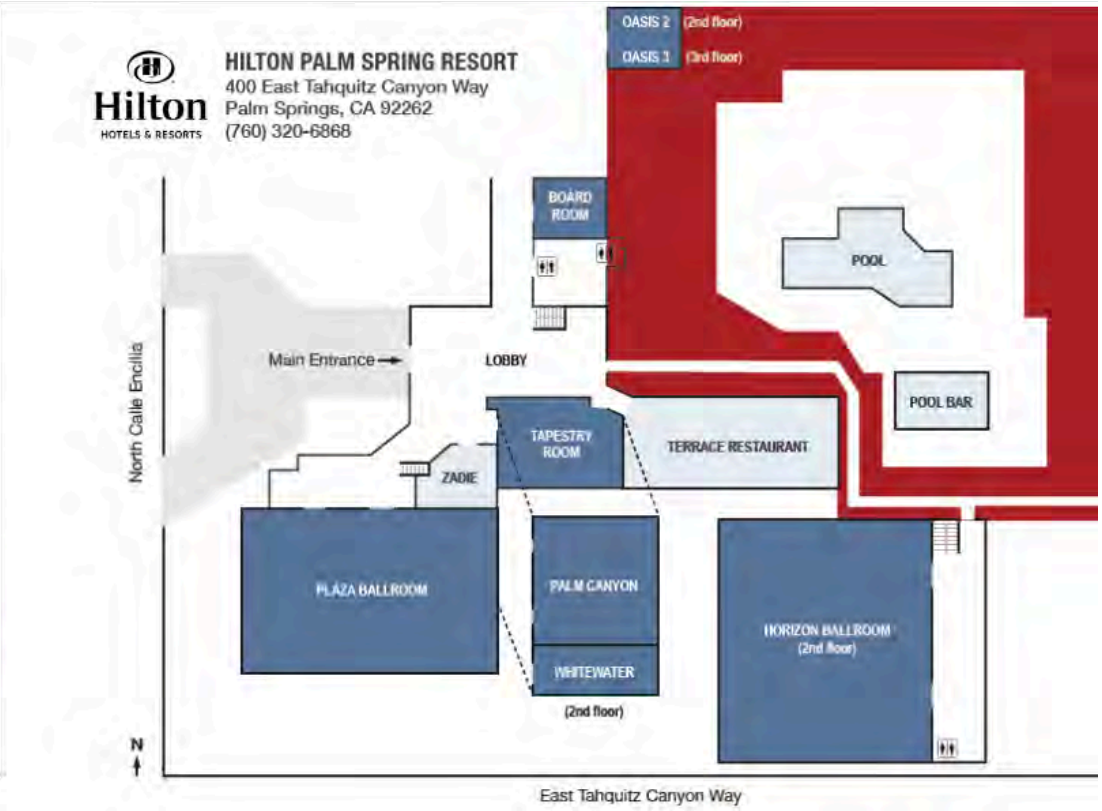
Agua Caliente Band of Cahuilla Indians Land Acknowledgement Video: youtu.be/O4TIEnxiwIA



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ONLINE COMPONENTS Only registered attendees can access the online meeting platform to view videos, discuss posters, preview posters, and contact authors during the meeting. As with all SCEC events, presenters may choose to post materials publicly after the meeting. This may take time due to permissions, but many materials will be made public by the end of September.

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GROUP MEALS will be buffet-style and planned to suit most participants. Attendees with dietary restrictions are encouraged to ask the hotel banquet staff about specific ingredients or replacement meals if necessary.

THE VENUE is ADA compliant and offers guest rooms with accessibility features. The venue is small enough that no additional space has been designated for Multi-Faith, Family, Low-Sensory or Lactation Rooms. Participants needing these accommodations have been advised to book a room at the Hilton. Captions will be available during plenary sessions. Slides will be available for download (with speaker's permission) as soon as possible after their presentation. Should issues arise at the meeting, contact the hotel staff or SCEC staff.

KEEPING HEALTHY The Centers for Disease Control and Prevention (CDC) has updated Respiratory Virus Guidance for protections against spread of COVID-19, RSV and Flu (www.cdc.gov/respiratory-viruses/prevention/index.html). While community transmission rates are low and vaccination rates are high, the nature of this event (dense gatherings in indoor spaces) requires everyone to commit to common sense hygiene and prevention strategies.