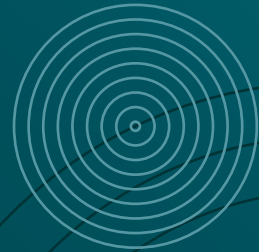


Forward Together

2023



SSA Board

Officers

Ruth Harris, *President*

Heather DeShon,
President-Elect

Peggy Hellweg, *Past President*

Kris Pankow, *Secretary*

Jacob Walter, *Treasurer*

Board of Directors

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Susan Bilek (2026)

Ashly Cabas (2025)

Roby Douilly (2025)

Karen Fischer (2024)

Victor Huerfano (2026)

Diego Melgar (2025)

Zhigang Peng (2024)

Xyoli Pérez-Campos (2024)

Carl Tape (2024)

Aaron Velasco (2026)

USGS Geologist Suzanne Hecker examines
sediments exposed in excavation along the
Rodgers Creek fault near Windsor, California.

©C. Trexler, USGS



The mission-advancing work of SSA highlighted in this annual report was made possible by the members of our tight-knit community.

In the first pages you'll meet the deserving recipients of SSA's 2024 honors. These awards, bestowed at our annual awards ceremony, are the product of great care and thought from nominators as well as the members who serve on the Society's honors committees.

We're just as delighted to introduce you to our Reviewers of the Year. They are only a few of the more than 1,200 volunteers who work with authors to ensure that SSA publishes only excellent and accurate science. Today these papers are reaching more readers than ever before thanks to SSA's first open-access journal, *The Seismic Record*, which continues to rack up page views and accolades.

Just like our peer reviewers, the mentors who volunteer in our SSA Connects program help our community make scientific progress. The Society is grateful for the sessions they have led on important topics, including writing grant proposals and convening Annual Meeting sessions.

The same kind of commitment to SSA on the part of co-chairs, conveners and workshop leaders brought us two meetings in 2023, connecting our members to one another and to the latest developments in seismology.

All of these donations of time and talent throughout the past year as well as generous financial gifts made 2023 a banner year for member support. With the addition of the new Paul Andrew Spudich Fund, SSA now offers more grants to support the future of seismology than ever before.

On behalf of SSA, thank you for each and every contribution you made to our mission. Together we advance seismology worldwide.

Ruth Harris

SSA President 2023–24



SSA recognizes the following members for their innovative research, impressive early-career contributions to the field of seismology and exemplary service both to the public and SSA.

These honorees have made a positive difference in both the global seismological community and the SSA mission to advance earthquake science worldwide.

Thingvellir National Park Iceland
Continental Divide - Tectonic Drift
between North American Plate and
Eurasian Plate

Norman A. Abrahamson

HARRY FIELDING REID MEDALIST



SSA's highest honor, this medal recognizes outstanding contributions to seismology or earthquake engineering.

Norman A. Abrahamson, a global leader in the field of probabilistic seismic hazard assessment (PSHA), is the recipient of the Society's 2024 Harry Fielding Reid Medal.

An adjunct professor of civil and environmental engineering at the University of California's Berkeley and Davis campuses and former engineering seismologist at Pacific Gas & Electric Co., Abrahamson is known for developing new methodologies as well as refining state-of-the-art practices in ground-motion modeling for crustal and subduction earthquakes; methodologies for assessing and scaling ground-motion time series for engineering applications; validation of 3D simulations; and treatment of uncertainty in PSHA.

Abrahamson has offered essential expertise in assessing seismic hazard worldwide at facilities including nuclear power plants, dams, electric grids, water and gas pipelines, tunnels and bridges. He has made valuable contributions to the National Seismic Hazard Model Project and served as a leader in a series of Next Generation of Ground-Motion Attenuation Models (NGA) projects, including NGA-West1 and 2, NGASubduction and NGA-East.

In their commendations of Abrahamson, his colleagues singled out his creative problem-solving abilities, his leadership at the interface of earth science and engineering, and his contributions to expanding gender diversity in the earthquake engineering field. The nomination included numerous comments from women working in seismology and across the sciences who said Abrahamson's generosity and commitment to inclusion changed the trajectory of their careers. "The group of successful women influenced by Norm will be a lasting legacy of his career," nominators noted.

"Norm exemplifies what it means to be a mentor. He actively and generously seeks to offer opportunities to young people working around him, even if it means that he passes up opportunities for himself." — 2024 Reid Medal Nomination Letter

Abrahamson's more than 250 publications include 170+ refereed journal papers and nearly 100 refereed conference papers on earthquake ground motion and seismic hazard. His numerous honors and awards include the 2006 William B. Joyner Memorial Lecturership, the 2009 Earthquake Engineering Research Institute (EERI) Distinguished Lecturership, the 2012 Bruce Bolt Medal and the 2023 American Geophysical Union Gilbert F. White Distinguished Award and Lectureship. Abrahamson was elected to the U.S. National Academy of Engineering in 2018 and has served in leadership roles on the boards of directors of SSA, EERI, the Pacific Earthquake Engineering Research Center and the Consortium of Organizations for Strong Motion Observation Systems.

2024 Honors

Harley M. Benz

FRANK PRESS PUBLIC SERVICE AWARD RECIPIENT

This award honors outstanding contributions to the advancement of public safety or public information relating to seismology.



Harley M. Benz, a former U.S. Geological Survey (USGS) technical coordinator for the Advanced National Seismic System (ANSS) and the director of the USGS National Earthquake Information Center (NEIC), is the recipient of the 2024 Frank Press Public Service Award for his work leading to profound improvements in how earthquake science is communicated to students, the media and decision makers.

Benz's work, say nominators, has helped deliver earthquake information widely with greater speed, frequency and accuracy than possible before.

Nominators noted the significant impact of Benz's leadership and guidance in monitoring and characterizing earthquakes worldwide, his effective engagement

and outreach, and "his research directed toward advancing the USGS mission to enhance situational awareness and improve the scope and timeliness of earthquake information in support of earthquake response."

Benz co-authored the 1999 Congressional Report that led to the formation and funding of the ANSS and helped modernize USGS earthquake analyses, reporting procedures and facilities, in particular revising the data processing and operations at NEIC to become less labor intensive and more automated.

Along with his mentorship of dozens of graduate students, postdoctoral students and early-career scientists, Benz forged many international partnerships during his time at USGS. He aided in the development of the Caribbean and N4 networks and expansion of the Global Seismographic Network, and expanded ties with the nuclear test ban treaty monitoring community that analyzes global seismic signals through the International Monitoring System. High-quality digital data from each of these networks is now available in real-time for NEIC, as a result of his efforts.

Doyeon Kim

CHARLES F. RICHTER EARLY-CAREER AWARD RECIPIENT

This award honors early-career members' outstanding contributions to the SSA mission.



Doyeon Kim, a lecturer in planetary science in the Faculty of Engineering at Imperial College London, is honored with the 2024 Charles F. Richter Early-Career Award for his scientific productivity across a variety of topics.

Kim's innovative research in seismic imaging and in finding novel ways to process seismic wave data collected from microearthquakes, earthquake coda, meteorite impacts, and oil industry active source experiments, among other sources, have greatly influenced Earth and Martian seismology. His research illuminates subsurface structures ranging from aquifer levels, shallow magmatic systems beneath volcanoes, subducting slabs such as those encountered beneath Alaska, and pervasive scatterers in the core-mantle boundary region, such as the ultra-low velocity zone beneath Marquesas that he and his colleagues discovered and described

Kim's nominators pointed out that "his work on Mars is helping lay the very foundation of Martian seismology."

in a paper published in *Science* in 2020.

As a NASA InSight mission teams' frontline scientist, Kim has applied his

expertise in method development and observational study to Mars, looking at how seismic wave observations on the Red Planet can be applied—and sometimes misunderstood—in studies of Mars' crustal structure.

Kim's publications include two essential papers for the nascent field of Martian seismology. In 2022, he was the first author of a paper published in *Science* that analyzed the first detection of surface waves on the planet's surface, after a fortuitous meteor impact. He was also the first author of a *Bulletin of the Seismological Society of America* paper in 2021 that noted the potential pitfalls of analysis and interpretation of seismic data collected by the InSight mission.

Douglas Scott Dreger

DISTINGUISHED SERVICE TO SSA AWARD RECIPIENT

This award honors individuals for their outstanding service to SSA.



For his outstanding contributions as chair of the SSA Publications Committee, Douglas Scott Dreger is the recipient of the Society's 2024 Distinguished Service Award.

Dreger, a professor of geophysics at the University of California, Berkeley, served as SSA Publications

Committee chair between 2016 and 2022. During his tenure, Dreger instigated "a broad range of initiatives intended to reinforce the reputation and financial performance of SSA's publications at a time of rapid change in the publishing landscape," reads his nomination letter.

As chair, Dreger oversaw the launch of SSA's first open-access journal, *The Seismic Record (TSR)*, and appointed Keith Koper as its inaugural editor-in-chief.

Dreger also oversaw the appointments of P. Martin Mai and Allison Bent as new Editors-in-Chief of the *Bulletin of the Seismological Society of America (BSSA)* and *Seismological Research Letters (SRL)*, respectively.

"BSSA was the first journal I read for a project as an undergraduate... years later I published my first scientific paper in BSSA. Subsequently, a majority of my life's work has been published in SSA journals." —Doug Dreger

Dreger helped to guide the redesign of *BSSA* and *SRL*, worked with then-*SRL* Editor-in-Chief Zhigang Peng to launch *SRL*'s Emerging Topics column and oversaw the revision of publication policies for all three journals, including the author sharing policy, preprint policy and supplementary content policy, to ensure the rigor and standards necessary to maintain a healthy and navigable publishing program.

2024 Honors

2024 Honors

Helen Crowley

WILLIAM B. JOYNER MEMORIAL LECTURER

Awarded by SSA and the Earthquake Engineering Research Institute (EERI), this lectureship honors William B. Joyner's career at the USGS and his commitment to continuing communication and education at the interface between research findings of earthquake science and the practical realities of earthquake engineering.



Helen Crowley, the 2024 William B. Joyner Memorial Lecturer, has collaborated closely with both the engineering seismology and earthquake engineering communities in Europe, as a member of the European Plate Observing System Seismology Consortium, and as the coordinator of the development of the first open European Seismic Risk Model.

As secretary general of the Global Earthquake Model Foundation, Crowley plays an important role in its global collaborative effort to develop open data, tools and software for state-of-the-art seismic hazard and risk assessment. She also serves as editor for *Earthquake Spectra*.

She was the 2012 recipient of the EERI Shah Family Innovation Prize and her nearly 200 publications include more than 70 papers in international peer-reviewed publications, covering many aspects of earthquake engineering with a common thread of earthquake risk estimation.

Her Joyner Lecture, "Why Seismic Hazard Modeling has Become a Risky Business," will look at the role that probabilistic seismic hazard models have historically played in defining actions for seismic design, will review the criticisms that have been placed on these models—especially, but not only, after damaging earthquakes—and will present numerous examples that underline the need for risk assessment to be an integral part of this process going forward.

Help SSA Honor Outstanding Community Members

Honors nomination deadlines are **30 September** with the exception of the Bruce Bolt Medal and William B. Joyner Memorial Lecturer, which are due **30 June**.

→ For more information, visit seismosoc.org/awards

Scientists from NASA and other agencies used satellites to map damage caused by the devastating earthquakes in southern Türkiye and western Syria in 2023.
©NASA Earth Observatory/Joshua Stevens

We are SSA.

→ We are one community of seismologists and engineers, students and professors, employees in government and private industry. Connected across six continents, we are united by our shared mission.

Together we advance seismology worldwide.

Aerial view of Excelsior Geyser (in the foreground) and Grand Prismatic Spring in Yellowstone's Midway Geyser Basin.
© Jim Peaco/National Park Service

SSA in 2023



2,799
Members worldwide



88
Countries where members reside

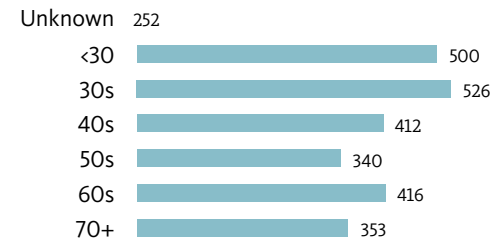


193
New members in the U.S.

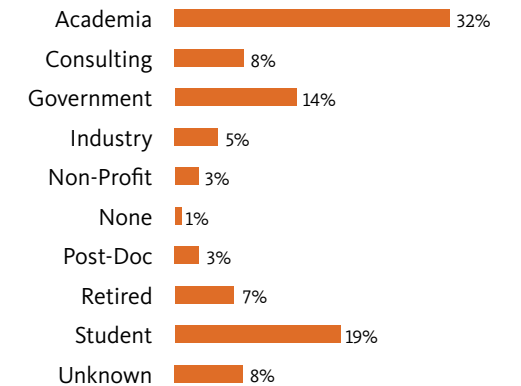


321
New members outside of U.S.

Member Age



Member Employment



→ Meet our members and learn more about their careers in SSA's monthly *At Work* column: seismosoc.org/category/at-work

We honor great scientists by continuing their work.

The Joyner Lecture, The Kanamori Fund and now, The Paul Andrew Spudich Travel Grant.



In 2023 a generous gift established The Paul Andrew Spudich Fund at SSA to honor the life and accomplishments of Paul Andrew Spudich (1950–2019), a giant in seismology and beloved member of the SSA community.

The new fund provides support to early-career and student members who have a research focus on earthquake source physics or ground motion prediction, areas to which Spudich made important contributions during his distinguished career as a seismologist with the U.S. Geological Survey (USGS).

Starting in 2024, the fund will provide its first grants for travel to a seismological conference anywhere in the world, fostering the exchange of information that is vital to scientific progress. Donations to this new fund will enable the program to grow and offer even more support in the future.

Protecting the pipeline of seismologists remains a top priority at SSA. That's why we focus so much of our support on members just starting their professional journeys. Both SSA student and early-career members enjoy deeply discounted registration fees for meetings convened by our Society as well as access to our expanding list of grant and fellowship opportunities.

Every February and July, all members are invited to apply for an SSA Community Grant, which provides the financial helping hand that so many scientists need to take their mission-advancing events across the finish line. In 2023, Community Grants of \$5,000 were awarded to:

- » Claire Richardson (Arizona State University), Joseph Phillips (Northern Arizona University) and Ken Gourley (University of Arizona), to create the Arizona Collaborative Consortium for Earth and Space Science (ACCESS) First Annual Meeting designed to foster collaboration, knowledge sharing, and professional development among Arizona's Earth and planetary geophysics communities.
- » Ericka Alinne Solano, Arturo Iglesias Mendoza and Miguel Angel Rodríguez at UNAM, Mexico City, to create a short course that focuses on Bayesian inversion methods applied to geophysical and seismological data.

This is just one of the many SSA grant programs that help our members forge new connections in the global seismological community and continue the important exchange of information that leads to scientific progress.

→ [Learn more about SSA Grants: seismosoc.org/grants-and-fellowship](https://seismosoc.org/grants-and-fellowship)

We put our members on the map with global travel grants.

SSA's global travel grants broaden horizons for early-career researchers.

Since 2018, the Global Travel Grant Program has extended the support SSA offers to early-career and student members beyond our own meetings, providing them with the financial means to participate in other seismological conferences and workshops all over the world.

In 2023, eight more SSA members received these one-of-a-kind grants, enabling them to share their research and make their names known in the global scientific community.



Ziqi (Evan) Zhang, a Global Travel Grant recipient, presenting his research at IUGG 2023.



Kiran Pandey
University of Memphis

Used his Global Travel Grant to attend: IUGG 2023 in Berlin, Germany

Observed: The inner workings of a nearby rock mechanics laboratory that is central to his research

Left with: A better comprehension of the lab's data and new connections that could lead to future partnerships and the exchange of valuable knowledge



Zoe Yin
 Scripps Institution of Oceanography

Research: Uses SAR and InSAR to characterize and quantify ground deformations surrounding earthquake ruptures. Particularly interested in smaller, secondary fault activations that can happen away from the main coseismic rupture.

Used her Global Travel Grant to attend: FRINGE 2023 in Leeds, United Kingdom

Connected with: Others interested in the same niche topics who shared their insights and provided feedback/suggestions for her research

We fact check each other's work.

Careful peer review ensures that SSA articles are both accurate and well-researched, continuing our reputation as a trusted source for science.



Sreeram Reddy Kotha



Hongyu Yu

“As an early-career researcher, serving as a reviewer for a well-recognized journal like *SRL* has been an incredibly valuable experience.”

— HONGYU YU

Sreeram Reddy Kotha of the Université Grenoble Alpes – ISTerre, Hongyu Yu of Zhejiang University and Norman A. Abrahamson of the University of California, Berkeley, were honored as SSA's Reviewers of the Year at the 2023 Annual Meeting.

Kotha was recognized for his work on behalf of *BSSA*, Yu for *SRL* and Abrahamson for *TSR*. In their recommendations for the awards, the journals' editors-in-chief cited the recipients' consistent engagement, meticulous attention to detail and wide-ranging knowledge.

“As an early-career researcher, serving as a reviewer for a well-recognized journal like *SRL* has been an incredibly valuable experience for me,” said Yu. “Not only does it allow me to stay up to date on the latest research in my field, but it also helps me develop critical thinking skills and learn to recognize and appreciate good science.”

Asked why he thought it was important to volunteer as a reviewer, Kotha said “the scientific process is arduous, and it is even harder to effectively communicate. As a reviewer, I would like to facilitate this transfer of knowledge.”

As a reviewer, he added that he also enjoys “priority access to some of the best minds in our community—that's a big win for me.”

→ Interested in being a reviewer for an SSA journal?

Register with the Editorial Manager software (click “Register” at the site) to provide more information about your expertise, including newly added categories of infrasound, seismoacoustics, environmental seismology and landslides.

SSA journals do more than share excellent science, they also support every single mission-advancing activity of our Society. Without library subscription and author fees, this small nonprofit couldn't offer all it does to every member, including deep discounts on meeting registration and professional training opportunities.



Bulletin of the Seismological Society of America

Advanced research in earthquake seismology and related disciplines

BSSA publishes original research articles in the fields of earthquake seismology, Earth structure imaging, seismic hazard assessment and related disciplines. Regular *BSSA* papers advance theory, present new methods and show novel applications. Periodic special sections cover major earthquakes and technological advances with broad impact for the field. *BSSA*'s format allows papers to fully explore research topics in detail.

Editor-in-Chief:
P. Martin Mai



Seismological Research Letters

A research journal for a broad geoscience audience that includes seismologists, engineers and natural hazards professionals

SRL publishes articles on seismology and related topics, with the goal of bridging the gaps between subspecialties within the broad geoscience audience. Periodic Focus Sections cover topics of special and timely interest to the global seismological community. Regular columns focus on topics including emerging research, historical seismology and special data collections.

Editor-in-Chief:
Allison Bent



The Seismic Record

SSA's first open-access journal

Rapid publication of short papers on the latest seismological developments and events. *TSR*'s original research articles cover all aspects of seismology and earthquake science, but they do not exceed 3,500 words (about six printed pages). This approach brings a laser focus to *TSR* papers that not only helps them stand out in the scientific community, but also makes them easier to publicize with the media and general public.

Editor-in-Chief:
Keith Koper

Top five most read articles in 2023

Bulletin of the Seismological Society of America

Impact factor ▶ 3.0

Probabilistic Seismic-Hazard Assessment for East Anatolian Fault Zone Using Planar Fault Source Models, Zeynep Gülerce, Syed Tanvir Shah, Akin Menekşe, Atilla Arda Özacar, Nuretdin Kaymakci and Kemal Önder Çetin

Earthquake Forecasting Using Big Data and Artificial Intelligence: A 30-Week Real-Time Case Study in China, Omar M. Saad, Yunfeng Chen, Alexandros Savvaidis, Sergey Fomel, Xiuxuan Jiang, Dino Huang, Yapo Abolé Serge Innocent Oboué, Shanshan Yong, Xin'an Wang, Xing Zhang and Yangkang Chen

A Double-Difference Earthquake Location Algorithm: Method and Application to the Northern Hayward Fault, California, Felix Waldhauser and William L. Ellsworth

Earthquake Phase Association with Graph Neural Networks, Ian W. McBrearty and Gregory C. Beroza

Generalized Seismic Phase Detection with Deep Learning, Zachary E. Ross, Men-Andrin Meier, Egill Hauksson, and Thomas H. Heaton

→ Learn more about SSA's publishing program or submit a paper: seismosoc.org/publications

Seismological Research Letters

Impact factor ▶ 3.3

Source Process of the 24 January 2020 Mw 6.7 East Anatolian Fault Zone, Turkey, Earthquake, Jiao Xu, Chengli Liu and Xiong Xiong

Coseismic Slip Distribution of the 24 January 2020 Mw 6.7 Doganyol Earthquake and in Relation to the Foreshock and Aftershock Activities, Xin Lin, Jinlai Hao, Dun Wang, Risheng Chu, Xiangfang Zeng, Jun Xie, Baolong Zhang and Qipeng Bai

SeisBench—A Toolbox for Machine Learning in Seismology, Jack Woollam, Jannes Münchmeyer, Frederik Tilmann, Andreas Rietbrock, Dietrich Lange, Thomas Bornstein, Tobias Diehl, Carlo Giunchi, Florian Haslinger, Dario Jozinović, Alberto Michelini, Joachim Saul and Hugo Soto

Distributed Acoustic Sensing Turns Fiber-Optic Cables into Sensitive Seismic Antennas, Zhongwen Zhan

Regional Moment Tensor Inversion for Earthquakes in Turkey and Its Surroundings: 2008–2015, Musavver Didem Cambaz and Ahu Kömeç Mutlu

The Seismic Record

The Destructive Earthquake Doublet of 6 February 2023 in South-Central Türkiye and Northwestern Syria: Observations and Analysis, P. Martin Mai, Theodoros Aspiotis, Tariq Anwar Aquib, Eduardo Valero Cano, David Castro-Cruz, Armando Espindola-Carmona, Bo Li, Xing Li, Jihong Liu, Rémi Matrau, Adriano Nobile, Kadek Hendrawan Palgunadi, Matthieu Ribot, Laura Parisi, Cahli Suhendi, Yuxiang Tang, Bora Yalcin, Ulaş Avşar, Yann Klinger and Sigurjón Jónsson

Rapid Characterization of the February 2023 Kahramanmaraş, Türkiye, Earthquake Sequence, Dara E. Goldberg, Tuncay Taymaz, Nadine G. Reitman, Alexandra E. Hatem, Seda Yolsal-Çevikbilen, William D. Barnhart, Tahir Serkan Irmak, David J. Wald, Taylan Öcalan, William L. Yeck, Berkan Özkan, Jessica A. Thompson Jobe, David R. Shelly, Eric M. Thompson, Christopher B. DuRoss, Paul S. Earle, Richard W. Briggs, Harley Benz, Ceyhun Erman, Ali Hasan Doğan and Cemali Altuntaş

The 2023 Southeast Türkiye Seismic Sequence: Rupture of a Complex Fault Network, Gesa Maria Petersen, Pinar Büyükkakpınar, Felipe Orlando Vera Sanhueza, Malte Metz, Simone Cesca, Kenan Akbayram, Joachim Saul and Torsten Dahm

Fault Roughness at Seismogenic Depths and Links to Earthquake Behavior, Elizabeth S. Cochran, Morgan T. Page, Nicholas J. van der Elst, Zachary E. Ross and Daniel T. Trugman

“Aftershock Faults” and What They Could Mean for Seismic Hazard Assessment, Tom Parsons, Eric L. Geist and Sophie E. Parsons

The Seismic Record joins prestigious database and directory



Since its 2021 launch, *The Seismic Record* (TSR) has received two important stamps of approval.

In July, TSR was welcomed into the Directory of Open Access Journals (DOAJ), a key community-driven service advocating best practices and standards in open access.

Inclusion in the directory required a rigorous review of TSR's publishing policies, editorial board, peer-review process, copyright and licensing, publication fee and waiver policy and plagiarism-screening efforts. As part of the directory, TSR will enjoy increased visibility and trust among readers and authors worldwide.

More good news arrived six months later with TSR's acceptance in Scopus, Elsevier's comprehensive and multidisciplinary abstract and citation database. Scopus includes more than 1.8 billion references dating back to 1970, including journals, trade journals, conference proceedings and books. The Scopus Content Selection & Advisory Board selects new journals to add to the database from thousands of new titles submitted each year. Only 33% of those titles meet the technical criteria needed for inclusion, and only 50% of those titles are accepted into the database.

In their review of TSR, the Scopus Content Selection Advisory Board said the journal “consistently includes articles that are academically sound and relevant to an international academic or professional audience in the field” and “has clear aims and scope/journal policies that are consistent with the journal's content.”

We rise to the challenge.

SSA members help each other over the obstacles to scientific progress.

Last November SSA received a record number of travel grant applications for our 2024 Annual Meeting in Anchorage, Alaska. These student and early-career member applicants didn't want the rising cost of travel to prevent them from attending SSA's flagship event, and neither did quite a few others in our community.

Among them: SSA Past President Peggy Hellweg, who teamed with President-Elect Heather DeShon, Lori Dengler, Thorne Lay, Doug Neuhauser, Fumiko Tajima and Bill Walter to issue a giving challenge to our entire community. They asked every member with the means to do so to make an end-of-year gift to the Annual Meeting Travel Grant Fund.

More than \$5,000 in donations arrived in short order at SSA headquarters, and Hellweg and her colleagues matched every gift dollar for dollar with their own money.

Their generosity helped SSA present 20 student and early-career members with grants to cover their 2024 Annual Meeting travel expenses as well as registration fees. These grant recipients, who represent the future of seismology, enjoy the opportunity to share their research, receive critically important feedback and make new connections with the wider scientific community.

→ Explore plenary presentations from SSA 2023
<https://2023.meetings.seismosoc.org/am-program>



“The last SSA Annual Meeting was particularly special for me as it allowed me to visit my home country and provided a unique opportunity to present my latest work in collaboration with my alma mater, University of Puerto Rico. It was gratifying to share findings about the most significant earthquake in Puerto Rico during my lifetime.”

—Margarita Solares, 2023 Annual Meeting Travel Grant recipient

SSA 2023 Annual Meeting 17–20 April, San Juan, Puerto Rico



2

Dedicated co-chairs behind the dynamic week of science: Xyoli Pérez-Campos and Elizabeth Vanacore



842

Presentations featuring research by student, early-career and veteran members from a wide range of institutions worldwide



46

Volunteer SSA Ambassadors provided first-time attendees with information about the full range of SSA member benefits



96%

Attendees surveyed who described the meeting as very valuable



A prior community-wide fundraising challenge in 2022, led by Peggy Hellweg, helped fund 23 Annual Meeting Travel Grants for these student and early-career members.

We mentor future seismologists.

SSA provides directions for our members' professional journeys.

The SSA Connects mentoring program links newcomers to the field of seismology with experienced scientists who can provide professional advice and answer a range of career-related questions. Like every SSA activity, these online mentoring sessions are powered by volunteers who generously share their expertise with our community.

SSA's wide array of professional development offerings for members in 2023 included a training session on writing winning CVs and application packets for research roles and another session on converting CVs into resumes for industry and government roles.

“SSA helped introduce me to the real-world implications of seismology. Research, engineering, workforce development, public policy—SSA brought them all together.”

—Michael West, SSA 2024 co-chair

The Society is grateful to these members who created and led SSA Connects mentoring sessions in 2023:

- » **Ask a Mentor: General Advice for SSA Members**
Anne Trehu, Oregon State University; Victor Tsai, Brown University
- » **How to Network at Meetings**
Rich Briggs, USGS; Joan Gomberg, USGS; Mouse Reusch, Pacific Northwest Seismic Network; David Wald, USGS; Andrew Michael, USGS
- » **Preparing for the 2023 Annual Meeting**
Andrea Llenos, USGS; Wenyuan Fan, Scripps Institution of Oceanography, UCSD; Sanjay Bora, GNS Science; Gabrielle Tepp, Caltech/SCSN; Allison Bent, Natural Resources Canada; Susan Hough, USGS; Nick Gregor, Consulting
- » **How to Present Your Work and Communicate Effectively**
Ashly Cabas, North Carolina State University; Sunyoung Park, The University of Chicago; Manuel Florez, Universidad Industrial de Santander; Shahram Pezeshk, The University of Memphis; Lingling Ye, Southern University of Science and Technology, China; Adrian Rodriguez-Marek, Virginia Tech; Seth Moran, USGS; Xiaotao Yang, Purdue University; Peter Malin, ASIRseismic.com
- » **General Advice for SSA Members and How to Convene a Session at the Annual Meeting**
Sean Ahdi, USGS; Renate Hartog, University of Washington; German Prieto, Universidad Nacional de Colombia; Elizabeth Vanacore, University of Puerto Rico at Mayagüez
- » **Write a Successful Grant Proposal**
Luciana Astiz, National Science Foundation; Matt Fouch, Samara/ Data; Debi Kilb, Scripps Institution of Oceanography; Will Levandowski, Tetra Tech
- » **Q & A: Applying to Work for the U.S. Geological Survey**
Alicia Gomez, USGS; Brian Shiro, USGS
- » **Ph.D. Program Advising (Seismology)**
Andreas Fichtner, ETH Zurich; Jessie Saunders, Caltech; Rhiannon Vieceli, Sandia National Laboratories; Hongfeng Yang, The Chinese University of Hong Kong



SSA Connects Mentor Sunyoung Park seen here with members of her group in the Seismology and Geodesy Lab at the University of Chicago. ©Jason Smith

→ Get connected with an SSA mentor:

seismosoc.org/jobs/ssa-connect

We keep things topical.

Together SSA members explore the latest developments in seismology.

Can physics-based ground motion modeling predict ground motions for an event that reliably matches with observed ground motions? If yes, what is the most important information we need to get? And if no, what is the most important gap we need to fill?

These were just a few of the questions that seismologists explored together in “Future Directions for Physics-Based Ground Motion Modeling,” SSA’s second topical conference. Co-Sponsored by the Seismological Society of Japan, the gathering (10–13 October 2023 in Vancouver, Canada) drew experts from around the globe to assess converging trends in modern ground motion modeling.

Inspired by the presentations by experts in the field, attendees told SSA they left with new ideas for their own research and a better understanding of the specific roles of seismologists, physicists, engineers and geologists in both the development of ground motion models and the protection of public safety in high seismic-risk regions.

Irene Y. Liou of the University of California, Davis, walked away “with a renewed sense of excitement for the field and a drive to investigate topics.” One of five student participants who received complimentary registration and a travel stipend thanks to generous donations to SSA’s Kanamori and General Funds, Liou described the conference as “inspiring and unforgettable.”



Annemarie Baltay (USGS) and Hiroshi Kawase (Kyoto University) co-chaired SSA’s 2023 fall topical conference.

More inspiration is on the way. Photonic Seismology: Lighting the Way Forward (7–10 October 2024 in Vancouver, Canada) will discuss the latest geoscience research in Distributed Acoustic Sensing and other fiber-sensing technologies. Environmental Seismology: Planning for the Planet’s Future (14–18 October 2025 in Denver, Colorado) will bring together researchers using seismic data to investigate cryosphere, ocean and groundwater dynamics, fluvial processes, cyclones, landslides, erosion and other complex environmental problems.

FUTURE DIRECTIONS
Physics-based ground-motion modeling
10–13 October 2023
Vancouver, BC

CO-CHAIRLED BY

| | | |
|------------------------|---|---|
| Annemarie Baltay | + | + |
| U.S. Geological Survey | + | + |
| Hiroshi Kawase | + | + |
| Kyoto University | | |

Photonic Seismology
Lighting the Way Forward
7–10 October 2024
Vancouver, BC

CO-CHAIRLED BY

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|------------------------------------|
| Zack Spica, |
| University of Michigan |
| Zhongwen Zhan |
| California Institute of Technology |

We stay connected to Capitol Hill.

The Society provides ongoing scientific expertise to U.S. policymakers to help ensure that their decisions are in the best interest of science and public safety.

In recent months we’ve urged Congress to reauthorize and fully fund both the National Volcano Early Warning System and the National Earthquake Hazards Reduction Program. We’ve reminded policymakers why geoscience and seismic science programs across the Federal Government need their continued support.



In 2023, Rachel Willis, a Ph.D student in geophysics at the Colorado School of Mines, joined our efforts as our newest

Government Relations

Policy Fellow. The role includes a year of service on SSA’s Government Relations Committee to identify and support key legislative goals and issues as well as funding to travel to Washington, D.C. to meet with members of Congress and their staff.

→ Learn more about SSA’s policy work: seismosoc.org/us-government-relations

Thank you for supporting seismology.

Your gifts to SSA in 2023 helped our community continue to advance seismology and protect public safety.

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The SSA General Fund

A source of unrestricted support, this fund allows SSA to direct donations toward the greatest areas of need in the Society.

The Kanamori Fund

Honoring Caltech Professor Emeritus Hiroo Kanamori, this fund supports the professional development of seismologists, including the SSA Connects program, Annual Meeting workshops and travel to SSA meetings from European Seismological Commission member countries.

The Annual Meeting Travel Grant Fund

Provides student and early-career members with travel grants to attend the SSA Annual Meeting, an opportunity to network, present research and receive feedback from the international seismological community.

The William B. Joyner Memorial Fund

Supports both the William B. Joyner Lecture Series, which fosters the exchange of information at the interface of earthquake science and earthquake engineering, and the Charles F. Richter Early-Career Award.

The Paul Andrew Spudich Fund

Honors the late seismologist Paul Andrew Spudich by supporting travel grants for student and early-career members pursuing research in his areas of expertise and accomplishment, earthquake source physics and ground motion prediction.

SSA's Planned Giving Program

Allows donors to support our mission beyond their lifetime with a larger gift than they might be able to make through their current income alone.

→ SSA welcomes your tax-deductible donation at seismosoc.org/give

Environmental Seismology Planning for the Planet's Future

14–18 October 2025
Denver, Colorado


CO-CHAIRLED BY

Rick Aster
Colorado State University

Siobhan Niklasson
New Mexico Tech



For more information, visit:
▶ seismosoc.org/environmental-seismology



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