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Luis Ceferino

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Davis Hall, Room 773
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Professional Associations:

University of California, Berkeley	**California, USA**
Assistant Professor, Civil and Environmental Eng. Dept.	2024 – Present
New York University	**New York, USA**
Assistant Professor, Civil and Urban Eng. Dept. & Center for Urban Science and Progress	2021 – 2023
Princeton University	**New Jersey, USA**
Distinguished Postdoctoral Fellow, Andlinger Center for Energy and the Environment	2019 – 2020

Education:

Stanford University	**California, USA**
PhD Civil and Environmental Engineering	2015 – 2019
Stanford University	**California, USA**
MS Structural Engineering and Geomechanics	2013 – 2014
Universidad National de Ingeniería	**Lima, Peru**
Bachelor of Science in Civil Engineering	2007 – 2011

Awards and Honors:

Luis Ceferino:	
Hellman Fellow Award	2026
NSF CAREER Award	2026
Andlinger Center Distinguished Postdoctoral Fellowship, Princeton University	2019 – 2020
John A. Blume Fellowship, Stanford University	2017 – 2018
Shah Family Fellowship, Stanford University	2015 – 2016
Andrés del Castillo Fellowship, Patronato UNI (Peru)	2013
Presidential Fellowship, Department of Education (Peru)	2013
Undergraduate Research Award, CONEIC (Peru)	2013
Valedictorian (#1/104), Civil Engineering Dept., Universidad Nacional de Ingeniería (Peru)	2011
Manuel Pardo y Lavalle Undergraduate Prize, Patronato UNI (Peru)	2010
Undergraduate Admission Test Award (#8/4277), Universidad Nacional de Ingeniería (Peru)	2007
Research Group:	
Prateek Arora: Best Paper Award, ASCE EMI Objective Resilience Student Competition	2025
Prateek Arora: Coalition of Disaster Resilient Infrastructure Fellowship	2022

Research:

- Research Interests: Multi-hazard risk analysis; reliability of critical infrastructure systems; climate adaptation and disaster resilience; performance-based earthquake engineering; artificial intelligence in civil engineering; uncertainty quantification; extreme event modeling.
- Publications: 34 peer-reviewed papers in high-impact interdisciplinary and disciplinary journals: *Nature Communications; Earthquake Spectra; Applied Energy; Bulletin of the Seismological Society of America; ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems (Part A: Civil Engineering); ASCE Natural Hazards Review; Reliability Engineering & Structural Safety; Journal of Earthquake Engineering and Structural Dynamics; Risk Analysis; Natural Hazards and Earth System Sciences; IEEE Transactions on Visualization and Computer Graphic; Stochastic Environmental Research*

and Risk Assessment; Sustainability; Journal of Disaster Research; PNAS Nexus; International Journal of Disaster Risk Reduction.

Numerous refereed conference papers (23); preprints and other unpublished articles under review (7 in total); and academic reports (7).

- Google Scholar Citation: 1040, h-index: 17, i10-index:23
- ~29 invited talks at universities or research institutions
- Lead Principal Investigator (PI) or co-PI for numerous research and innovation projects, totaling ~ USD 2.3M in external funding. Some examples include:
  - PI on NSF Project "CAREER: A Computational Framework for Rare-Event Resilience Planning and Education in Infrastructure Systems." (09/2026 – 08/2031)
  - Lead PI on NSF Project "MATH-DT: Scalable Bayesian Online Learning for Digital Twins in Power Network Resilience against Sequential Extreme Events." (09/2025 – 08/2028)
  - Lead PI on NSF Project "CLIMA/Collaborative Research: Riders on the Storm: Climate Adaptation of Housing Infrastructure for Resilient Communities in Coastal Cities." (07/2024 – 06/2027)
  - Lead PI on NSF Project "Collaborative Research: Enhancing Earthquake Casualty Predictions: A Novel Modeling Framework Informed by Epidemiology and Local Human-Building Dynamics" (08/2024 – 07/2027)

Teaching and Advising

Five courses at the undergraduate and graduate levels with excellent teaching scores:

- CE 120 Structural Engineering (UC Berkeley's Undergraduate Program).
  - Reviews: N/A (90 students) – Spring 2026.
- CE 120 Structural Engineering (UC Berkeley's Undergraduate Program).
  - Reviews: 6.21/7.0 (99 students) – Spring 2025.
- CE 294 Disaster Risk Analysis of Infrastructure Systems (UC Berkeley's Graduate Program).
  - Reviews: 6.55/7.0 (17 students) – Fall 2024
- CE 120 Structural Engineering (UC Berkeley's Undergraduate Program).
  - Reviews: 6.32/7.0 (76 students) – Spring 2024.
- CE-UY 2133 Engineering Mechanics (NYU's Undergraduate Program).
  - Reviews: 4.9/5.0 (16 students) – Fall 2023.
- CE-UY 3133 Structural Analysis (NYU Undergraduate Program).
  - Reviews: 5.0/5.0 (5 students) – Fall 2022; 4.4/5.0 (7 students) – Spring 2021.
- CUSP-GX 8006 Disaster Risk Analysis and Urban Systems Resilience (NYU Graduate Program).
  - Reviews: 4.2/5.0 (11 students) – Spring 2023; 4.0/5.0 (13 students) – Spring 2022.

Advising:

- Postdoctoral Associates (4)
  - Prateek Arora (2025 – Present, UC Berkeley Postdoctoral Scholar)
  - Yvonne Merino (2025 – Present, UC Berkeley Postdoctoral Scholar)
  - Azin Ghaffary (2022 – 2024, NYU CUSP Faculty Fellow) – Project Engineer at Thornton and Tomasetti.
  - Charalampos Avraam (2021 – 2023, NYU CUSP Faculty Fellow) – Researcher at NREL.
- Ph.D. Students (5)
  - Luis Cossio (2025 – Present)
  - Kexun Li (2024 – Present)
  - SoungEil Houng (2023 – Present)
  - Riccardo Negri (2022 – Present)
  - Prateek Arora (2021 – 2025) – Postdoctoral Scholar at UC Berkeley
- Visiting Ph.D. Students (4)
  - Yan Liu, Tongji University, China (2025 – Present)

  - Sen Yang, Tsinghua University, China (2024 – 2025)
  - Yvonne Merino, Pontificia Universidad Católica de Chile, Chile (2022 – 2023)
  - Carlos Mesta, University of Pavia, Italy (2022 – 2022)
- M.S. Students (39): Cayden Chen; Tarea Karunaratne; Jikun Liu; Eva Yao; Charan Kukunoor; Dan Mao; Xinlu Xu; Erdi Gao; Ziyang Huang; Tianqi Zhang; Zhongqi Zhang; Ruoru Feng; Hongming Liu; Hao Shi; Anna Kramer; Muxin Jiang; Yu Ze Toh; Akshay Shetty; Shuang Guo; Henry Cui; Shuang Guo; Qinchan Li; Punit Vats; Yifan Zhang; Yuanbo Zhang; Boson Liu; Kexun Li; Wenxiao Li; Yinchen Yi; Dennis Bazan; Lea Shagiakhmetova; Ziyi Wang; Sidik Permana; Zhemin Xu; Anna-maria Assey; Yufeng Yan; Wolin Jian; Weiqi Chu; Lyucheng Yang.
- Student groups:
  - UC Berkeley Timber Strong Competition (2025 – Present).
  - UC Berkeley EERI Seismic Design Competition (2024 – Present).
  - NYU EERI Seismic Design Competition (2021 – 2023).

Leadership and Professional Services

- University of California, Berkeley
  - Graduate Studies Committee Member in the CEE Dept. (2025 – Present)
  - SEMM Graduate Admissions and Fellowships (2025 – Present)
  - Executive Committee Member for the University of California Disaster Resilience Network (2024 – Present)
  - IDBE Committee Member in the CEE Dept. (2024 – 2025)
- New York University
  - Faculty Search Committee Member in the CUE Dept. (2023)
  - Faculty Search Committee Member in the CUE Dept. (2022)
- Earthquake Engineering Research Institute
  - Northern California Chapter Board Member (2026 – Present)
  - Co-chair of the Public Health Working Group (2022 – 2024)
- Professional Appointments
  - Uncertainty Quantification Consultant, National Institute of Standards and Technology (2026 – Present)
  - Disaster Risk Specialist Consultant, World Bank Group (2024)
  - Earthquake Risk Consultant, Applied Technology Council (2019 – 2020)
  - Earthquake Risk Consultant, World Bank Group (2017 – 2019)
  - Co-founder/CTO, Yanapay Inc. (2017 – 2019)
  - Co-founder/Structural Engineering Consultant, RENDEL Inc. (2015-2019)
  - Structural Engineering Staff, Rivera Consulting Group Inc. (2014)
- Reviewer activities:
  - Proposals for funding agencies: NSF (2023, 2024, 2024, 2025, 2025, 2026, 2026); USGS (2023)
  - Journals: *Nature Cities; Nature Communications; Scientific Reports; Earthquake Spectra; ASCE Natural Hazards Reviews; Reliability Engineering and System Safety; Journal of Earthquake Engineering; Risk Analysis; Natural Hazards; Computers and Structures; International Journal of Disaster Risk Reduction; Computers and Operations Research; Journal of Disaster Research; Seismica; Earthquake Engineering and Structural Dynamics*
- Organizer/Co-organizer for Workshops and Conference Sessions:
  - 2026 NHERI Computational Symposium Organizing Committee
  - 2026 National Conference on Earthquake Engineering Technical Committee
  - ASCE Engineering Mechanics Institute (EMI) 2025 at the University of California, Irvine, Anaheim, California
  - 14th International Conference on Structural Safety and Reliability (ICOSAAR 2025), University of Southern California, Los Angeles, California
  - 14th International Conference on Application of Statistics and Probability in Civil Engineering (ICASP 2023) at Trinity College Dublin, Dublin, Ireland

- 12th National Conference on Earthquake Engineering (NCEE 2022), Salt Lake City, Utah
- 11th National Conference on Earthquake Engineering (2018), at UCLA, Los Angeles, California
- 12th International Conference on Structural Safety and Reliability (ICOSAAR 2017), TU Wien, Vienna, Austria
- 2nd Techsuyo, Peruvian Tech Community Meeting (2017)

Journal papers (student or postdoc in Ceferino's group when the research was conducted)

[J1] Houng, S.E., **Ceferino, L.** (In review). Scalable Scenario-based Earthquake Risk Modeling via Linearized Ground-Motion—Fragility Coupling and PPCA. [Preprint]

[J2] Negri, R., Xu, S., Dragomir, C., Porfiri, M., **Ceferino, L.** (In review). When Recovery Becomes Infeasible: A Markov Model of Housing Abandonment Risk in Flood-Prone Areas. [Preprint]

[J3] Negri, R., Dragomir, C., Xu, S., Figueira, I., Porfiri, M., **Ceferino, L.** (In review). Permanent Relocation Into and Out of Areas Exposed to Natural Hazards: a Multidisciplinary Review of the Literature. [Preprint]

[J4] Arora, P., Ceferino, L., Dobler, G. (In review). A Novel Framework for Detecting Disaster-Induced Power Outages Globally via Satellite Observations. [Preprint]

[J5] Figueira, I., Lauber, O., Xu, S., Dragomir, C., Ceferino, L., Porfiri, M. (In review). "Sublinear Scaling of Vacant Houses and its Emergence from Household Collective Dynamics."

[J6] Li, X., Chen, R., Sang, Y., Hults, G., Harrison, K., Fung, J., Zhang, Y., Dragormir, C., Porfiri, M., Ceferino, L., Xu, S. (In review). "Asymmetric Repair and Sale Diffusion Shapes Neighborhood Recovery Divergence after Hurricanes."

[J7] Yan, L., Ceferino, L. (In review) "Toward Proactive Disaster Response: An IT-Enabled Framework for Automated Relief Supply Allocation."

[J8] Houng, S.E., **Ceferino, L.**, Abrahamson, N. (Accepted). Fast Propagation of Epistemic Uncertainty in Seismic Hazard via Adaptive Importance Sampling. *Bulletin of the Seismological Society of America.* [Preprint]

[J9] Arora, P., **Ceferino, L.** (Accepted). The Feasibility of Energy Communities for Hurricane Resilience. *ASCE Natural Hazards Reviews* [Preprint]

[J10] **Ceferino, L.**, Yi, Y., Li, W., Merino, Y., Moya, L., Shoaf, K., So, E. (Accepted). A Performance-Based Earthquake Fatality Modeling Framework Using Collapse Volume Ratios. *Earthquake Spectra,* 42 (1), e70057.

[J11] Espinoza, B., Moya, L., **Ceferino L.** (2026). Evaluating the Seismic Damage Dynamics of Buildings' Vertical Growth in Lima, Peru. *Earthquake Spectra,* 42 (1), e70012.

[J12] Yang, S., **Ceferino, L.**, Zhang, L., Gu, C., Guo, T., Kondo, G. (2026). When Agents Learn to Think: Large Language Model-Enhanced Agent-Based Modeling for Crowd Evacuation in Disaster Scenarios. *Reliability Engineering & System Safety*, (269) 112056.

[J13] Zhang, Z., Li, Q., Sun, Q., **Ceferino, L.** (2026). Using virtual reality to study human response to flood risk across controlled experiments. *International Journal of Disaster Risk Reduction,* (132) 105956.

[J14] Boldini, A., De Lellis, P., Imperatore, S., Das, R., **Ceferino, L.**, Heitor, M., Porfiri, M. (2026). Predicting the role of inequalities on human mobility patterns. *PNAS Nexus*, 5 (1), pgaf407.

[J15] Dávila, C., Estrada, M., **Ceferino, L.**, Morales, J., García, F., Koshimura, S. (2025). Probabilistic Tsunami Hazard Assessment Based on Time and Space Dependent Rupture Analysis of the Central Peruvian Subduction Zone. *Journal of Disaster Research*, 20 (6), 922-935.

[J16] Ceferino, L., Kukunoor, C., Mao, D., Xu, X., Wu, J., Zsarnócsay, A. (2025). Accessing Acute Care Hospitals in the San Francisco Bay after a Major Hayward Earthquake. *Nature Communications,* (16) 9328.

[J17] Negri, R., **Ceferino, L.**, A., Cremen, G. (2025). Prioritizing Urban Areas for Hyper-local Flood Sensors using Stakeholder Elicitation and Risk Analysis, *ASCE Natural Hazards Reviews,* 26 (3), 04025020.

[J18] Mesta C., **Ceferino, L.**, Cremen, G., Galasso, C. (2025). Investigating post-earthquake hospital transportation for casualties through agent-based modeling. *Earthquake Spectra*, 41 (3): 2028-2059.

[J19] Houng, S.E., **Ceferino, L.** (2025). Fast Probabilistic Seismic Hazard Analysis through Adaptive Importance Sampling. *Bulletin of the Seismological Society of America,* 115 (2): 646–663

[J20] Merino, Y., **Ceferino, L.**, Pizarro, S., de la Llera, J. C. (2024). Modeling Hospital Resources based on Global Epidemiology after Earthquake-Related Disasters. *Earthquake Spectra*.

[J21] **Ceferino, L.**, Merino, Y., Pizarro, S., Moya, L., Ozturk, B. (2024). Placing Engineering in the Earthquake Response and the Survival Chain. *Nature Communications,* 15 (4298).

[J22] Arora, P., **Ceferino, L.** (2024). A Quasi-binomial Regression Model for Hurricane-induced Power Outages during Early Warning. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, 10 (2).

[J23] Liu, C., Macedo, J., Kottke, A., **Ceferino, L.** (2024). Impact of Ergodic and Non-ergodic Ground Motion Estimation on the Earthquake Resilience of Shared Distributed Energy Resource Systems. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering,* 10 (1).

[J24] Avraam, C., **Ceferino, L.**, Dvorkin, Y. (2023). Operational and Economy-Wide Impacts of Compound Cyberattacks and Extreme Weather Events on Electric Power Networks. *Applied Energy*, 349 (121577).

[J25] **Ceferino, L.**, & Lin, N. (2023). Hurricane Risk of Solar Generation in the United States. *ASCE Natural Hazards Review*. 24 (4), 04023029:1-12.

[J26] Arora, P., **Ceferino, L.** (2023). Probabilistic and machine learning methods for uncertainty quantification in power outage prediction due to extreme events. *Natural Hazards and Earth System Sciences*, 23 (5), 1665–1683.

[J27] **Ceferino, L.**, Lin, N., & Xi, D. (2023). Bayesian Updating of Solar Panel Fragility Curves and Implications of Higher Panel Strength for Solar Generation Resilience. *Reliability Engineering & Structural Safety*, 229 (108896).

[J28] Alisjahbana, I., **Ceferino, L.**, Kiremidjian, A. (2023). Prioritized Reconstruction of Healthcare Facilities after Earthquakes based on Recovery of Emergency Services. *Risk Analysis*, 43 (9), 1763–1778.

[J29] Mota, R., Ferreira, N., Silva, J. D., Horga, M., Lage, M., **Ceferino, L.**, Alim, U., Sharlin, E. & Miranda, F. (2022) A Comparison of Spatiotemporal Visualizations for 3D Urban Analytics. *IEEE Transactions on Visualization and Computer Graphics,* 29 (1) 1277-1287.

[J30] Hariri-Ardebili MA, Sattar S, Johnson K, Clavin C, Fung J, **Ceferino L.** (2022). A Perspective towards Multi-Hazard Resilient Systems: Natural Hazards and Pandemics. *Sustainability*. 14(8):4508.

[J31] **Ceferino, L.**, Lin, N. & Xi, D. (2022) Stochastic modeling of solar irradiance during hurricanes. *Stochastic Environmental Research and Risk Assessment*, 36, 2681–2693.

[J32] **Ceferino, L.**, Galvez, P., Ampuero, J.-P., Kiremidjian, A., Deierlein, G., & Villegas-Lanza, J. C. (2021). Bayesian Parameter Estimation for Space and Time Interacting Earthquake Rupture Model Using Historical and Physics-Based Simulated Earthquake Catalogs. *Bulletin of the Seismological Society of America,* 111 (6): 3356–3373.

[J33] Patel, S., **Ceferino, L.**, Liu, C., Kiremidjian, A., & Rajagopal, R. (2021). The disaster resilience value of shared rooftop solar systems in residential communities. *Earthquake Spectra*, June, 1–24.

[J34] **Ceferino L.**, Mitrani-Reiser J., Kiremidjian A., Deierlein G., Bambarén, Celso (2020). "Effective Plans for Hospital System Response to Earthquake Emergencies". *Nature Communications*, 11, 4325.

[J35] **Ceferino, L.**, Kiremidjian, A., and Deierlein, G. (2020). "Probabilistic space- and time-interaction modeling of main-shock earthquake rupture occurrence". *Bulletin of Seismological Society of America*. 110 (5): 2498-2518.

[J36] **Ceferino L**., Kiremidjian A., and Deierlein G. (2018). "Regional Multi-severity Casualty Estimation Due to Building Damage Following a Mw 8.8 Earthquake in Lima, Peru". *Earthquake Spectra*, 4(3).

[J37] **Ceferino L.**, Kiremidjian A., and Deierlein G. (2018). "Probabilistic Model for Regional Multi-severity Casualty Estimation due to Building Damage Following Earthquakes. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, 4(3), 04018023.

[J38] Markhvida M., **Ceferino L.**, and Baker J. (2017). "Modeling spatially correlated spectral accelerations at multiple periods using principal component analysis and geostatistics." *Journal of Earthquake Engineering and Structural Dynamics*, 47(5), 1107-1123.

[J39] Noh H.Y., Kiremidjian A., **Ceferino L.**, and So E. (2017). "Bayesian Updating of Earthquake Vulnerability Functions with Application to Mortality Rates." *Earthquake Spectra*, Vol. 33, No. 3, pp. 1173-1189.

[J40] Lallemant D., Burton H., **Ceferino L.**, Bullock Z., and Kiremidjian A. (2017). "A Framework and Case Study for Earthquake Vulnerability Assessment of Incrementally Expanding Buildings." *Earthquake Spectra*, 33(4).

[J41] Zavala C., Gibu P., Lavado L., Taira J., Cárdenas L., and **Ceferino L.** (2012). "Cyclic Behavior of Low Ductility Walls Considering Perpendicular Action." *Journal of Disaster Research*, 8(2), 313.

Refereed Conference Papers

[C1] **Ceferino, L.**, Yi, Y., Li, W., Merino, Y., Moya, L., Shoaf, K., So, E. (2026). Advancing Earthquake Casualty Modeling via Multifaceted Data Collection. *In National Conference of Earthquake Engineering*, Portland, Oregon.

[C2] Merino, Y., **Ceferino, L.**, Shoaf, K., Petersen, M., Sahin, U., Ozpinar, N., Kara, B. (2026). Advancing Earthquake Casualty Modeling via Multifaceted Data Collection. *In National Conference of Earthquake Engineering*, Portland, Oregon.

[C3] Arora, P., **Ceferino, L**. (2025). Mapping Disaster-Induced Power Outages Using Satellite Observations. *In ASCE Engineering Mechanics Institute 2025 Conference*, Anaheim, California.

[C4] **Ceferino, L.,** Kukunoor, C., Zarnóczay, A. (2024). The Benefits of Large-scale Seismic Retrofits in the Hospital Systems in the Bay Area, California. *In 18th World Conference on Earthquake Engineering*, Milan, Italy.

[C5] Espinoza-Sifuentes, B., Moya, L., Ceferino, L. (2024). Vertical Growth of Masonry Buildings in Peru and its Role in their Seismic Vulnerability. *In 18th World Conference on Earthquake Engineering*, Milan, Italy.

[C6] Moya, L., Mesias, F., Tostado, A., Kramer, A., Ceferino, L., Wiguna, S., Adriano, B. (2024). Open Dataset of Road Obstructions due to Collapsed Buildings from the 2023 Turkey Earthquakes. *In 18th World Conference on Earthquake Engineering*, Milan, Italy.

[C7] Mesta, C., Ceferino, L., Cremen, G., Galasso, C. (2024). Understanding Post-earthquake Hospital Arrival Times through Agent-based Modeling. *In 18th World Conference on Earthquake Engineering*, Milan, Italy.

[C8] Arora, P. & **Ceferino, L.** (2023). A performance-based probabilistic framework to model risk to power systems from hurricanes. *In 14th International Conference on Applications of Statistics and Probability in Civil Engineering*, Dublin, Ireland.

[C9] Arora, P. & **Ceferino, L.** (2023). Could rooftop solar panels and storage have enhanced the electricity resilience during Hurricane Isaias (2020)? *In 14th International Conference on Applications of Statistics and Probability in Civil Engineering*, Dublin, Ireland.

[C10] Negri, R., Fernandez, M., Tan, B. Y. & **Ceferino, L.** (2023). Investigating the Use of Citizen-Science Data as a Proxy for Flood Risk Assessment in New York City. *In 14th International Conference on Applications of Statistics and Probability in Civil Engineering*, Dublin, Ireland.

[C11] Avraam, C., Dvorkin, Y. & **Ceferino, L.** (2023). Risk of New York City's Electric Power Networks Against Compound Extreme Floodings and Cyberattacks. *In 14th International Conference on Applications of Statistics and Probability in Civil Engineering*, Dublin, Ireland.

[C12] **Ceferino, L.**, Kukunoor, C., Mao, D., Xu, X. & Wu, J. (2023). Combining Seismic Risk Analysis and Network Modeling to Assess Hospital Service Accessibility in the Bay Area , California. *In 14th International Conference on Applications of Statistics and Probability in Civil Engineering*, Dublin, Ireland.

[C13] **Ceferino, L.,** Martin, A., & Bambarén, C. (2022). Hospital System Response to Earthquakes in the COVID-19 Pandemic. *The 12th National Conference on Earthquake Engineering*, Salt Lake City, US.

[C14] **Ceferino, L.**, Lin, N., & Xi, D. (2020). Distributed Energy Resources for Disaster Resilience to Hurricanes in a Changing Climate. In American Geophysical Union Fall Meeting.

[C15] **Ceferino, L.**, Mitrani-Reiser, J., Kiremidjian, A., Deierlein, G., & Bambarén, C. (2020). Informing Emergency Response of Hospital Systems after Moderate and Large Earthquakes in Lima, Peru. In 17th World Conference on Earthquake Engineering, 6c – 0003, Tokyo, Japan.

[C16] **Ceferino, L.**, Liu, C., Alisjahbana, I., Patel, S., Sun, T., Kiremidjian, A., & Rajagopal, R. (2020). Earthquake resilience of distributed energy resources. In 17th World Conference on Earthquake Engineering, Tokyo, Japan.

[C17] Markhvida, M., Cremen, G., Grujic, O., **Ceferino, L.**, & Baker, J. (2020). Methods for Evaluation and Treatment of Epistemic Uncertainty in Portfolio Losses Due to Earthquakes. In 17th World Conference on Earthquake Engineering, 1–10, Tokyo, Japan.

[C18] **Ceferino L.**, Mitrani-Reiser J., Kiremidjian A., and Deierlein G. (2018). "Computing Hospital System Resilience: A Supply-Demand Perspective". In 11th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, US.

[C19] **Ceferino L**., Kiremidjian A., and Deierlein G. (2018). "Parameter Estimation Methods for Modeling of Time and Space Interactions of Earthquake Rupture". In 16th European Conference in Earthquake Engineering, Thessaloniki, Greece.

[C20] **Ceferino L.**, Kiremidjian A., and Deierlein G. (2017). "Space and time interaction modeling of earthquake rupture occurrence". In 12th International Conference on Structural Safety & Reliability, Vienna, Austria.

[C21] **Ceferino L.**, Kiremidjian A., and Deierlein G. (2017). "Framework of the estimation of the health status of the population during an earthquake emergency". In 16th World Conference on Earthquake Engineering, Santiago de Chile, Chile.

[C22] Markhvida M., **Ceferino L.**, and Baker J. (2017). "Effect of ground motion correlation on regional seismic loss estimation: application to Lima, Peru using a cross-correlated principal component analysis model". In 12th International Conference on Structural Safety & Reliability, Vienna, Austria.

[C23] Zavala C., Gibu P., Lavado L., Taira J., Cardenas L., and **Ceferino L.** (2013). "Low Ductility Concrete Wall Test Considering Perpendicular Wall Action". In 10th International Conference on Urban Earthquake Engineering, Center for Urban Earthquake Engineering, Tokyo Institute of Technology, pp.599-602, 2013.

Technical Reports

[R1]. Miranda E, Acosta A, **Ceferino L**, Davalos H, Galvis F, Gunay S, Heresi P, Macedo J, Miranda S, Ramos J, Rojas P, Ruiz-Garcia J, Vera X, Mosalam K, Robertson I, Roueche D. "StEER - 26 MAY 2019 LAGUNA PERU EARTHQUAKE: PRELIMINARY VIRTUAL ASSESSMENT STRUCTURAL TEAM (P-VAST) REPORT." DesignSafe-CI. https://doi.org/10.17603/ds2-cbff-4878

[R2]. **Ceferino L**, Ibrahim H, Javadinasab Hormozabad S, Kijewski-Correa T, Pilkington S, Roueche D, Robertson I, and Prevatt D. "Event briefing. StEER—Hurricane Zeta." November 2020. DesignSafe-CI. https://doi.org/10.17603/ds2-67r3-2y51

[R3]. Fischer E, Aldea S, Archbold J, Bantis J, Bravo M, **Ceferino L**, Carrillo J, Cheng K, Cordero D, Elkady A, Guerrero H, Gunay S, Hakhamaneshi M, Heresi P, Hoepfinger C, Khalil Z, Mathur V, Martin A, Metz A, Mijic Z, Miranda E, Pajaro C, Poulos A, Sepulveda C, Toraman E, Wein A, Wu K, Zambrano J, Zhang J. "EERI: LUGU, TAIWAN SEPTEMBER 18, 2022, Mw 6.9 EARTHQUAKE." September 2022, DesignSafe-CI. https://doi.org/10.17603/ds2-65yg-nn97

[R4]. Cortes M, Arora P, **Ceferino L**, Ibrahim H, Istrati D, Reed D, Roueche D, Safiey A, Tomiczek T, Zisis I, Alam M, Kijewski-Correa T, Prevatt D, Robertson I. "StEER: Hurricane Ian Preliminary Virtual Reconnaissance Report (PVRR)." November 2022, DesignSafe-CI. https://doi.org/10.17603/ds2-kc9k-s242

[R5]. Dilsiz A, Gunay S, Mosalam K, Miranda E, Arteta C, Sezen H, Fischer E, Hakhamaneshi M, Hassan W, Alhawamdeh B, Andrus S, Archbold J, Arslanturkoglu S, Bektas N, **Ceferino L**, Cohen J, Duran B, Erazo K, Faraone G, Feinstein T, Gautam R, Gupta A, Haj Ismail S, Jana A, Javadinasab Hormozabad S, Kasalanati A, Kenawy M, Khalil Z, Liou I, Marinkovic M, Martin A, Merino Y, Mivehchi M, Moya M, Pájaro Miranda C, Quintero N, Rivera J, Romão X, Lopez Ruiz M, Sorosh S, Vargas L, Velani P, Wibowo H, Xu S, Yilmaz T, Alam M, Holtzer G, Kijewski-Correa T, Robertson I, Roueche D, Safiey A. "StEER: 2023 Mw 7.8 Kahramanmaras, Türkiye Earthquake Sequence Preliminary Virtual Reconnaissance Report (PVRR)." February 2023, DesignSafe-CI. https://doi.org/10.17603/ds2-7ry2-gv66 v1

[R6]. Alami M, Gunay S, Mosalam K, Vargas L, Hassan W, Merino-Peña Y, Burton H, Alhawamdeh B, Lahna T, Xu S, Marinkovic M, Archbold J, Iturburu L, Martin A, Bektas N, **Ceferino L**, Duran B, Nobahar M, Romão X, Wang C, Zhou G, Zaoui A, Zaoui H, Kijewski-Correa T. "StEER: Oukaïmedene Morocco Preliminary Virtual Reconnaissance Report (PVRR)." October 2023. DesignSafe-CI. https://doi.org/10.17603/ds2-gw0j-6757

[R7]. Arora P, Li K, Ceferino L. "Modeling Power Recovery after Earthquakes in California." April 2026.

Community Service and Outreach

- Led a workshop with multiple stakeholders of the FloodNet Initiative, including researchers, emergency responders, and city officers, to define priority areas to deploy 500 sensors for inland floods in NYC 2022
- Developed material and taught a three-session interactive lecture on earthquake fundamentals at the Sequoia High School in Redwood City, California 2017
- Conducted a community session on earthquake vulnerability of soft-story houses for critical neighborhoods in Oakland, California, in coordination with the Oakland Chief Resilience Officer 2015

Invited Seminars at Universities and Research Institutes

1. Association of Structural Engineers, Philippines, May. 2026 (Keynote speaker in CASTED 2026)
2. University of California, Davis, Dept. of Civil, Environmental and Architectural Eng., Feb. 2025
3. University of Nebraska-Lincoln, Dept. of Civil, Environmental and Architectural Eng., Nov. 2025
4. University of Colorado Boulder, Dept. of Civil, Environmental and Architectural Eng., Sep. 2024
5. Pontificia Universidad Católica del Perú, Dept. de Ingeniería Civil, Lima, Peru, Aug. 2024
6. Rice University, Dept. of Civil and Environmental Eng., Nov. 2023
7. Columbia University, Dept. of Civil Engineering and Engineering Mechanics, Oct. 2023
8. Universidad Nacional de Ingeniería, Dept. de Ingeniería Civil, Lima, Peru, Aug. 2023
9. Pontificia Universidad Católica de Chile, Dept. de Ingeniería Estructural y Geotécnica, Santiago de Chile, Chile, Jun. 2023
10. New Jersey Institute of Technology, Dept. of Civil and Environmental Eng., May. 2023
11. University of California, Berkeley, Dept. of Civil and Environmental Eng., Mar. 2023
12. Stony Brook University, Dept. of Civil and Environmental Eng., Nov. 2022
13. Stanford University, Blume Center and SURI Affiliates and Alumni Meeting, Oct. 2022
14. University of California, Los Angeles, ASCE Lifelines Conference, Feb. 2022
15. University College of London, Dept. of Civil, Environmental and Geomatic Engineering, London, UK, Nov. 2021
16. The UN Climate Change Conference of Parties (COP26), NYU Official Delegation, Glasgow, Scotland, Nov. 2021
17. University of California, Los Angeles, Dept. of Civil and Environmental Eng., Feb. 2021
18. University College of London, Dept. of Civil, Environmental and Geomatic Engineering, London, UK, Nov. 2020
19. Johns Hopkins University, Dept. of Civil and Systems Eng., Mar. 2020
20. University of Washington, Dept. of Civil and Environmental Eng., Feb. 2020
21. New York University, Dept. of Civil and Urban Eng., Feb. 2020
22. University of Delaware, Dept. Civil, Construction, and Environmental Engineering, Nov. 2019
23. Princeton University, Dept. of Civil and Environmental Eng., Feb. 2020
24. University of Delaware, Dept. Civil, Construction, and Environmental Engineering, May. 2019
25. Universidad Nacional de Ingeniería, Dept. de Ingeniería Civil, Lima, Peru, Dec. 2018
26. Instituto Geofísico del Perú, Aug. 2018
27. World Bank Group's Understanding Risk Forum, Mexico City, Mexico, Jun. 2018
28. University of California, Berkeley, PEER, Jul. 2016
29. Universidad Nacional de Ingeniería, Dept. de Ingeniería Civil, Lima, Peru, Mar. 2013
30. Universidad Nacional de Ingeniería, Dept. de Ingeniería Civil, Lima, Peru, Dec. 2014

Media Coverage

1. "UC Berkeley Engineering Faculty Integrate AI into core Undergraduate Courses" at UC Berkeley News, Jan. 2026
2. "How a Major Bay Area Earthquake Could Endanger Healthcare Access" at UC Berkeley News, Nov. 2025
3. "Preparing for the next 'big one'" at UC Berkeley News and United Nations DRR Prevention Web, Sep. 2025
4. "Researchers raise concerns about critical issue with solar panels" at The Cool Down, Aug. 2024
5. "Pineapple Expresses and rising seas are battering California's piers" at Associate Press, Feb. 2024
6. "Collapses of infrastructure in New York City" (Interview 1, 2, and 3) at CBS News, May. 2023
7. "Approaches to manage flood risks after Hurricane Ida" in an interview with News 12 Brooklyn, Sep. 2021
8. "A new technique predicts how quakes would affect a city's hospitals" in Stanford Engineering News, Oct. 2020
9. "Hospitals can coordinate to save lives after an earthquake" in Temblor Inc.'s articles, Nov. 2020
10. Featured in the CEO Update Newsletter of the Canterbury District Health Board for research on "Seismic Resilience of Hospital Systems" in New Zealand, Sep. 2017
11. Interviewed by Radio San Borja, in Lima, about seismic risk analysis and performance-based earthquake engineering, Dec. 2014
12. Interviewed by the Peruvian Association of Civil Engineers about state-of-the-art research on earthquake engineering in USA, Aug. 2014

Languages

Spanish (native language)
English (second language)

Professional Affiliations

American Society of Civil Engineers (ASCE)
Earthquake Engineering Research Institute (EERI)
Seismological Society of America (SSA)
Society for Risk Analysis (SRA)