Corey Scher

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Education

Ph.D. (*2025*) **Earth and Environmental Sciences.** CUNY Graduate Center.
Dissertation: "InSAR Monitoring of Landscape Changes in War and Conflict Settings with Case Studies in Ukraine, Gaza, and the Jordan Valley."

M.S. (*2019*) **Geology.** City College of New York.
Thesis: "Snowmelt Detection on Alpine Glaciers using Synthetic Aperture Radar Time Series."

B.A. (*2017*) **Geology.** University of California, Berkeley.

Professional Experience

2025– **Postdoctoral Researcher**, *Oregon State University.*
Damage mapping in conflict and disaster settings with open-source Earth observation data.

2024– **Geographic Information Systems (GIS) Innovation Advisor**, *United Nations Office for Project Services (UNOPS).*
Development of GIS capabilities within the UNOPS Peace and Security Cluster.

2018–2022 **Graduate Research Fellow**, *City College of New York.*
Project: Mapping seasonal glacier melt across the Hindu Kush Himalaya with time-series synthetic aperture radar (SAR).

2018–2020 **Graduate Research Fellow**, *Advanced Science Research Center.*
Project: Coastal Hypoxia Analysis and Risk Tracking (CHART) via remote sensing and process-based modeling in South and Southeast Asia.

2020 **Summer Intern**, *NASA Jet Propulsion Laboratory.*
Project: Advancing synergies between ECOSTRESS and SAR for structure/thermal regimes.

2017–2018 **Graduate Research Fellow**, *City College of New York.*
Project: NASA Pandora spectroscopy of atmospheric composition and Earth–atmosphere interactions.

2017–2019 **Research Affiliate**, *University of San Francisco.*
Project: Remote monitoring of groundwater overdraft with GRACE and InSAR.

2016–2017 **Undergraduate Research Apprentice**, *University of California, Berkeley.*

Project: Investigating hydraulic-scaling laws on river channel geometry using multi-frequency LiDAR.

Teaching

2017–2024 **Lab Instructor**, Earth Systems Science. City College of New York, Dept. of Earth and Atmospheric Sciences.

2018 **Lab Instructor**, Systems Analysis of the Earth. City College of New York, Dept. of Earth and Atmospheric Sciences.

Workshop Instruction

2024 **NASA and USAID**. Three-day workshop on urban hazard and vulnerability assessment with Earth observation data, San Salvador, El Salvador.

2022 **NASA Applied Remote Sensing Training (ARSET)**. "Monitoring Urban Damage with Interferometric Synthetic Aperture Radar."

Awards and Fellowships

2025 **Earth Observation (EO) Excellence Team Award.** European Space Agency award to the Decentralized Damage Mapping Group for advancing EO-based conflict damage mapping.

2020 **NASA Summer Maximizing Student Potential in STEM Program**. Supported a summer research internship at the NASA Jet Propulsion Laboratory.

2019 **American Geophysical Union (AGU) Travel Grant Recipient.** Conference: "Quest for Sustainability of Heavily Stressed Aquifers," Valencia, Spain.

Publications

1. Ulbricht, Bailey, Allen S. Weiner, Jamon Van Den Hoek, and **Corey Scher**. "There Is Nothing Left: Jus Ad Bellum Proportionality and Israel's War Against Hamas in Gaza." *Berkeley Journal of International Law* (2025).
2. **Corey Scher** and Jamon Van Den Hoek. "Nationwide Conflict Damage Mapping with Interferometric Synthetic Aperture Radar: A Study of the 2022 Russia–Ukraine Conflict." *Science of Remote Sensing* (2025): 100217.
3. **Scher, Corey.** "InSAR Monitoring of Landscape Changes in War and Conflict Settings with Case Studies in Ukraine, Gaza, and the Jordan Valley." Ph.D. dissertation, *City University of New York Graduate Center*, 2025.
4. Asi, Yara, David Mills, P. Gregg Greenough, Dennis Kunichoff, Saira Khan, Jamon Van Den Hoek, **Corey Scher**, et al. "'Nowhere and No One Is Safe': Spatial Analysis of Damage to Critical Civilian Infrastructure in the Gaza Strip During the First Phase of the Israeli Military Campaign, 7 October to 22 November 2023." *Conflict and Health* 18, no. 1 (2024): 24.
5. **Corey Scher**, Nick Steiner, and Kyle McDonald. "Mapping Seasonal Glacier Melt Across the Hindu Kush Himalaya with Time Series SAR." *The Cryosphere* 15, no. 3 (2021): 901–913.

Preprints and Working Papers

6. **Scher, Corey** and Jamon Van Den Hoek. "Active InSAR Monitoring of Building Damage in Gaza During the Israel–Hamas War." *Preprint*, arXiv:2506.14730, 2025.
7. Rinaldo, Daniele, Rami Alazzeh, Jean-Louis Arcand, **Corey Scher**, and Jamon Van Den Hoek. "The Destruction of Gaza: Satellite Measurements of the Economic Cost of War." *Proceedings of the National Academy of Sciences Nexus (PNAS Nexus)*, under review, September 2025.
8. Witmer, Frank, **Corey Scher**, Jamon Van Den Hoek, and John O'Loughlin. "Measuring and Accounting for War Destruction Using Human-Reported and Satellite-Derived Conflict Data: Ukraine 2022–2023." *Annals of the American Association of Geographers*, under review, 2025.

Invited Talks and Guest Lectures

Nov 2025 **Guest Lecture**, "Tracking progressive war damage with satellite radar," *School of Foreign Diploy, Georgetown University*, Washington, D.C.

Oct 2025 **Invited talk**, "Monitoring Landscape Changes in Armed Conflict Zones," *Bloomberg News*, New York, NY.

Sep 2025 **Invited talk**, "AI for Global Progress – An Innovation Showcase," hosted by *Google Public Sector* during the *United Nations General Assembly High-Level Week*, in affiliation with *UNOPS*, New York, NY.

Jun 2025 **Student Speaker**, CUNY Graduate Center Commencement Ceremony (link)

May 2025 **Invited talk**, "Mapping War Damage from Space," *Nerd Nite*, CUNY Graduate Center.

Apr 2025 **Invited talk**, "Landscape Changes in Armed Conflict Zones and Disaster Settings with Satellite Radar Data," *Sixth Annual Image Intelligence Workshop*, *United Nations Global Service Centre*.

Apr 2025 **Guest lecture**, "Mapping Wartime Building Damage with Interferometric Synthetic Aperture Radar," *University of Wisconsin–Madison*.

Apr 2025 **Invited panelist**, "Environmental Impacts and Implications of War in Ukraine," *Ukrainian Institute of America* with *Ukrainian Jersey City*, New York, NY.

Mar 2025 **Guest lecture**, "Mapping Wartime Building Damage with Interferometric Synthetic Aperture Radar," Dept. of Electrical Engineering, *The Cooper Union*.

Feb 2025 **Invited panelist**, "Digital Landscapes," *Harvard Ukrainian Research Institute*, Harvard University.

Dec 2024 **Invited talk**, "Damage Mapping," *Humanitarian Intelligence Unit*, U.S. Department of State.

Oct 2024 **Invited talk**, "Persistent Monitoring of Damage to Built-up Areas in Gaza During the First Year of the 2023 Israel–Hamas War," *Workshop on GIS and LIS Curriculum*, Pratt Institute, New York, NY.

Nov 2023 **Invited talk**, "Mapping Damage in Gaza Using Sentinel-1 Coherence," *Financial Times Weekly Graphics Team Meeting*.

Nov 2023 **Invited talk**, "Brown Bag Lunch Conversation," *New York Times Graphics Team Meeting.*

Nov 2023 **Invited talk**, "Using Remote Sensing to Assess Damage in Gaza," *Foreign, Commonwealth, and Development Office of the United Kingdom.*

Media and Public Attention

Research and data products featured, cited, or discussed in more than 500 international media outlets; also included in reports from international humanitarian organizations and cited in international legal proceedings. Full list here; more at whoiscorey.com.

Selected Media

Oct 2025 *ABC*: "Satellite Images Show Extent of Destruction in Gaza After Two Years of War." (link)

Oct 2025 *BBC*: "Gaza War in Maps and Satellite Images." (link)

Jul 2025 *Haaretz*: "500 Missiles, 200 Interceptors, $1.5 Billion: Numbers Behind Iran's Attacks on Israel." (link)

Mar 2025 *Bloomberg*: "Satellite Imagery Shows Gaza's Destruction and Resilience With War Unresolved." (link)

Mar 2025 *Financial Times*: "Lebanon's Displaced Return to Find 'Scorched Earth' After Israeli Offensive." (link)

Jan 2025 *The New York Times*: "Mapping the Damage in Altadena and Pacific Palisades." (link)

Oct 2024 *The New York Times*: "Gaza in Ruins After a Year of War." (link)

Aug 2024 *Financial Times*: "'We Thought We Lived in Tuscany': Hizbollah Strikes Ravage Israel's North." (link)

Jun 2024 *The New York Times*: "What Ukraine Has Lost." (link)

Jun 2023 *The Washington Post*: "Rural Areas Sacrificed for Xi Jinping's New City, Satellite Imagery Shows." (link)

Selected Interviews and Appearances

Oct 2025 *BBC Radio 4, The World at One*: "The Challenge of Rebuilding Gaza." (link)

Aug 2025 *Der Standard*: "War cartographers Scher and Van Den Hoek: Destruction in Gaza worse than in Dresden 1945." (link)

Jul 2025 *BBC Radio 4, The World This Weekend*: "A Picture of Life in Gaza." (link)

Feb 2025 *The Thought Project Podcast, CUNY Graduate Center*: "Mapping the Wreckage of War and Wildfires." (link)

Jan 2024 *Marketplace*: "How Satellite Radar Helps Scientists Map the Destruction in Gaza." (link)

Jan 2024 *Bloomberg News*: "MapLab: Mapping Gaza's Destruction." (link)

Dec 2023 *Scientific American*: "Inside the Satellite Tech Revealing Gaza's Destruction." (link)

Nov 2023 *Democracy Now!*: "Gaza in Ruins: Satellite Imagery Researchers Say Israel Has Destroyed or Damaged 56,000 Buildings." (link)

Selected Reports and Legal Proceedings

Oct 2024 *United Nations General Assembly*: "Economic costs of the Israeli occupation for the Palestinian people: the economic impact of the Israeli military operation in Gaza from October 2023 to May 2024"
Incorporates satellite-based building damage data and analysis from Scher & Van Den Hoek. (link)

Jan 2024 *United Nations Conference on Trade and Development (UNCTAD)*: "Preliminary assessment of the economic impact of the destruction in Gaza and prospects for economic recovery: UNCTAD rapid assessment."
Incorporates satellite-based building damage data and analysis from Scher & Van Den Hoek. (link)

Dec 2023 *International Court of Justice*: "Application of the Convention on the Prevention and Punishment of the Crime of Genocide in the Gaza Strip (South Africa v. Israel)"
References satellite-based building damage data and analysis from Scher & Van Den Hoek. (link)

Conference Presentations

1. Van Den Hoek, Jamon, and **Corey Scher**. "Nationwide Mapping of Damage to Human Settlements Across Ukraine Using Sentinel-1 InSAR Coherent Change Detection." Paper presented at the *Global Land Program Open Science Meeting*, Online, November 5, 2024.
2. **Scher, Corey**. "The Science and Practice of War Damage Impact Assessment Using Satellite Radar." Application Lightning Talk presented at *SatSummit 2024*, Washington, D.C., May 17, 2024.
3. **Scher, Corey**, and Jamon Van Den Hoek. "Nationwide Mapping of Damage to Human Settlements Across Ukraine Using Sentinel-1 InSAR Coherence Change Detection." Talk presented at the *AGU Fall Meeting*, San Francisco, CA, December 2023
4. **Scher, Corey**, and Jamon Van Den Hoek. "Decentralized, Nation-Wide, High-Frequency War Damage Mapping Using InSAR Time Series Data." Poster presented at the *AGU Fall Meeting*, Chicago, IL, December 2022.
5. **Scher, Corey**, Kyle C. McDonald, Charles J. Vorosmarty, and David Saah. "Monitoring Sustainability of Shared Groundwater Resources Using Satellite Measurement of Transboundary Aquifer Compaction." Talk presented at the *Chapman Conference on the Quest for Sustainability of Heavily Stressed Aquifers at Regional to Global Scales*, American Geophysical Union, Valencia, Spain, October 2019.

6. **Scher, Corey**, and David Saah. "Extent and Characteristics of Damage from Wildfires Caused by Incendiary Kites During Protests of the Gaza–Israel Barrier Fence (March 2018 to Present)." Poster presented at the *AGU Fall Meeting*, San Francisco, CA, December 2018.
7. **Scher, Corey**, and David Saah. "Remote Monitoring of Groundwater Overdraft Using GRACE and InSAR." Poster presented at the *AGU Fall Meeting*, San Francisco, CA, December 2017.
8. **Scher, Corey**, Christopher Tennant, Laurel Larsen, and Dino G. Bellugi. "Do Rivers Really Obey Power-Laws?: Using continuous high resolution measurements to define bankfull channel and evaluate downstream hydraulic-scaling over large changes in drainage area." Poster presented at the *AGU Fall Meeting*, San Francisco, CA, December 2016.

Service

Program Service

2021–2025 **Executive Committee Student Member.** Dept. of Earth and Environmental Sciences, CUNY Graduate Center.

2019–2021 **Admissions Committee Student Member.** Dept. of Earth and Environmental Sciences, CUNY Graduate Center.

Professional Service

Conference Sessions

Dec 2025 **Co-Convener**, "Damage Assessment Across Scales and Systems: Environmental and Societal Impacts of Conflict and Disaster," *AGU 2025 Fall Meeting.*

Dec 2024 **Primary Convener**, "Tracking the Footprint of War: Earth and Environmental Science Perspectives on Monitoring Conflict Impacts," *AGU 2024 Fall Meeting.*

Academic Journal Editing

2025 **Guest Editor**, *Environmental Research Letters* special issue: "Initial and Enduring Environmental Consequences of Armed Conflict" (forthcoming).

Academic Journal Reviewing
Science Advances — Geophysical Research Letters — Water Resources Research — Science of Remote Sensing

Professional Affiliations

- American Geophysical Union

Software Development, Programming, & Field Experience

- Expert in Python, JavaScript, and shell scripting for geospatial data science and remote-sensing time-series analysis

- Expert in InSAR; engineering of scalable cloud-based pipelines using ASF HyP3, Google Cloud, and Google Earth Engine
- Data visualization with Python, Adobe Creative Suite, and GIS platforms
- Formal training in field geologic mapping and hydrogeology
- Field-based atmospheric remote sensing; water-optics sampling and sensor deployment (NASA Pandora network)
- In situ experiment on vegetation-induced sedimentation, Wax Lake Delta, Louisiana (PI: Laurel Larsen)