

Scott R. Stephenson

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Appointments

University of Connecticut, Storrs

Assistant Professor, Department of Geography, 2014-present

Education

University of California, Los Angeles

Ph.D. Geography, 2014
M.A. Geography, 2010

Stanford University

B.A. Human Biology, 2003
Minor: Science, Technology, and Society

Publications

Refereed Publications

Stephenson, S.R., Wang, W., Zender, C.S., Wang, H., Davis, S.J., Rasch, P.J. (2018). Climatic responses to future trans-Arctic shipping. *Geophysical Research Letters* 45. DOI:10.1029/2018GL078969

Stephenson, S.R., Oculi, N., Bauer, A., Carhuayano, S. (forthcoming). Convergence and divergence of UNFCCC nationally determined contributions. *Annals of the American Association of Geographers*.

Oculi, N. and **Stephenson, S.R.** (2018). Conceptualizing climate vulnerability: understanding the negotiating strategies of Small Island Developing States. *Environmental Science & Policy* 85: 72-80.

Wang, H. and **Stephenson, S.R.** (2018). Quantifying the impacts of climate change and land use/cover change on runoff in the lower Connecticut River Basin. *Hydrological Processes* 32: 1301-1312.

Stephenson, S.R. and Pincus, R. (2018). Challenges of sea-ice prediction for Arctic marine policy and planning. *Journal of Borderlands Studies* 33: 255-272.

Stephenson, S.R. (2018). Confronting borders in the Arctic. *Journal of Borderlands Studies* 33: 183-190.

Pezard, S., Tingstad, A., Van Abel, K., **Stephenson, S.R.** (2017). Maintaining Arctic cooperation with Russia: Planning for regional change in the Far North. RAND Corporation, Santa Monica, CA. ISBN: 978-0-8330-9745-3.

Clarke-Sather, A., Crow-Miller, B., Banister, J.M., Thomas, K.A., Norman, E.S., **Stephenson, S.R.** (2017). The shifting geopolitics of water in the Anthropocene. *Geopolitics* 22: 332-359.

Stephenson, S.R. (2017). Access to Arctic Urban Areas in Flux: Opportunities and Uncertainties in Transport and Development. In Orttung, R.W., ed. *Sustaining Russia's Arctic Cities: Resource Politics, Migration, and Climate Change*. New York: Berghahn.

Stephenson, S.R. and Agnew, J.A. (2016). The work of networks: embedding firms, transport and the state in the Russian Arctic oil and gas sector. *Environment and Planning A* 48: 558-576.

- Stephenson, S.R.** and Smith, L.C. (2015). Influence of climate model variability on projected Arctic shipping futures. *Earth's Future* 3: 331-343.
- Buixadé Farré, A., **Stephenson, S.R.**, et al. (2014). Commercial Arctic shipping through the Northeast Passage: routes, resources, governance, technology, and infrastructure. *Polar Geography* 37: 298-324.
- Stephenson, S.R.**, Brigham, L.W., Smith, L.C. (2014). Marine accessibility along Russia's Northern Sea Route. *Polar Geography* 37: 111-133.
- Smith, L.C. and **Stephenson, S.R.** (2013). New Trans-Arctic shipping routes navigable by midcentury. *Proceedings of the National Academy of Sciences* 110: 4871-4872.
- Stephenson, S.R.**, Smith, L.C., Brigham, L.W., Agnew, J.A. (2013). Projected 21st-century changes to Arctic marine access. *Climatic Change* 118: 885-899.
- Stephenson, S.R.** (2012). Collaborative infrastructures: a roadmap for international cooperation in the Arctic. *Arctic Yearbook 2012* 1: 311-333.
- Stephenson, S.R.**, Smith, L.C., Agnew, J.A. (2011). Divergent long-term trajectories of human access to the Arctic. *Nature Climate Change* 1: 156-160.

Other Publications

- Stephenson, S.R.** (2017). Perspectives: Trans-polar shipping. In Corell, R.W., Kim, J.D., Kim, Y.H., Young, O.R., ed. *The Arctic in World Affairs*. 2016 North Pacific Arctic Conference Proceedings, pp. 139-151. Honolulu, Hawaii.
- Tingstad, A., Pezard, S., **Stephenson, S.R.** (2016). Will the breakdown in U.S.-Russia cooperation reach the Arctic? *Inside Sources*, October 12. www.insidesources.com/will-the-breakdown-in-u-s-russia-cooperation-reach-the-arctic
- Azzara, A. J., Wang, H., Rutherford, D., Hurley, B., **Stephenson, S.R.** (2015). A 10-Year projection of maritime activity in the U.S. Arctic: A report to the President. U.S. Committee on the Marine Transportation System, Integrated Action Team on the Arctic, Washington, D.C.
- Stephenson, S.R.** (2013). The role of winter/ice roads in industry and communities in Northern Alberta. In Hansen, K.G., Rasmussen, R.O., Weber, R. (ed.) *Proceedings from the First International Conference on Urbanisation in the Arctic*. Nordregio Working Paper 2013:6.

Honors and Awards

- 2018: AAG Delegate, UNFCCC COP 24, Katowice, Poland
University of Connecticut Scholarship Facilitation Fund Awardee
- 2017: AAG Delegate, UNFCCC COP 23, Bonn, Germany
- 2016: AAG Delegate, UNFCCC COP 22, Marrakech, Morocco
AGU Research Spotlight: "Influence of climate model variability on projected Arctic shipping futures"
University of Connecticut Provost's Teaching Innovation Mini-Grant
- 2015: New Generation of Polar Researchers Leadership Symposium (selected participant)
Nominee, Doctoral Hooding Processional Marshal, UCLA

- 2014: Selection: *Esri Map Book*, Vol. 29
AAG Graduate Student Affinity Group Travel Award
- 2013: *PNAS* Top 10 Story of 2013: “New Trans-Arctic shipping routes navigable by midcentury”
First place (Analytic Presentation), Esri International User Conference Map Competition
UCLA Dissertation Year Fellowship (2013-2014)
UCLA Research Travel Grant (Svalbard, Norway)
UCLA Geography Graduate Publication Award
- 2012: American Geophysical Union Outstanding Student Paper Award
UCLA Canadian Studies Graduate Research and Conference Award
- 2011: National Science Foundation Nordic Research Opportunity (Nansen Environmental and Remote Sensing Center, Bergen, Norway)
Field Research Grant, Northern Alberta Development Council
UCLA Geography Graduate Publication Award
- 2010: National Science Foundation Graduate Research Fellow (2010-2013)
- 2009: UCLA Graduate Research Mentorship (2009-2010)
UCLA Graduate Summer Research Mentorship

Service and Affiliations

Associate Editor, *Polar Geography* (2016-present)

Editorial Board, *Polar Geography* (2014-present); *FOCUS on Geography* (2016-present)

Alumni Relations, Outreach, Development and Honors Committee, University of Connecticut Department of Geography (2014-present); Chair (2016-present)

Referee, *Advances in Polar Science*; *Arctic*; *Arctic Yearbook*; *Asia-Pacific Journal of Atmospheric Sciences*; *Climatic Change*; *Earth's Future*; *Environment, Space, and Place*; *Geographical Review*; *Geophysical Research Letters*; *FOCUS on Geography*; *International Journal of Geographical Information Science*; *Journal of Cleaner Production*; *Journal of Climate*; *Journal of Transport Geography*; *Marine Policy*; NSF (External Reviewer: Arctic System Sciences; Arctic Social Sciences; Geography and Spatial Sciences); *Nature Climate Change*; *Oceanologia*; *Oxford Bibliographies*; *Polar Geography*; *Risk Analysis*; *Science Advances*; *Scientific Reports (Nature)*; *Transportation Research Part A: Policy and Practice*; *Urban Science*; US Arctic Domain Awareness Center (Subject Matter Expert Reviewer); *WIREs Climate Change*

American Association of Geographers (2008-present)

Polar Geography Specialty Group: Vice-Chair (2017-present); Treasurer (2014-2017); Board Member (2013-present)

Human Dimensions of Global Change Specialty Group: Treasurer (2018-present); Board Member (2017-present)

American Geophysical Union, Member (2010-present)

Organizer, “Careers in Geography” UCLA Graduate Professional Development Symposium (2010)

Presentations

Invited: “Navigating the future Arctic” (oral), University Centre in Svalbard (UNIS), Longyearbyen, Norway, August 2018.

“Climatic responses to future trans-Arctic shipping” (oral), American Association of Geographers Annual Meeting, New Orleans, LA, April 2018.

Invited: “The political geography of Arctic maritime governance” (panelist), American Association of Geographers Annual Meeting, New Orleans, LA, April 2018.

Invited: “Climate model projections for future Arctic marine access” (oral), International Workshop on Arctic, Le Havre, France, March 2018.

Invited: “Navigating the future Arctic” (oral), University Centre in Svalbard (UNIS), Longyearbyen, Norway, August 2017.

Invited: “Navigating the future Arctic” (oral), Norwegian Scientific Academy for Polar Research International Summer School, Longyearbyen, Norway, August 2017.

“Alignment and divergence of Arctic state climate agendas” (oral), American Association of Geographers Annual Meeting, Boston, MA, April 2017.

Invited: “Climate change and national security in the Arctic: Emerging challenges and opportunities for action” (panelist), New Directions in Environmental Law Conference, Yale University, New Haven, CT, February 2017.

“Comparing the climate agendas of the parties to the UN Framework Convention on Climate Change” (poster), American Geophysical Union Fall Meeting, San Francisco, CA, December 2016.

Invited: “Climate change and geopolitics in the Arctic” (oral), SUNY Albany Geography and Planning Colloquium, Albany, NY, October 2016.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Inaugural Lecture of Southern Connecticut State University’s Department of the Environment, Geography & Marine Sciences Colloquium Series, New Haven, CT, September 2016.

Invited: “Perspectives on trans-polar shipping” (oral), 2016 North Pacific Arctic Conference, East-West Center, Honolulu, HI, August 2016.

Invited: “The potential of the trans-polar route as a commercial shipping corridor” (oral), A 5° C Arctic in a 2° C World, Columbia University, New York, NY, July 2016.

“Arctic Ocean change and transportation” (oral), Arctic-COAST I: Indicators, Resilience, and Governance in Arctic Coastal Social-Ecological Systems, Murmansk, Russia, June 2016.

“Challenges of sea ice prediction for Arctic marine policy and planning” (oral), American Association of Geographers Annual Meeting, San Francisco, CA, March 2016.

Invited: “Arctic Horizons 2025: NSF Forum on the Future of Arctic Social Research” (panelist), American Association of Geographers Annual Meeting, San Francisco, CA, March 2016.

“SONARC: a sea ice monitoring and forecasting system to support safe operations and navigation in Arctic seas” (oral), American Geophysical Union Fall Meeting, San Francisco, CA, December 2015.

Invited: “Climate change and polar regions” (panelist), Rutgers Regional Climate Symposium 2015, Rutgers University, New Brunswick, NJ, November 2015.

“Embedded firms, transport and the state: a brief examination of Yamal LNG” (oral), Arctic-FROST Annual Meeting, St. Petersburg, Russia, August 2015.

Invited: “Issues and methods for modeling Arctic marine navigation” (oral), Nansen International Environmental and Remote Sensing Centre SONARC Meeting, St. Petersburg, Russia, August 2015.

“Assessing projected variability in the future Arctic navigation season” (oral), Association of American Geographers Annual Meeting, Chicago, IL, April 2015.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), 46th Symposium on International Relations, Yale University, New Haven, CT, April 2015.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Rutgers University Geography Colloquium, New Brunswick, NJ, March 2015.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Coastal Perspectives Lecture Series, University of Connecticut Avery Point, February 2015.

“Future projections of trans-Arctic shipping potential and variability” (poster), American Geophysical Union Fall Meeting, San Francisco, CA, December 2014.

Invited: “Trans-border shipping in the North American Arctic” (oral), Borders in Globalization Conference, Ottawa, ON, September 2014.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Department of Civil and Environmental Engineering Seminar Series, University of Connecticut, September 2014.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Climate and National Security Seminar Series, RAND Corporation, Santa Monica, CA, July 2014.

Invited: “Scenarios of 21st-century human access in a warming Arctic” (oral), Department of Earth System Science Seminar Series, University of California, Irvine, CA, May 2014.

Invited: “Extractive networks and climatic vulnerabilities in the Russian Arctic” (oral), Developing an Arctic Roadmap Game Workshop, Wilson Center, Washington, DC, April 2014.

“The network allure: spatial embeddedness in Arctic extractive industries” (oral), Association of American Geographers Annual Meeting, Tampa, FL, April 2014.

“Future climate impacts of trans-Arctic shipping” (oral), Arctic Frontiers, Tromsø Norway, January 2014.

“Scenarios of 21st-century trans-Arctic shipping for climate studies” (oral), American Geophysical Union Fall Meeting, San Francisco, CA, December 2013.

Invited: “Seasonal changes in access along the Northern Sea Route” (oral), Alaska and the New Maritime Arctic, Anchorage, AK, November 2013.

“Navigating the Northwest Passage: projections for viability in the 21st century” (oral), Arctic Shipping North America Forum, St. John’s, NL, October 2013.

Invited: “Access in flux: opportunities and challenges to sustainable transportation in the Russian Arctic” (oral), Promoting Sustainability in Russia’s Arctic Cities, George Washington University, Washington, DC, May 2013.

“The Northern Sea Route: plausible navigation scenarios” (oral), Association of American Geographers Annual Meeting, Los Angeles, CA, April 2013.

“Impacts of projected sea ice changes on trans-Arctic navigation” (poster), American Geophysical Union Fall Meeting, San Francisco, CA, December 2012.

“The Role of winter/ice roads in industry and communities in northern Alberta” (oral), The First International Conference on Urbanization in the Arctic, Nuuk, Greenland, August 2012.

“Projecting Arctic maritime access to 2100” (oral), Association of American Geographers Annual Meeting, New York, NY, February 2012.

“Accessibility dynamics in a warming Arctic” (oral), American Geophysical Union Fall Meeting, San Francisco, CA, December 2010.

“Implications of climate change for Arctic accessibility” (oral), Association of American Geographers Annual Meeting, Washington, DC, April 2010.

“Integration of estimates of winter road suitability in Arctic accessibility modeling” (oral), Association of Pacific Coast Geographers Annual Meeting, San Diego, CA, October 2009.

“Mapping vulnerability of settlements to permafrost thaw-induced subsidence in Siberia and the Russian Far East” (oral), Association of American Geographers Annual Meeting, Las Vegas, NV, March 2009.

Teaching

University of Connecticut, 2014 - present

GEOG 2320: Climate Change: Current Geographic Issues

GEOG 2510: Visualizing Geographic Data

GEOG 4130: Geographical Analysis of Transportation

GEOG 5000: Research Design

GEOG 5130: GIS in Transportation Geography

GEOG 6880: Advanced Topics in Environmental Geography

University of California, Los Angeles (Teaching Assistant), 2010-2013

ENV 180A: Practicum in Environmental Science

GEOG 168: Intermediate GIS

Hokkaido University of Education, Hakodate, Japan, 2005-2006

English instruction to Japanese university students.

Daibundo School, Hakodate, Japan, 2005-2006

English instruction to native Japanese speakers in a seminar format.

Natural History Museum of Los Angeles County, 2002

Designed and conducted educational programming and tours.

Selected Media Coverage and Appearances

Arctic Today, “Air pollution from ships will likely slow rising Arctic temperatures, researchers say” (9/27/18)

Grist, “Shipping giants look lustily at the warming Arctic” (9/24/18)

UConn Today, “More ships and more clouds mean cooling in the Arctic” (9/17/18)

Buzzfeed News, “Disappearing Arctic sea ice will help Russia export its oil” (2/6/17)

Yale Environment 360, “Shipping plans grow as Arctic ice fades” (11/17/16)

Arctic Deeply, “The Future of Arctic Shipping” (2/10/16)

UConn Today, “Sailing the mid-century Arctic” (1/14/15)

KCBS-740AM San Francisco, “Sailing the Arctic, Thanks to Global Warming” (12/2/13)

Economist Intelligence Unit, “The Arctic bites back—for now” (4/10/13)

Reuters, “Warmer climate to open new Arctic shipping routes by 2050 –study” (3/4/13)

Los Angeles Times, “Ice melt to expand Arctic shipping by midcentury” (3/4/13)

NPR, “Study finds climate change to open Arctic sea routes by 2050” (3/5/13)

Scientific American, “Melting Arctic ice will make way for more ships—and more species invasions” (3/6/13)

Reuters, “Ice melt to close off Arctic’s interior riches: study” (5/29/11)

Toronto Globe and Mail, “Global warming jeopardizing ice highways, study says” (5/29/11)

CBC News, “Climate change to ravage Arctic ice roads” (5/31/11)

Wall Street Journal, Marketwatch “Melting ice has its downside for Canada” (5/31/11)

Scientific American, “Arctic to gain ports, lose ice roads new study finds” (5/13/11)