

Amber Silver

Assistant Professor

College of Emergency Preparedness, Homeland Security and Cybersecurity
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EDUCATION

- 2017 **Ph.D.**, Department of Geography & Environmental Management
University of Waterloo, Waterloo, Ontario
- 2012 **M.E.S.**, Department of Geography & Environmental Management
University of Waterloo, Waterloo, Ontario
- 2010 **B.Sc.** (Honours Geography), Department of Geography
Saint Mary's University, Halifax, Nova Scotia

PREVIOUS EMPLOYMENT

Department of Geography & Environmental Management, University of Waterloo
Sessional Instructor, 2011-2016
Teaching Assistant, 2010-2015
Research Assistant, 2010-2012

Department of Geography, Saint Mary's University
Cartographer and Lab Technician, 2010
Research Technician, 2007-2010
Teaching Assistant, 2007-2010
Research Assistant, 2007

RESEARCH AND SCHOLARSHIP

AREAS OF SPECIALIZATION

Weather, climate, and society: Risk and crisis communication; values, preferences, and usage of forecast information; risk perception, public attention, and decision making; social media; sense of place and disaster recovery.

Data collection: Social media content analysis; semi-structured interviews; focus groups; large sample questionnaires

PUBLICATIONS**Articles (External Peer Review)**

- 11 Larter P., Grek-Martin J., and **Silver A.** (2019). Does time heal all wounds? Restoring place attachment in Halifax's Point Pleasant Park after Hurricane Juan. *The Canadian Geographer* 63: 494-506.
- 10 **Silver A.** and Andrey J. (2019). Public attention to extreme weather: sense-making on social media. *Journal of Contingencies and Crisis Management* 27: 346-358.
- 9 **Silver A.** (2019). Public attention to risks, hazards, and disasters: a retrospective literature review and proposed conceptual model. *Risk, Hazards, and Crisis in Public Policy* 10: 294-310.
- 8 Penta S., Phillips S., **Silver A.**, and Barrett E. (2019). Beyond internships: Experiential learning as a tool for emergency management education. *International Journal of Mass Emergencies and Disasters* 37: 35-43.
- 7 **Silver A.** and Matthews L. (2017). The use of Facebook for information seeking, decision support, and self-organization following a significant disaster. *Information, Communication, and Society* 20 (11): 1680-1697.
- 6 Harrison S., **Silver A.**, and Doberstein B. (2015). Post-storm damage surveys of tornado hazards in Canada: Implications for mitigation and policy. *International Journal of Disaster Risk Reduction* 13: 427-440.
- 5 **Silver A.** and Grek-Martin J. (2015). "Now we understand what community really means": Reconceptualising the role of sense of place in the disaster recovery process. *The Journal of Environmental Psychology* 42: 32-41.
- 4 **Silver A.** (2014). Watch or warning? Perceptions, preferences, and usage of forecast information by members of the Canadian public. *Meteorological Applications* 22 (2): 248-255.
- 3 **Silver A.** and Andrey J. (2014). The influence of previous disaster experience and socio-demographics on protective behaviors during two successive tornado events. *Weather, Climate, and Society* 6 (1): 91-103.
- 2 Andrey J., Joakim E., Schooner V., Hambly D., **Silver A.**, Jayasundera R., and Nelson A. (2012). Academic entitlement in the context of learning styles. *Canadian Journal of Education* 35 (4): 3-30.

- 1 **Silver A.** and Conrad C. (2010). Public perception of and response to severe weather warnings in Nova Scotia, Canada. *Meteorological Applications* 17 (2): 173-179.

Book Chapters

- 2 **Silver A.** (2019). Chapter 15: The use of social media in crisis communication. In Kar B. and Cochran D. (eds.) *Understanding the Roles of Risk Communication in Community Resilience Building*. Routledge.
- 1 Robbins J.C., C. Cunningham, R. Dankers, M. DeGennaro, G. Dolif, R. Duell, V. Marchezini, B. Mills, J.P. Sarmiento, **A. Silver**, R. Trajber, and A. Watkins. (2018). Chapter 19: Communication and dissemination of forecasts and engaging user communities, In: A.W. Robertson and F. Vitart (eds.), *The Gap Between Weather and Climate Forecasting: Sub-seasonal to Seasonal Prediction*. Elsevier, London.

White Papers and Reports

- 1 **Silver A.** and Peddle, S. (2018). Voices of Flooding in Windsor, Ontario: Results of a Survey on Flood Experiences and Preparing for the Future. A Partners for Action report prepared for the City of Windsor and the Canadian Red Cross.

Dissertations and Theses

- 2 **Silver, A.** (2017). Public Attention to Environmental Hazards. Doctoral dissertation, Department of Geography & Environmental Management, Faculty of Environment, University of Waterloo. 126 pp. Dr. Jean Andrey (supervisor)
- 1 **Silver, A.** (2012). Factors Influencing Individuals' Decision-Making During High-Risk Short-Notice Disasters: The Case Study Of The August 21st, 2011 Goderich, Ontario Tornado. Masters thesis, Department of Geography & Environmental Management, Faculty of Environment, University of Waterloo. 164 pp. Dr. Jean Andrey (supervisor)

Other Contributions

- 3 **Silver A.** and Mills B. (2017). The value and application of sub-seasonal to seasonal weather forecasts, 2nd edition. Waterloo: Environment Canada. 78 pp.
- 2 **Silver A.** (2012). Risk communication preferences among Goderich residents following the August 21st, 2011 tornado. *Canadian Risks & Hazards Network Newsletter* 4(1): 46-48.

- 1 **Silver A.** and van Proosdij D. (2009). The influence of vegetation on sedimentary processes in a macro-tidal salt marsh. Proceedings of the 8th Bay of Fundy Ecosystem Partnership Science Workshop, Wolfville, Nova Scotia. 10 pp

Manuscripts Under Review

- 1 **Silver A.**, Jackson, S., and Ezung, C. (Under Review). The Social Amplification of Risk During Hurricanes Florence and Michael. Submitted to: *Journal of Risk Research*.

Research In Progress

- 4 **Silver, A.**, Jackson, S., and Behlendorf, B. (In Preparation). Assessing motive in searching for and disseminating weather-related information before, during, and after Hurricane Dorian in Nova Scotia, Canada. In preparation for: *Information, Communication, and Society*. Expected submission: Summer 2020.
- 3 **Silver, A.**, Lawson, C., and Nussbaum, B. (In preparation). Stakeholder engagement and public response to resiliency planning and hazard mitigation planning using the New York State Hazard Mitigation Plan. In preparation for *International Journal of Disaster Risk Reduction*. Expected submission: Winter 2019.
- 2 **Silver, A.** (In Preparation). Assessing 30 years of research on the Social Amplification of Risk Framework (SARF). In preparation for *Risk Analysis*. Expected submission: Winter 2019.
- 1 Cohen, N. and **Silver, A.** (In Preparation). The use of social media for problem-focused, emotion-focused, and religious-focused coping following Hurricane Florence. In preparation for *Journal of International Crisis and Risk Communication Research*. Expected submission: Fall 2019.

GRANT FUNDING

Federal-Level

- 2015-2020 **Key Personnel.** National Science Foundation, PIRE Award. “Building Extreme Weather Resiliency Through Improved Weather and Climate Prediction and Emergency Response Strategies”. Award Number: 1545917. \$4,497,533 total award. \$193,000 awarded for personal research and VOST development. With Everette Joseph (Principal Investigator) and Christopher Thorncroft (Co-Principal Investigator).

State-Level

2017-2019 **Co-Principle Investigator.** New York State Division of Homeland Security and Emergency Services. “*New York State Hazard Mitigation Program (SHMP)*”. With Principle Investigator Catherine Lawson and co-Principle Investigator Brian Nussbaum. \$1,000,000 total award.

ACADEMIC AWARDS AND HONOURS

2016 Sharon & David Johnston award. \$5000 value.
Canadian Risks and Hazards Network travel bursary. \$600 value.

2012-2015 SSHRC CGS Doctoral Award. \$105,000 value.
University of Waterloo President's Graduate Scholarship. \$30,000 value.

2014 American Meteorological Society Student Presentation Award.
University of Waterloo SSHRC Talent Award nominee.

2013 Association of American Geographers Gilbert F. White Award.
Outstanding Achievement in Graduate Studies, University of Waterloo.
CAGONT/ELDAAG Student Presentation Award.

2012-2013 Ontario Graduate Scholarship. \$15,000 value (declined).
Environmental Studies Graduate Experience Award. \$4000 value.

2012 Scholarship to attend the Natural Hazards Center annual workshop.

2011-2012 SSHRC CGS Masters Award. \$17,500 value.
University of Waterloo President's Graduate Scholarship. \$10,000 value.
Ontario Graduate Scholarship. \$15,000 value (declined).

2010-2012 Environmental Studies Graduate Experience Award. \$8000 value.

2010 Weather and Society Integrated Studies (WAS*IS) Fellow.
Canadian Association of Geographers (CAG) Undergraduate Award

2009 NSERC URSA. \$4500 value.
Academic Achievement Scholarship. \$3500 value.
ACAG Student Presentation Award.
Saint Mary's University Dean's List

2008 NSERC URSA. \$4500 value.
Academic Achievement Scholarship. \$3500 value.
Saint Mary's University Dean's List

CONFERENCES AND SYMPOSIUMS

Silver A. (2019). Atlantic hurricanes: tomorrow's solutions to enhancing prediction and bolstering resilience. Panel discussion. RISE Conference, Albany, New York. November 18-20.

Silver A. (2019). Communication challenges and opportunities based on recent high impact events: hurricanes and wildfires. Panel discussion. *American Meteorological Society Summer Community Meeting*, Albany, New York. August 13-14.

Silver A. and Andrey J. (2018). Public attention to extreme weather: sense-making on social media. *Association of American Geographers*. New Orleans, Louisiana. April 10-14.

Silver A. and Matthews L. (2016). The use of Facebook for information seeking, decision support, and self-organization following a significant disaster. *Canadian Association of Geographers*. Halifax, Nova Scotia. May 30-June 4.

Silver A. and Andrey J. (2015). Assessing the use of provincial weather hashtags by members of the Canadian public. *Social Media and Society*. Toronto, Ontario. July 27-29.

Silver A. and Matthews L. (2014). Facebook as a response and recovery tool following the 2011 Goderich, Ontario tornado. *Canadian Risks and Hazards Network Annual Symposium*. Toronto, Ontario. October 22-24.

Silver A. and Andrey J. (2014). Perception and use of weather information in decision-making by members of the Canadian public. *World Weather Open Science Conference*. Montréal, Québec. August 16-21.

Silver A. and Grek-Martin J. (2014). "It still feels like Goderich to me, and I think that it will be beautiful again": The positive and negative impacts of an F3 tornado on residents' sense of place. *Annual Meeting of the Canadian Association of Geographers*. St. Catherines, Ontario. May 26-30.

Harrison S., **Silver A.**, and Doberstein B. (2014). Post-storm damage survey of tornadic events in Canada: Implications for disaster risk reduction and policy. *Annual Meeting of the Canadian Association of Geographers*. St. Catherines, Ontario. May 26-30.

Silver A. (2014). Preferences, perceptions, and usage of forecast information by members of the Canadian public. *94th Annual Meeting of the American Meteorological Society*. Atlanta, Georgia. February 2-6.

Silver A. (2013). "Now we understand what 'community' really means": Exploring the positive and negative impacts of disaster on place attachments. *Joint Annual Meeting of*

the Canadian Association of Geographers Ontario Division and the Eastern Lakes Division of the Association of American Geographers. Toledo, Ohio. October 25-26.

Silver A. and Andrey J. (2013). Watch or warning? Weather saliency and forecast preferences among Ontario residents. *Annual Meeting of the Canadian Association of Geographers.* St. John's, Newfoundland. August 11-15.

Silver A. and Andrey J. (2013). Factors influencing individuals' self-protective behaviours during the August 21st, 2011 Goderich, Ontario tornado. *Annual Meeting of the Association of American Geographers.* Los Angeles, California. April 9-13.

Silver A. (2012). Risk communication and decision-making: the role of current communications technologies before, during, and after the Goderich, Ontario tornado. *Annual Meeting of the Canadian Association of Geographers.* Waterloo, Ontario. May 28-June 2.

Silver A. (2012). The role of mobile phone technology and social media before, during, and after the Goderich, Ontario tornado. *Annual Meeting of the Association of American Geographers.* New York, New York. February 24-28.

Silver A., King J., and Rombough L. (2011). Travel behavior of undergraduate students in the Region of Waterloo, Ontario. Poster presentation. *Wilfrid Laurier University Faculty of Arts 4x3 Poster Symposium.* Waterloo, Ontario. March 30.

Silver A. (2010). Community resilience to natural disasters: A case study from Nova Scotia, Canada. *1st Waterloo Conference on the Characteristics and Risk Management of Natural Hazards.* Waterloo, Ontario. December 1-3.

Conrad C., Grek-Martin J., and **Silver A.** (2010). Perceptions of a changing climate: Voices from The Gambia, West Africa. *Canadian Association of Geographers Ontario Division Meeting.* Toronto, Ontario. October 15-16.

Silver A. and Conrad C. (2010). Public perception of and response to severe weather warnings in Nova Scotia, Canada. *Annual Meeting of the Canadian Association of Geographers.* Regina, Saskatchewan. June 1-5.

Silver A. and Conrad C. (2009). Public perception of and response to severe weather warnings in Nova Scotia, Canada. *21st Atlantic Canadian Association of Geographers Meeting.* Halifax, Nova Scotia. October 16-17.

Silver A. and van Proosdij D. (2009). The influence of vegetation on sedimentary processes within a macro-tidal salt marsh. *8th Bay of Fundy Ecosystem Partnership Workshop.* Wolfville, Nova Scotia. May 26-29.

Silver A. and van Proosdij D. (2008). The influence of vegetation on sedimentary processes within a macro-tidal salt marsh. *20th Atlantic Canadian Association of Geographers Meeting*. Sackville, New Brunswick. October 17-18.

INVITED PRESENTATIONS

Silver A. (2019). Navigating the Changing Communication Landscape: Social Media Risk and Crisis Communication. National Weather Service (NWS) Integrated Warning Team Workshop. Sioux Falls, South Dakota. October 24.

Silver A. (2019). Navigating the changing communication landscape: social media for risk and crisis communication. A Coast and Ocean Risk Communication Community of Practice (CORC COP) Webinar. October 4.

Silver A. (2017). Public attention to high impact weather. *DAES and ASRC Joint Colloquium Series*. October 23.

McGown D., **Silver A.**, and Mitchell A. (2017). Risk and the environment. *Spur Toronto*. April 8.

Silver A. (2014). Public perception and usage of weather products and services by members of the Canadian public. The Weather Network, Oakville, Ontario. October 3.

Silver A. (2014). Update on public understanding of Environment Canada bulletins. Environment Canada, Downsview, Ontario. April 4.

Silver A. (2014). Risk communication during emergencies. Flood Warning and Emergency Planning Meeting, Flood Coordinators Workshop. London, Ontario. March 6.

Mills B. and **Silver A.** (2014). Understanding the development, dissemination, usage, and perception of weather information from the forecaster to various end-users. *GEOG 674: Climate and Society*, University of Waterloo. January 31.

Silver A. (2014). The benefits and challenges associated with the use of social media as a flood risk communication tool. Grand River Conservation Authority (GRCA), Cambridge, Ontario. January 29.

Silver A. (2013). Communication of flood risk information: challenges and future opportunities for practitioners. Upper Thames River Conservation Authority (UTRCA), London, Ontario. October 9.

Silver A. (2013). External messaging and public, municipal, and media reception – social science perspectives. Provincial Flood Forecasting and Warning Committee (PFFWC) workshop, Toronto, Ontario. September 18-19.

Silver A. (2013). Factors influencing individuals' decision making during high risk short-notice disasters: the case study of the August 21st, 2011 Goderich, Ontario tornado. Environment Canada, Downsview, Ontario. April 3.

Silver A. (2010). Regional social vulnerability to severe weather events. Weather and Society*Integrated Studies (WAS*IS) Workshop. Boulder, Colorado. August 5-13.

TEACHING

Undergraduate Courses Taught, University at Albany

CEHC 344 – Emergency Preparedness (F17, S18, Su18, F18, W19, S19, Su19, F19)
IINF 307 – Current Topics in Social Media (F18)

Undergraduate Courses Taught, University of Waterloo

GEOG 206 – Human dimensions of natural disasters (Su11, Su12, Su13)
GEOG 306 – Human dimensions of natural disasters (Su15, Su16)
GEOG 222 – Geographical Study of Canada (S12, F13, F14)

Teaching Assistant, University of Waterloo

- Introduction to physical geography
- Weather and climate
- On becoming a geographer
- Human dimensions of natural hazards
- Resources management

Undergraduate Students Supervised

Coley, C. (2019). Perceived versus actual preparedness for extreme weather among rural residents of upstate New York. Undergraduate thesis, Department of Public Administration and Policy, University at Albany.

Cohen, N. (2019). The use of social media for problem-focused, emotion-focused, and religious-focused coping following Hurricane Florence. Undergraduate research project, College of Emergency Preparedness, Homeland Security and Cybersecurity, University at Albany.

Starr L. (2014). University-level storm closure policies in Canada. Undergraduate thesis, Department of Geography & Environmental Management, University of Waterloo.

Casbourn S. (2014). Changes in the flooding regime of the St. Lawrence basin in response to climate change. Undergraduate research project, Department of Geography & Environmental Management, University of Waterloo.

Harrison S. (2014). Post-storm damage surveys of tornado hazards in Canada: Implications for mitigation and policy. Undergraduate thesis, Department of Geography & Environmental Management, University of Waterloo. 117 pp.

Davies M. (2013). How climate change will affect tornadoes and the future disaster planning in Ontario. Undergraduate research project, Department of Geography & Environmental Management, University of Waterloo.

Avis M. (2012). Perception, communication, and response among the elderly following a tornado in Goderich, Ontario. Undergraduate research project, Department of Geography & Environmental Management, University of Waterloo.

SERVICE

College of Emergency Preparedness, Homeland Security and Cybersecurity

- 2019- Faculty supervisor, **Virtual Operations Support Team (VOST)**, University at Albany.
- 2018- Member, **Graduate Committee**, College of Emergency Preparedness, Homeland Security and Cybersecurity
- 2017-2019 Member, **Search Committee**, College of Emergency Preparedness, Homeland Security and Cybersecurity.
- 2017-2018 Chair, **Grievance Committee**, College of Emergency Preparedness, Homeland Security and Cybersecurity

University at Albany, State University of New York

- 2018- Member, **Committee on Academic Standing**, University at Albany.

Professional Service

- 2019- Co-chair of the HiWeather social media working group of the World Meteorological Organization.
Co-Lead, Coast and Ocean Risk Communication Community of Practice (CORC CoP), a MEOPAR initiative.
- 2016- Member of the High Impact Weather (HIWx) working group of the World Meteorological Organization
- 2013-2017 Member of the American Meteorological Society's Board on Societal Impacts.
- 2013 Canadian Risks and Hazards Network (CRHNet) Young Professionals Committee member
- 2012-2014 Special session organizer and chair ("Weather and Society") at the Canadian Association of Geographers annual meeting.
- 2012 Student volunteer at the Natural Hazards Research Centre 37th annual workshop. Broomfield, Colorado. July 14-17.
- 2011-2012 Organizing committee member for the Canadian Association of Geographer's 2012 annual meeting.
- 2011 Review committee member for the Weather and Society*Integrated Studies (WAS*IS) workshop.
- 2010-2017 Committee member for the Canadian Weather and Society study and research group at the University of Waterloo.

Professional Memberships

American Meteorological Society (AMS)
 Association of American Geographers (AAG)
 Canadian Risks and Hazards Network (CRHNet)
 Canadian Association of Geographers (CAG)

Refereeing

Peer-reviewed Journals

- Weather, Climate and Society
- Journal of Environmental Psychology
- New Media and Society
- Geographical Review

- Papers in Applied Geography
- Journal of Community Psychology
- Natural Hazards
- Environmental Hazards
- International Journal of Disaster Risk Reduction
- Bulletin of the American Meteorological Society (BAMS)
- PLOS ONE
- Information Systems for Crisis Response and Management (ISCRAM)

Publishers

- Nelson Education Ltd.

Media Interviews and Spotlights

- 104.9 The Beach
- Goderich Signal Star
- Bullet News Huron
- The Weather Network
- CBC / Radio-Canada
- University of Waterloo
- University at Albany
- Accuweather
- Honolulu Star-Advertiser
- The Atlantic
- Phys.org
- Northeast Public Radio (NPR affiliate)

Signature:

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November 22nd, 2019