

Scott V. Hatcher

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02/11/2018
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Education

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| 2017 | UC Berkeley (Berkeley, CA). Professional certificate in spatial data Science. A short course aimed at bringing private sector researchers up to date on geospatial analysis and computational tools. |
| 2016 | ESA ESRIN (Frascati, Italy). Certificate of completion for attending the European Space Agency's Earth Observation summer school. Primary focus was hands on training in the processing and analysis of Sentinel mission EO products, as well as a primer in data assimilation methods. |
| 2010–2013 | Memorial University (St. John's, NL). M.Sc., Department of Geography, Thesis: <i>People at the tidal flats: coastal geomorphology and hazards in Iqaluit, Nunavut</i> . One published manuscript in <i>Arctic</i> , and another submitted to <i>Geomorphology</i> . |
| 2009–2010 | Centre of Geographic Sciences, Nova Scotia Community College (Lawrencetown, NS). Adv. Diploma in Remote Sensing. Technical diploma that taught proficiency in Remote Sensing & GIS computing. Taught in ArcGIS (including Python scripting), GRASS GIS, PCI Geomatica, ERDAS Imagine, and GeoDA. |
| 2005–2009 | St. Francis Xavier University (Antigonish, NS). B.A. double major in Music/History, with a focus in Physics. I spent a semester abroad at the University of Western Australia, in my birthplace of Perth, WA. |

Research Experience

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| 2016–2018 | Geospatial Scientist <i>PrecisionHawk Inc., Raleigh, North Carolina, U.S. (remote position)</i>
My role as Geospatial Scientist required me to direct the research agenda of the company in collaboration with external clients, and to internalize the results from these external collaborations. This requires expertise in both scientific research as well as software development. In particular, as a UAV data analysis software company, it is my job to continually assess what analysis products can be produced from our UAV sensor suite, and to assure their accuracies are within the spec of the client. |
| Mar–Jun 2016 | Intern <i>eCoast Ltd., Raglan, Waikato, New Zealand</i>
Working closely with a small team at eCoast Ltd., I applied the New Zealand Marine Habitat Classification System to a legacy fisheries database at the Hawkes Bay Regional Council. This required the collection, transformation, and organization of a number of disparate fisheries datasets. The end product was a Hawkes Bay Marine Geodatabase that will be updated in the future to maintain the council's ability to monitor and manage fisheries in the Hawkes Bay region. Additionally, I provided software expertise in Python and R to the group of researchers at eCoast Ltd. |

2015–2016	Research Assistant <i>Geography department, University of Otago; Dunedin, New Zealand</i> As part of a research team led by Dr. Mike Hilton, I underwent a crash course in Aeolian Geomorphology. Our field team conducted two trips to Stewart Island to measure airflow modification over coastal foredunes, as well as multiple trips to St.Kilda beach to investigate the evolution of a heavily managed urban coastal dune system. As a research group we prepared two manuscripts for publication.
May–Jun 2014	Contract Researcher <i>Hatcher Research Associates Inc.; Sydney, NS</i> Hired by the Gabarus Historical Society, I produced a coastal hazards assessment report on the historic lighthouse in Gabarus Bay. This provided a succinct summary of literature produced on the region relevant to coastal hazards, as well as an analysis of historical aerial imagery to derive rates of erosion to the lighthouse property. I was able to assist the small group in requesting funding from the federal government to put in adequate and effective protection measures for the historic building.
Jan–Nov 2014	EG II GIS Analyst <i>Geological Survey of Canada, Atlantic Division; Dartmouth, NS</i> Using national GIS datasets, I helped to develop and implement a Coastal Sensitivity Index for the entire Canadian coastline under the CanCoast project. The index is a communication tool that uses existing data to assist with adaptation planning within the federal government. With limited time under contractual work I was also able to produce visualisations of the results for the national coast assessment for climate change adaptation.
Apr–Nov 2013	Research Assistant <i>Sustainable Communities Initiative, Memorial University and Nunatsiavut Government; St.John's, NL</i> I worked as co-lead for a field season doing geophysical surveys in five remote coastal communities within the Inuit Land Claim of Nunatsiavut in northern Labrador. Using limited resources we successfully collected new hazards data, organized existing data, and archived all data into a community database.
Feb–May 2010	Remote Sensing Technician <i>Advanced Geomatics Research Group, Nova Scotia Community College; Middleton, NS</i> I processed and analyzed raw multi-year aerial LiDAR data to conduct change detection within an eroding coastal dune/beach system in Nova Scotia, Canada.
Jun–Jul 2010	Remote Sensing Technician <i>Department of Fisheries and Oceans, Bedford Institute of Oceanography; Dartmouth, NS</i> In two months I trained myself in the SeaDAS scripting language and implemented an algorithm to detect and map chlorophyll levels in the Bras D'Or estuary of Cape Breton, Nova Scotia. The remote sensing platform I used was MODIS.
Aug–Sept 2009	Dive Technician <i>Bras D'Or Marine Research Institute, Cape Breton University; Sydney, NS</i> I was a scientific diver for the Sydney Harbour dredging project. I Operated video and camera equipment for underwater surveys of marine life. I maintained scientific equipment, the dive boat (24' semi-rigid Zodiac), and the dive equipment.

Awards

Sep 2014	Free and Open-Source Software for GIS conference student travel award recipient.
Oct 2013	Fellow of the department of Geography at Memorial University, recognizing academic excellence in postgraduate course work.
Dec 2010	ArcticNet Scientific Meeting 2010, award for poster that most closely aligns with Inuit values.
Aug 2011	Industry and Northern Affairs Canada (INAC) Northern Scientific Training Program funding recipient.
Sep 2011	Society for the History of Discoveries Annual Student Essay Contest winner.

Papers Reviewed

2014	<i>Journal of Coastal Research</i> Arreola-Lizzarraga, J.A., Padilla-Arredondo, G., Lopex-Tapia, R., Mendez-Rodriguez, L., Montesinos-Gonzalez, A., Mendoza-Salgado, R., and Lechuga-Deveze, C. 2014. Hydrobiological Changes and Resilience of a Seimarid Coastal Lagoon to an Extreme Rainfall Event.
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Teaching Experience

May 2015	<i>University of Otago, Dunedin, New Zealand</i> Contracted to conduct four lab sessions on Volunteered Geographic Information as part of the SURV208 GIS course under the direction of Dr. Antoni Moore.
Aug 2013	<i>Memorial University, St.John's, NL</i> Conducted a workshop for the first year Graduate students on using the reference manager "Docear" in their studies.
Apr 2013	<i>Memorial University, St.John's, NL</i> Conducted a workshop for my research group on how to create and manage a website using the WordPress CMS.
Sep-Dec 2012	<i>Memorial University, St.John's, NL</i> Geography of the Arctic. Teaching Assistant. I was responsible for marking assignments and exams, and for creating model assignments. I also gave a guest lecture on how to create a scientific poster.

Software Experience

GIS software	I have experience scripting in the full python geospatial stack (rasterio, fiona, shapely, leaflet), ESRI arcpy, QGIS, SeaDAS, PCI Geomatica, and IDL.
Scientific software	I have experience doing statistical analysis in R and scientific python, as well as data processing and visualization in R, numpy, and scipy.
Graphics software	I have experience using CorelDraw, Inkscape, GIMP, and PhotoShop to do scientific illustrations.

Conference Presentations

Sep 2014	Conducted a workshop entitled <i>Crowdsourced data capture using open-source GIS tools</i> (Free and Open-Source Software for GIS annual conference: Portland, OR).
Aug 2013	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Evolution of a subArctic macrotidal embayment</i> (Annual meeting of the Canadian Association of Geographers: St.John's, NL).
May 2012	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Changing Exposures to Coastal Hazards in Iqaluit, Nunavut</i> (Atlantic Canadian Coastal and Estuarine Science Society: Halifax, NS).
Apr 2012	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Changing Exposures to Coastal Hazards in Iqaluit, Nunavut</i> (International Polar Year Conference: Montreal, QC).
Jun 2011	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Coastal Hazards in a changing Iqaluit</i> (Annual Conference of the Sir Arthur Lewis Institute of Social and Economic Studies: Port-of-Spain, Trinidad & Tobago).
Jul 2011	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Coastal Hazards in a changing Arctic municipality: Iqaluit, NU</i> (Annual meeting of the Canadian Society of Landscape Architects: Iqaluit, NU).
Sep 2011	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Geomorphology of the Iqaluit tidal flats</i> (Newfoundland and Labrador Geological Survey fall speaker series: St.John's, NL).
Sep 2011	Hatcher, S.V., <i>On the birth of the Monsoon Winds: a reanalysis of the evidence for the existence of Hippalus</i> (Society for the History of Discoveries Annual Conference: Portland, ME).
Dec 2010	Hatcher, S.V., Forbes, D.L.F, and Manson, G., <i>Coastal Hazard mapping in an expanding Iqaluit</i> (ArcticNet Annual Scientific Meeting: Ottawa, ON).

Publications (first author)

2017	Hatcher, S.V., San Souci, J., Boulard, A., and Monterastelli, G., (2017). Shell Albian Sands Mine Reclamation Monitoring Using High Resolution Data from Unmanned Aerial Systems. <i>COSIA Land EPA 2017 Mine Site Reclamation Research Report</i>
2015	Hatcher, S.V., Forbes, D.L., (2015). Coastal hazards in an expanding Arctic municipality: Iqaluit, Nunavut. <i>Arctic</i>
2014	Hatcher, S.V., Forbes, D.L., and Manson, G., (2014). Coastal geoscience field work near Iqaluit, Nunavut, 2009-2011. <i>GSC open-file 7653</i> . Natural Resources Canada, Geological Survey of Canada. http://open.canada.ca/data/en/dataset/eb9dd7ef-0c44-561f-8593-9f3ec0d428c5
2013	Hatcher, S.V., (2013). The Birth of the Monsoon Winds: On the Existence and Understanding of Hippalus, and the Discovery of the Apogeous Trade Winds. <i>Terra Incognitae</i> , 45(1), 19-29.
2012	Hatcher, S.V., Forbes, D.L., and Manson, G., (2012). Coastal Hazard Assessment for Adaptation Planning in an Expanding Arctic Municipality. Submitted to <i>The Sustainable Development of Coastal Communities: Challenges and Solutions</i> . Port-of-Spain, Trinidad. C-Change ICURA Working paper Series No.23. Available at www.coastalchange.ca

Publications (co-author)

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| 2015 | Hilton, M.J., Hatcher, S.V., Wakes, S.J., and Konlechner, T.M., (2016). Flow Deflection and Deceleration Across a Simple Foredune. <i>In: Vila-Concejo, A., Bruce, E., Kennedy, D.M., and McCarroll, R.J. (eds.), Proceedings of the 14th International Coastal Symposium</i> (Sydney, Australia). <i>Journal of Coastal Research</i> , Special Issue, No. 75. Coconut Creek (Florida), ISSN 0749-0208. |
| 2013 | Riedlsperger, R., Hatcher, S.V., and Bell, T., (2013). A review of Landscape Hazard Mapping in the Canadian Arctic and Subarctic: Common Practices and Recommendations for Future Mapping in Nunatsiavut. Technical report submitted to the Nunasiavut Government. |
| 2012 | James, T. S., Whalen, D.J.R., Jenner, K.A., Hatcher, S.V., Ulmi, M., Forbes, D.L., Manson, G.K., Henton, J.A., and Craymer, M.R., (2012). Coastal geoscience for sustainable development in Nunavut: 2012 activities. Summary of Activities (2012): 143-150. |

Technical Qualifications

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| 2013 | Certified Ground Penetrating Radar Operator, consisting of a course given by Sensors & Software in Mississauga, Ontario, Canada. |
| 2009 | Certified in Marine Emergency Duties (MED) A3 from Transport Canada, as well as the Small Vessel Operator's Proficiency Ticket from Transport Canada. |
| 2009 | WHMIS & OHS certification. |

Volunteer Experience

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| 2016 | Volunteered for the OSGeo foundation in reviewing and preparing training material for FOSS GIS software to input into the UN GGIM mandate. |
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Activities

Professional member of the Association of Polar Early Career Scientists 2014–2015 — Volunteer for Protoshed community workshop in St.John's, NL — Certified Open-water scuba diver — Small Vessels Operators Proficiency (SVOP) certificate from Transport Canada — Workplace Hazardous Materials Information System (WHMIS) and Occupational Health and Safety (OHS) training — Hobbies: bicycling, photography, luthiery, playing music, and motorcycle restoration.

References

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