

R. SCOTT ST. GEORGE

Associate Professor
Department of Geography, Environment and Society
University of Minnesota

<http://umn.edu/~stgeorge>
stgeorge@umn.edu
[@scottstgeorge](#)

QUALIFICATIONS

University of Arizona (*Tucson, USA*)

2003 – 2007 Doctor of Philosophy in Geoscience. *Advisors:* David Meko and Michael Evans.
Committee members: Julio Betancourt, Katherine Hirschboeck and Jonathan Overpeck.
Dissertation: Hydrological and paleo-drought variability in the Winnipeg River basin, Canada, and the Canadian Prairies

University of Western Ontario (*London, Canada*)

1995 – 1998 Master of Science in Geography. *Advisor:* Brian Luckman. *Thesis:* Tree-ring reconstruction of summer temperatures in Banff and Jasper National Parks.

University of Winnipeg (*Winnipeg, Canada*)

1991 – 1995 Bachelor of Science (Four Year) in Geography.

Awards, Honors, and Training

2017	Europe Research Stay (Switzerland), Alexander von Humboldt Foundation
2017	Arthur 'Red' & Helene B. Motley Exemplary Teaching Award, University of Minnesota
2017	Faculty Development Leave, University of Minnesota
2016	Humboldt Research Fellowship for Experienced Researchers, Alexander von Humboldt Foundation
2016	Sabbatical Leave and Supplement, University of Minnesota
2014	Editors' Citation for Excellence in Refereeing, <i>Geophysical Research Letters</i>
2013	Expert Witness Training Academy, William Mitchell College of Law
2012	Single Semester Leave, College of Liberal Arts, University of Minnesota
2011	Resident Fellow, Institute on the Environment, University of Minnesota
2007	Stephen Enders & William Jenney Prize for Second Place Paleoclimate Talk, Geosciences Symposium, University of Arizona
2006	Andrew Ellicott Douglass Memorial Scholarship, University of Arizona
2006	ConocoPhillips Prize for Best Quaternary Geology/Paleoclimate Talk, University of Arizona
2005, 2006	Prairie Adaptation Research Collaborative Graduate Scholarship
2005	Galileo Circle Scholar, University of Arizona
2003	Prairie Adaptation Research Collaborative Postgraduate Scholarship Supplement
2003	Canada Graduate Scholarship (declined)
2003	Natural Sciences and Engineering Council of Canada Postgraduate Scholarship
1995, 1996	Special University Scholarship, University of Western Ontario
1995	Canadian Association of Geographers Award, University of Winnipeg
1994	Board of Regents Academic Proficiency Scholarship, University of Winnipeg

EMPLOYMENT AND APPOINTMENTS

Department of Geography, Environment and Society, University of Minnesota (*Minneapolis, USA*)

Associate professor, 2015 to present; Assistant professor, 2010 – 2015

- Produced new paleoclimate records in the United States, Canada, and Nepal, combined empirical and modeling approaches to map the influence of climate on tree growth in forests across the Northern Hemisphere, and evaluated how trees respond to (or ignore) the influence of particular climatic and non-climatic factors
- Identified regions where decadal and multidecadal behavior within the climate system is particularly important, used proxy networks to estimate its progression during the past several centuries, and assessed critically the ability of current-generation climate models to simulate this particular style of climate change
- Led projects using music to communicate core concepts in climate science, created viral videos for climate science education, and fostered collaborations with musicians in the United States, Canada, and Europe

School of Environmental Studies, Queen's University (*Kingston, Canada*)

Adjunct professor, 2009 to present

- Served on committees for graduate students in Environmental Studies conducting research on past climate change, and boreal forest ecology in northern Canada

Johannes Gutenberg-Universität Mainz (*Mainz, Germany*)

Helmholtz-Zentrum Geesthacht — Zentrum für Material- und Küstenforschung (*Geesthacht, Germany*)

Humboldt Research Fellow, 2017 – 2018

- Won support from Germany's Humboldt Foundation to launch a new project on decadal-to-multidecadal climate variability with researchers at Johannes Gutenberg University and the Helmholtz-Zentrum Geesthacht

PAGES International Project Office (*Bern, Switzerland*)

Visiting scientist, 2017

- Coordinated the publication of a tree-ring database for North America to support climate change research, and served as co-editor for a special issue on decadal climate variability

Geological Survey of Canada, Natural Resources Canada (*Ottawa, Canada*)

Research scientist (RES-2), 2009 – 2010; Physical scientist (PS-2), 1999 – 2009

- Developed a new method to estimate the frequency and magnitude of past floods from flood-damaged trees, demonstrated how flood risks respond to climate and land use changes, and identified the risk posed by El Niño to wind energy production
- Project leader for 'the Paleoenvironmental Perspectives on Climate Change' program, which contributed a geological perspective to policy and planning measures aimed at helping Canadians adapt to a changing climate

Laboratory of Tree-Ring Research, University of Arizona (*Tucson, USA*)

Research associate, 2004 – 2006

Department of Geography, University of Western Ontario (*London, Canada*)

Laboratory co-ordinator, Dendrogeomorphology Laboratory, 1998

Research assistant, Dendrogeomorphology Laboratory, 1995 – 1997

PUBLICATIONS

Articles († = graduate student author, ‡ = undergraduate student author)

49. **S. St. George**, M. Mudelsee, The weight of the flood-of-record in flood frequency analysis, *Journal of Flood Risk Management* (accepted October 26, 2018).
48. B. Wilhelm, J.A. Ballesteros Cánovas, N. MacDonald, W.H.J. Toonen, V. Baker, M. Barriendos, G. Benito, A. Brauer, J.P. Correlá, R. Denniston, R. Glaser, M. Ionita, M. Kahle, T. Liu, M. Luetscher, M. Macklin, M. Mudelsee, S. Munoz, L. Schulte, **S. St. George**, M. Stoffel, O. Wetter, Interpreting historical, botanical, and geological evidence to aid preparations for future floods, *WIREs: Water* e1318 (2018). Invited contribution
47. S.N. Appleton†, **S. St. George**, High-elevation mountain hemlock growth as a surrogate for cool-season precipitation in Crater Lake National Park, USA, *Dendrochronologia* **52**, 20-28 (2018).
46. T.R. Ault, **S. St. George**, Unravelling the mysteries of megadrought, *Physics Today* **71**, 44-50 (2018). Invited contribution
45. J. Esper, **S. St. George**, K. Anchukaitis, R. D'Arrigo, F. Ljungqvist, J. Luterbacher, L. Schneider, M. Stoffel, R. Wilson, U. Büntgen, Large-scale, millennial-length temperature reconstructions from tree rings. *Dendrochronologia* **50**, 81-90 (2018).
44. D.S. Kaufman, N. Abram, M.N. Evans, P. Francus, H. Goosse, H. Linderholm, M.F. Loutre, B. Martrat, H.V. McGregor, R. Neukom, **S. St. George**, C. Turney, L. von Gunten, Technical note: Open-paleo-data implementation pilot – The PAGES 2k special issue, *Climate of the Past* **14**, 593-600 (2018).
43. **S. St. George**, Mississippi rising, *Nature* **556**, 34-35 (2018). Invited contribution
42. J. Esper, S. Holzkämper, U. Büntgen, B. Schöne, F. Keppler, C. Hartl, **S. St. George**, D.F.C. Riechelmann, K. Treydte, Site-specific climatic signals in stable isotope records from Swedish pine forests. *Trees* **32**, 855-869 (2018).
41. T.R. Ault, **S. St. George**, J.E. Smerdon, S. Coats, C. Carillo, J.S. Mankin, B.I. Cook, S. Stevenson, A robust null hypothesis for the potential causes of western megadrought, *Journal of Climate* **31**, 3-24 (2018).
40. **S. St. George**, R.J. Telford, Fossil forest reveals sunspot activity in the early Permian: COMMENT, *Geology* **45**, e427 (2017).
39. J. Emile-Geay, N.P. McKay, D.S. Kaufman, L. von Gunten, J. Wang, K.J. Anchukaitis, N.J. Abram, J.A. Addison, M.A.J. Curran, M.N. Evans, B.J. Henley, Z. Hao, B. Martrat, H.V. McGregor, R. Neukom, G.T. Pederson, B. Stenni, K. Thirumalai, J.P. Werner, C. Xu, D.V. Divine, B.C. Dixon, J. Gergis, I.A. Mundo, T. Nakatsuka, S.J. Phipps, C.C. Routson, E.J. Steig, J.E. Tierney, J.J. Tyler, K.J. Allen, N.A.N. Bertler, J. Björklund, B.M. Chase, M.-T. Chen, E. Cook, R. de Jong, K.L. DeLong, D.A. Dixon, A.A. Ekaykin, V. Ersek, H.L. Filipsson, P. Francus, M.B. Freund, M. Frezzotti, N.P. Gaire, K. Gajewski, Q. Ge, H. Goosse, A. Gornostaeva, M. Grosjean, K. Horiuchi, A. Holmes, K. Husum, E. Isaksson, S. Kandasamy, K. Kawamura, K.H. Kilbourne, N. Koç, G. Leduc, H.W. Linderholm, A.M. Lorrey, V. Mikhalenko, P.G. Mortyn, H. Motoyama, A.D. Moy, R. Mulvaney, P.M. Munz, D.J. Nash, H. Oerter, T. Opel, A.J. Orsi, D.V. Ovchinnikov, T.J. Porter, H.A. Roop, C. Saenger, M. Sano, D. Sauchyn, K.M. Saunders, M.-S. Seidenkrantz, M. Severi, X. Shao, M.-A. Sicre, M. Sigl, K. Sinclair, **S. St. George**, J.-M. St. Jacques, M. Thamban, U.K. Thapa†, E.R. Thomas, C. Turney, R. Uemura, A.E. Viau, D.O. Vladimirova, E.R. Wahl, J.W.C. White, Z. Yu, J. Zinke, A global multiproxy database for temperature reconstructions of the Common Era. *Scientific Data* **4**, doi: 10.1038/sdata.2017.88 (2017).
38. **PAGES 2k Coordinators**, The third phase of the PAGES 2k Network. In Y. Kushnir, C. Cassou, **S. St. George**, N. Caltabiano, L. von Gunten (editors) Special issue on decadal climate variability, Joint publication of *CLIVAR Exchanges* and *Past Global Changes Magazine*, 71-74 (2017).
37. Y. Kushnir, C. Cassou, **S. St. George**, Editorial on decadal climate variability. In Y. Kushnir, C. Cassou, **S. St. George**, N. Caltabiano, L. von Gunten (editors) Special issue on decadal climate variability, Joint publication of *CLIVAR Exchanges* and *Past Global Changes Magazine*, 1 (2017).
36. U.K. Thapa†, **S. St. George**, D.K. Kharal, N.P. Gaire, Tree growth across the Nepal Himalaya during the last four

- centuries, *Progress in Physical Geography* **41**, 478–495 (2017).
35. **S. St. George**, D. Crawford[‡], T. Reubold, E. Giorgi, Making climate data sing — Using music-like sonifications to convey a key climate record, *The Bulletin of the American Meteorological Society* **98**, 21-25 (2017).
 34. D.K. Kharral[†], U.K. Thapa[†], **S. St. George**, H. Meilby, S. Rayamajhi, D.R. Bhujju, Tree-climate relations along an elevational transect in Manang Valley, central Nepal, *Dendrochronologia* **41**, 57-64 (2017).
 33. J.A. Ballesteros-Cánovas, M. Stoffel, **S. St. George**, K.A. Hirschboeck, A review of flood records from tree rings, *Progress in Physical Geography* **39**, 794-816 (2015).
 32. **S. St. George**, K.J. Anchukaitis, On the AD 1815 Tambora eruption and the matter of misplaced tree rings. *Past Global Changes Magazine* **23**: 60-61 (2015).
 31. G.R. Brooks, **S. St. George**, Flooding, structural flood control measures, and a geomorphic context for the flood problem along the Red River, Manitoba, Canada, In P. Hudson, H. Middelkoop, (editors), *Geomorphology And Management Of Embanked Floodplains: North American And European Fluvial Systems In A Era Of Global Environmental Change*. Springer, 87-117 (2015).
 30. **S. St. George**, M.C.A. Torbenson[†], New ages for shoreline stumps along Lake Winnipeg, Canada and their implications for paleo-lake level estimates, *The Holocene* **24**, 1393-1397 (2014).
 29. **S. St. George**, An overview of tree-ring width records in the Northern Hemisphere, *Quaternary Science Reviews* **95**, 132-150 (2014).
 28. **S. St. George**, The global network of tree-ring widths and its applications to paleoclimatology. *Past Global Changes Magazine* **22**: 16-17 (2014).
 27. **S. St. George**, T.R. Ault, The imprint of climate within Northern Hemisphere trees. *Quaternary Science Reviews* **89**, 1-4 (2014).
 26. T.R. Ault, J.E. Cole, J.T. Overpeck, G.T. Pederson, **S. St. George**, B. Otto-Bliesner, C.A. Woodhouse, C. Deser, The continuum of hydroclimate variability in western North America during the last millennium, *Journal of Climate* **26**, 5863-5878 (2013).
 25. **S. St. George**, T.R. Ault, M.C.A. Torbenson[†], The rarity of absent growth rings in Northern Hemisphere forests outside the American Southwest, *Geophysical Research Letters* **40**, doi:10.1002/grl.50743 (2013).
 24. E.L. Wertz[‡], **S. St. George**, J.D. Zeleznik, Vessel anomalies in *Quercus macrocarpa* tree rings associated with recent floods along the Red River of the North, United States, *Water Resources Research* **49**, 630-634 (2013).
 23. T.R. Ault, J.E. Cole, **S. St. George**, The amplitude of decadal to multidecadal variability in precipitation simulated by state-of-the-art climate models, *Geophysical Research Letters* **39**, L21705, doi:10.1029/2012GL053424 (2012).
 22. K.F. Kipfmüller, E.R. Larson, **S. St. George**, Does uncertainty in proxy reconstructions affect the relations inferred between the Pacific Decadal Oscillation and wildfire activity in the western United States? *Geophysical Research Letters* **39**, L04703, doi:10.1029/2011GL05064 (2012).
 21. **S. St. George**, T.R. Ault[†], Is energetic decadal variability a stable feature of the central Pacific Coast's winter climate? *Journal of Geophysical Research - Atmospheres* **116**, D12102, doi:10.1029/2010JD015325 (2011).
 20. **S. St. George**, D.M. Meko, E.R. Cook, The seasonality of precipitation signals encoded within the North American Drought Atlas, *The Holocene* **20**, 983-988 (2010).
 19. **S. St. George**, Tree rings as paleoflood and paleostage indicators. In M. Stoffel, M. Bollschweiler, D.R. Butler, B.H. Luckman, (editors), *Tree-Ring Reconstructions In Natural Hazards Research: A State-of-the-Art*. Advances in Global Change Research series, Springer, 233-240 (2010).
 18. **S. St. George**, Dendrohydrology and extreme floods along the Red River, Canada. In M. Stoffel, M. Bollschweiler, D.R. Butler, B.H. Luckman, (editors), *Tree-Ring Reconstructions In Natural Hazards Research: A State-of-the-Art*. Advances in Global Change Research series, Springer, 277-279 (2010).

17. T.R. Ault[†], **S. St. George**, The magnitude of decadal and multidecadal variability in North American precipitation, *Journal of Climate* **23**, 842-850 (2010).
16. **S. St. George**, S.A. Wolfe, El Niño stills winter winds across the southern Canadian Prairies, *Geophysical Research Letters* **36**, L23806, doi:10.1029/2009GL041282 (2009).
15. **S. St. George**, D.M. Meko, M.P. Girardin, G.M. MacDonald, E. Nielsen, G.T. Pederson[†], D.J. Sauchyn, J. Tardif, E. Watson, The tree-ring record of summer drought in the Canadian Prairies, *Journal of Climate* **22**, 689-710 (2009).
14. **S. St. George**, D.M. Meko, M.E. Evans, Regional tree growth and inferred summer climate in the Winnipeg River basin, Canada since AD 1783, *Quaternary Research* **70**, 158-172 (2008).
13. H.A. Catton[†], **S. St. George**, W.R. Remphrey, An evaluation of bur oak (*Quercus macrocarpa* Michx.) decline in the urban forest of Winnipeg, Manitoba, Canada, *Arboriculture & Urban Forestry* **33**, 22-30 (2007).
12. **S. St. George**, Streamflow in the Winnipeg River basin, Canada: trends, extremes and climate linkages, *Journal of Hydrology* **332**, 396-411 (2007).
11. **S. St. George**, D.J. Sauchyn, Paleoenvironmental perspectives on drought in western Canada – Introduction, *Canadian Water Resources Journal* **31**, 197-204 (2006).
10. **S. St. George**, P.M. Outridge, E. Nielsen, High-resolution dendrochemical analysis of flood-affected oaks using laser ablation ICP-mass spectrometry, *International Association of Wood Anatomists Journal* **27**, 19-31 (2006).
9. G. Ferguson[†], **S. St. George**, Historical and estimated groundwater levels near Winnipeg, Canada and their sensitivity to climatic variability, *Journal of the American Water Resources Association* **39**, 1249-1260 (2003).
8. **S. St. George**, E. Nielsen, Palaeoflood records for the Red River, Manitoba, Canada derived from anatomical tree-ring signatures, *The Holocene* **13**, 547-555 (2003).
7. **S. St. George**, B. Rannie, The causes, progression, and magnitude of the 1826 Red River flood in Manitoba, *Canadian Water Resources Journal* **28**, 99-120 (2003).
6. **S. St. George**, E. Nielsen, Flood ring evidence and its application to paleoflood hydrology of the Red River and Assiniboine River in Manitoba, *Geographie Physique et Quaternaire* **56**, 181-190 (2002).
5. **S. St. George**, E. Nielsen, F. Conciatori, J. Tardif, Trends in *Quercus macrocarpa* vessel areas and their implications for tree-ring paleoflood studies, *Tree-Ring Research* **58**, 3-10 (2002).
4. **S. St. George**, E. Nielsen, Hydroclimatic change in southern Manitoba since AD 1409 inferred from tree rings, *Quaternary Research* **58**, 103-111 (2002).
3. **S. St. George**, B.H. Luckman, Extracting a paleotemperature record from *Picea engelmannii* treeline sites in the central Canadian Rockies, *Canadian Journal of Forest Research* **31**, 457-470 (2001).
2. **S. St. George**, E. Nielsen, Signatures of high-magnitude 19th century floods in *Quercus macrocarpa* (Michx.) tree rings along the Red River, Manitoba, Canada, *Geology* **28**, 899-902 (2000).
1. B.H. Luckman, T.A. Kavanagh, I. Craig, **S. St. George**, Earliest photograph of Athabasca and Dome Glaciers, Alberta. *Geographie Physique et Quaternaire* **53**, 401-405 (1999).

Manuscripts in Submission or Revision

3. L. Klippel[†], P.J. Krusic, O. Konter, **S. St. George**, V. Trouet, J. Esper, A 1200+ year reconstruction of temperature extremes for the northeastern Mediterranean region, *International Journal of Climatology* (revision submitted October 17, 2018).

2. J. Martin, G.T. Pederson, C.A. Woodhouse, E.R. Cook, G.J. McCabe, K.J. Anchukaitis, E.K. Wise, P. Erger, L. Dolan, M. McGuire, S. Gangopadhyay, K. Chase, J. Littell, S. Gray, **S. St. George**, J. Friedman, D. Sauchyn, J. St. Jacques, J. King, Increased drought intensity driven by warming in the United States' largest river basin, *Nature Climate Change* (submitted October 4, 2018).
1. **S. St. George**, J. Esper, Concord and discord among Northern Hemisphere paleotemperature reconstructions from tree rings. *Quaternary Science Reviews* (in revision October 10, 2018).

Manuscripts in Preparation

7. L. Klippel[†], **S. St. George**, U. Büntgen, P. Krusic, J. Esper, Why is there no millennial-scale cooling trend present in tree-ring data? *Climate of the Past*.
6. B.L. Coulthard, **S. St. George**, Respecting the limits of freely-available tree-ring chronologies.
5. U.K. Thapa[†], **S. St. George**, Detecting climatic and human influences in the dry pine forests of eastern Nepal's Koshi River basin, *Dendrochronologia*.
4. **S. St. George**, Paleofloods stage a comeback, *Nature Geoscience*.
3. **S. St. George**, The societal value of historical and paleoflood hydrology on the Red River of the North, *Anthropocene*.
2. C. Hartl, **S. St. George**, O. Konter, A. Kirchhefer, J. Esper, Warfare dendrochronology and the German super battleship *Tirpitz's* deployment to Norway, *Anthropocene*. Invited contribution
1. G.T. Pederson, K. Anchukaitis, C. Routson, N. McKay, **S. St. George**, Temperature-sensitive tree-ring widths and density data for North America, *Scientific Data*.

Conference Abstracts († = graduate student author, ‡ = undergraduate student author)

88. U.K. Thapa[†], **S. St. George**, Potential hydroclimatic information from pine trees in the dry valleys of eastern Nepal's Koshi River basin, Climate of the Common Era, Fall 2018 American Geophysical Union Meeting, Washington D.C., USA, December 10-14, 2018.
87. T. Ault, S. Coats, J. Mankin, C. Carillo, J. Smerdon, **S. St. George**, P. Williams, B. Cook, F. Lehner, S. Stevenson, N. Steiger, Megadrought risk in low-warming scenarios, Ensemble Modeling Approaches to Studying the Earth System Response to Anthropogenic Forcing, Fall 2018 American Geophysical Union Meeting, Washington D.C., USA, December 10-14, 2018.
86. M. McPartland[†], **S. St. George**, G. Pederson, Does signal-free detrending increase coherence across spatial scales within large tree-ring networks? Climate of the Common Era, Fall 2018 American Geophysical Union Meeting, Washington D.C., USA, December 10-14, 2018.
85. L. von Gunten, N. Abram, O. Bothe, H.W. Linderholm, B. Martrat, H.V. McGregor, R. Neukom, S.J. Phipps, **S. St. George**, The PAGES 2k Network: Status update on Phase Three projects, Climate of the Common Era, Fall 2018 American Geophysical Union Meeting, Washington D.C., USA, December 10-14, 2018.
84. **S. St. George**, T.R. Ault, M. McPartland[†], Disentangling the decadal 'knot' in high-resolution paleoclimatology, Decadal and Centennial Variability From High-Resolution Bio- and Geoarchives, Second International TERENO Conference, Berlin, Germany, October 8-12, 2018. Invited contribution
83. K. Anchukaitis, B. Coulthard, N. McKay, J. Pearl[†], G. Pederson, C. Routson, **S. St. George**, R. Wilson, Large-scale temperature reconstructions from tree rings in North America: Challenges and opportunities, Mountain Climate Conference, Gothic, USA, September 17-21, 2018.
82. M. McPartland[†], **S. St. George**, Testing the effects of signal-free detrending on climate signals recovered from tree-ring networks, American Association of Geographers Annual Meeting, New Orleans, USA, April 10-14, 2018.

81. **S. St. George**, T. Ault, J. Smerdon, S. Coats, J. Mankin, C. Carrillo, B. Cook, S. Stevenson, A new framework to test the origins of western American megadrought, TRACE2018 (Tree Rings in Archeology, Climatology and Ecology), Greifswald, Germany, April 24-27, 2018.
80. H. McGregor, S. Phipps, L. von Gunten, B. Martrat, H. Linderholm, N. Abram, O. Bothe, R. Neukom, **S. St. George**, The PAGES 2k Network, Phase 3: Themes and call for participation, Studying the Climate of the Last Two Millennium, European Geosciences Union General Assembly, April 8-13, 2018.
79. C. Hartl, O. Konter, **S. St. George**, A. Kirchhefer, D. Scholz, J. Esper, Warfare dendrochronology – Trees as witnesses of the *Tirpitz* attacks, Interdisciplinary Tree-Ring Research, European Geosciences Union General Assembly, April 8-13, 2018.
78. J. Esper, S. Holzkämper, U. Büntgen, B. Schöne, F. Keppler, C. Hartl-Meier, **S. St. George**, K. Treydte, Site-specific climatic signals in stable isotope records from Swedish pine forests, Interdisciplinary Tree-Ring Research, European Geosciences Union General Assembly, April 8-13, 2018.
77. **S. St. George**, J. Esper, The need for new theory in global dendroclimatology, Interdisciplinary Tree-Ring Research, European Geosciences Union General Assembly, April 8-13, 2018. Invited contribution
76. **S. St. George**, The societal value of historical and paleoflood research in Manitoba, Canada, Exposure, Vulnerability and Resilience of Human Societies To Climate- and Weather-Related Disasters From the Holocene to the Anthropocene, Climate Change Impacts and Risks in the Anthropocene Group, Riederalp, Switzerland, March 20-24, 2018.
75. L. von Gunten, H. McGregor, B. Martrat, **S. St. George**, R. Neukom, O. Bothe, H. Linderholm, S. Phipps, N. Abram, The PAGES 2k Network, Phase 3: Themes and call for participation, Climate of the Common Era, Fall 2017 American Geophysical Union Meeting, New Orleans, USA, December 11-15, 2017.
74. T.R. Ault, **S. St. George**, J.E. Smerdon, S. Coats, C. Carrillo, J.S. Mankin, B.I. Cook, S. Stevenson, A robust null hypothesis for the potential causes of western megadrought, The Climate of the Common Era, Fall 2013 American Geophysical Union Meeting, San Francisco, California, December 11-15, 2017.
73. **S. St. George**, Long droughts: Using natural climate archives to gage the risks of future “megadroughts”, Network Meeting of the Alexander von Humboldt Foundation, Bielefeld, Germany, October 18-20, 2017.
72. H. Linderholm, N. Abram, O. Bothe, B. Martrat, H. McGregor, R. Neukom, S. Phipps, **S. St. George**, L. von Gunten, The PAGES 2k Network, Phase 3: Introduction, goals and call for participation, Paleoclimate Model Intercomparison Project 2017, Stockholm, Sweden, September 24-29, 2017.
71. **S. St. George**, Why do trees remember? Discerning biological and climatic persistence within tree-ring width chronologies and the global tree-ring network, Workshop on Paleoclimate Reanalyses, Data Assimilation and Proxy System Modelling, Louvain-la-Neuve, Belgium, May 29-June 1, 2017.
70. **S. St. George**, T. Ault, C. Carrillo, S. Coats, J. Mankin, J. Smerdon, What to expect when you’re expecting decadal variability in hydroclimatic proxies, PAGES 5th Open Science Meeting, Zaragoza, Spain, May 9-13, 2017.
69. U. Thapa[†], **S. St. George**, Testing the potential of *Pinus roxburghii* and *P. wallichiana* in the dry interior of eastern Nepal as hydroclimatic proxies, PAGES 5th Open Science Meeting, Zaragoza, Spain, May 9-13, 2017.
68. **PAGES 2k Coordinators**, The PAGES 2k network, Phase 3: Introduction, goals and call for participation, Studying the climate of the last two millennia, European Geophysical Union General Assembly, Vienna, Austria, April 23-28, 2017.
67. G.T. Pederson, K.J. Anchukaitis, **S. St. George**, N. McKay, C. Routson, PAGES NAM2k Group, North American 0.5 degree gridded summer temperature reconstructions, MtnClim2016, Leavenworth, USA, October 17-21, 2016.
66. M. Heyman, S. Chatterjee, S. St. George, Using wavelets to discover relationships among tree-ring records, Statistics and the Environment, Joint Statistical Meetings, American Statistical Association, Chicago, USA, July 31-August 4, 2016.

65. T.R. Ault, **S. St. George**, A robust null hypothesis for the potential causes of western megadrought, Comparing data and model estimates of hydroclimate variability and change over the Common Era, PAGES 2K network and PAST2K PMIP, Lamont-Doherty Earth Observatory, Palisades, USA, June 1-3, 2016.
64. U. Thapa[†], **S. St. George**, An evaluation of the Nepal Himalaya tree-ring network and its potential application to paleodischarge studies, Cross Community Workshop on Past Flood Variability, Grenoble, France, June 27-30, 2016.
63. **S. St. George**, Trees as flood sensors, Cross Community Workshop on Past Flood Variability, Grenoble, France, June 27-30, 2016.
62. J. Arndt[‡], **S. St. George**, The influence of upper-air winds and the El Niño-Southern Oscillation on commercial air travel, Winchell Undergraduate Research Symposium, Minnesota Academy of Sciences, Minneapolis, USA, April 29, 2016.
61. G.T. Pederson, C. Woodhouse, E. Wise, J. St. Jacques, **S. St. George**, D. Sauchyn, J. Martin[†], E. Cook, C. Leland[†], U. Lall, N. Devineni, Multi-century perspectives on current and future streamflow in the Missouri River Basin, Third American Dendrochronology Conference, Mendoza, Argentina, March 28 - April 1, 2016.
60. G.T. Pederson, K.J. Anchukaitis, **S. St. George**, N. McKay, C. Routson, Progress towards a tree-ring based North American 2k summer temperature reconstruction, Third American Dendrochronology Conference, Mendoza, Argentina, March 28 - April 1, 2016.
59. U.K. Thapa[†], **S. St. George**, S. Bhandari, How well do temperature reconstructions from the western Himalaya of Nepal match across different tree species? Third American Dendrochronology Conference, Mendoza, Argentina, March 28 - April 1, 2016.
58. R. Telford, K. Rehfeld, **S. St. George**, Is there robust evidence of solar variability in palaeoclimate proxy data? European Geophysical Union General Assembly, Vienna, Austria, April 12-17, 2015.
57. G.T. Pederson, J. Alder, E. Cook, J. Friedman, S. Hostetler, U. Lall, C. Leland, J. Martin, G. McCabe, N. Devineni, P. Norton, **S. St. George**, J. St. Jacques, D. Sauchyn, J. Stamm, E. Wise, C. Woodhouse. Multi-century perspectives on current and future flow of the Missouri River Headwaters, Droughts: Reconstructing The Past, Pacific Climate Workshop, Pacific Grove, March 8-11, 2015.
56. M.C.A. Torbenson[†], **S. St. George**, Assessing the dendrochronological and dendroclimatic potential of Shasta red fir (*Abies magnifica* var. *shastensis*), Paleoclimatology and Paleoclimatology General Contributions, Fall 2014 American Geophysical Union Meeting, San Francisco, California, December 15-19, 2014.
55. S. Appleton[†], **S. St. George**, Testing the climate sensitivity of mountain hemlock (*Tsuga mertensiana* (Bong.) Carr.) near the southern limit of its range, The Climate Of The Common Era, Fall 2014 American Geophysical Union Meeting, San Francisco, California, December 15-19, 2014.
54. **S. St. George**, D. Crawford[‡], T. Reubold, 'A Song of Our Warming Planet': using music to communicate critical concepts in climate science, Connecting Geoscience With The Arts, Fall 2014 American Geophysical Union Meeting, San Francisco, California, December 15-19, 2014.
53. **S. St. George**, Seeing the forest for the tree(ring)s: guarding against false discovery in large-scale dendroclimatology, Finding Signal In The Noise: Dealing With Multiple Sources Of Uncertainty In Paleoclimate And Paleoecology, Fall 2014 American Geophysical Union Meeting, San Francisco, California, December 15-19, 2014.
52. X. Li[†], **S. St. George**, K.J. Anchukaitis, Forward modeling of tree-climate relations across the Northern Hemisphere and temporal trends in climate sensitivity of tree-ring widths, American Association of Geographers Annual Meeting, Tampa, Florida, April 8-12, 2014.
51. X. Li[†], **S. St. George**, K.J. Anchukaitis, Simulated tree growth across the Northern Hemisphere and the seasonality of climate signals encoded within tree-ring widths, The Climate Of The Common Era, Fall 2013 American Geophysical Union Meeting, San Francisco, California, December 9-13, 2013.

50. **S. St. George**, T.R. Ault, M.C.A. Torbenson[†], Absent growth rings are rare in Northern Hemisphere forests outside the American Southwest, Ecological Society of America Annual Meeting, Minneapolis, Minnesota, August 4-9, 2013.
49. C.J. Crawford[†], K.F. Kipfmuehler, M. Salzer, M.C.A. Torbenson[†], **S. St. George**, Frost-ring formation in Douglas-fir at the lower forest border in central Idaho. Second American Dendrochronology Conference, Tucson, Arizona, May 13-17, 2013.
48. M.C.A. Torbenson[†], **S. St. George**, Traumatic resin ducts in *Abies magnifica* at interior sites along the central Pacific Coast of the United States, Second American Dendrochronology Conference, Tucson, Arizona, May 13-17, 2013.
47. **S. St. George**, T.R. Ault, M.C.A. Torbenson[†], Widespread absent rings have not occurred in boreal and temperate trees outside the American Southwest during the last millennium, Second American Dendrochronology Conference, Tucson, Arizona, May 13-17, 2013.
46. C.J. Crawford[†], K.F. Kipfmuehler, **S. St. George**, Proxy-based annual and seasonal precipitation estimates for the Craters of the Moon lava-complex, The Climate Of The Common Era. Fall 2012 American Geophysical Union Meeting, San Francisco, California, December 3-7, 2012.
45. **S. St. George**, T.R. Ault, M.C.A. Torbenson[†], Widespread locally-absent rings in tree-ring records across the Northern Hemisphere during the last millennium. The Climate Of The Common Era. Fall 2012 American Geophysical Union Meeting, San Francisco, California, December 3-7, 2012.
44. N. McKay, T.R. Ault, **S. St. George**, Improving access to the global paleoclimate dataset through the development of a virtual paleoclimate laboratory in R (vplR), Climate Informatics 2012: The Second International Workshop on Climate Informatics. National Center for Atmospheric Research, Boulder, Colorado, September 20-21, 2012.
43. E.L. Wertz[‡], **S. St. George**, J.D. Zeleznik, Testing whether vessel characteristics in bur oak can serve as proxies for severe Red River floods within the United States. American Association of Geographers Annual Meeting, New York, New York, February 24-28, 2012.
42. C.J. Crawford[†], K.F. Kipfmuehler, **S. St. George**, Moisture-sensitive tree-ring widths from the Craters of the Moon lava-complex in east central Idaho. The Climate Of The Common Era. Fall 2011 American Geophysical Union Meeting, San Francisco, California, December 5-9, 2011.
41. **S. St. George**, T.R. Ault[†], Temporal instability of the energetic decadal pattern in winter precipitation observed along the central Pacific Coast, USA. Annual Meeting of the American Association of Geographers, Seattle, Washington, April 13-16, 2011.
40. **S. St. George**, T.R. Ault[†], Reading the bass line: how well do moisture-sensitive tree-ring records track decadal variability? The Climate Of The Common Era. Fall 2010 American Geophysical Union Meeting, San Francisco, California, December 13-17, 2010.
39. **S. St. George**, S.A. Wolfe, A drought in the wind: How historic climate observations can improve long-term wind forecasts. Canadian Wind Energy Association Annual Meeting and Exhibition, Montreal, Quebec, November 1-3, 2010.
38. **S. St. George**, S.A. Wolfe, El Niño stills winter winds across the southern Canadian Prairies. Canadian Wind Energy Association Annual Meeting and Exhibition, Montreal, Quebec, November 1-3, 2010.
37. **S. St. George**, T.R. Ault[†], The magnitude of decadal and multidecadal variability in North American precipitation. Third Joint Canadian Meteorological and Oceanographic Society - Canadian Geophysical Union Congress, Ottawa, Ontario, May 31-June 4, 2010.
36. **S. St. George**, S.A. Wolfe, El Niño stills winter winds across the southern Canadian Prairies. Third Joint Canadian Meteorological and Oceanographic Society - Canadian Geophysical Union Congress, Ottawa, Ontario, May 31-June 4, 2010.

35. T. J. Porter[†], M.F.J. Pisaric, P. deMontigny[‡], **S. St. George**, New insight on the boreal forest divergence problem from a regional study of tree growth in Old Crow Flats, northwestern Canada. American Association of Geographers Annual Meeting, Washington, D.C. USA, April 14-18, 2010.
34. **S. St. George**, T.R. Ault[†], How well do moisture-sensitive tree-ring records track climate variability at decadal timescales? World Dendro 2010 - 8th Conference on Dendrochronology. Rovaniemi, Finland, June 13-18, 2010.
33. **S. St. George**, S.A. Wolfe, El Niño stills winter winds across the southern Canadian Prairies. Wind Power Meteorology. Fall 2009 American Geophysical Union Meeting. San Francisco, California, December 14-18, 2009.
32. **S. St. George**, T.R. Ault[†], D.M. Meko, Using observations and proxies to assess the strength of decadal signals in North American drought. PAGES 3rd Open Science Meeting, Oregon State University, Corvallis USA, July 8-11, 2009.
31. **S. St. George**, M.N. Demuth, A. Pietroniro, Water, ice and timber: a geophysical perspective on water resources in the western Canadian Prairies. Climate Change Impacts on Hydroelectric Water Resource Management, Montreal, Canada, October 8-9, 2008.
30. D.J. Sauchyn, **S. St. George**, Advancing the application of dendrohydrology to water resources management in western Canada. AmeriDendro, Vancouver, British Columbia, June 23-27, 2008.
29. **S. St. George**, The tree-ring record of drought on the Canadian Prairies. Physical Geography and Tree-Ring Analysis, Canadian Association of Geographers Annual Meeting, Quebec City, Quebec, May 20-24, 2008.
28. T.R. Ault[†], **S. St. George**, The prominence of decadal and multidecadal variability in North American precipitation. Abrupt Change And Tipping Elements Of Climate Change At Decadal To Centennial Scales, American Geophysical Union Fall Meeting. San Francisco, California, December 10-14, 2007.
27. **S. St. George** D.M. Meko, Regional tree growth and inferred summer climate in the Winnipeg River basin, Canada since AD 1783. Canadian Quaternary Association Meeting, Ottawa, Ontario, June 4-8, 2007.
26. **St. George, S**, Tales written in timber – insights into the Lake Winnipeg watershed from tree rings. Lake Winnipeg: Physical and Chemical Issues (Environment Division). Ninetieth Canadian Chemistry Conference and Exhibition. Winnipeg, Manitoba, May 26-30, 2007. Invited contribution
27. **S. St. George**, Coherent tree-growth response to multivariate climate controls in the Winnipeg River basin, Ontario, Canada. Advances In Paleoclimatology, Association of American Geographers Annual Meeting, San Francisco, California, April 17-21, 2007.
24. **S. St. George**, Increasing river discharge in the Winnipeg River basin, central Canada. American Quaternary Association Biennial Meeting, Montana State University, Bozeman, Montana, August 18-20, 2006.
23. **S. St. George**, Streamflow in the Winnipeg River basin, Canada: Trends, extremes and climate linkages. Canadian Association of Geographers Annual Meeting, Thunder Bay, Ontario, May 29-June 1, 2006.
22. D.M. Meko, **S. St. George**, Enhancing water supply reliability: an interdisciplinary research project to enhance predictive capacity on the Colorado River: update on tree-ring component. Colorado River Hydrology Work Group, United States Bureau of Reclamation, Boulder, Colorado, May 2, 2006.
21. **S. St. George**, Streamflow in the Winnipeg River basin, Canada: Trends, extremes and climate linkages. GeoDaze, Department of Geosciences, University of Arizona, Tucson, Arizona, April 6-7, 2006.
20. **S. St. George**, Applying long-term streamflow and paleohydrological data to inform decisions on water management. Climate Change and Hydropower Workshop. Winnipeg, Manitoba, March 2-3, 2006.
19. D. Garrick[†], L. Lindenmayer[†], K. Pittenger[†], **S. St. George**, K. Jacobs, B. Nijssen, B. Colby, D.M. Meko, Enhancing water supply reliability: an interdisciplinary project to improve predictive capacity in the Colorado River basin. University of Arizona Water Forum, University of Arizona, Tucson, Arizona, November 9, 2005.
18. H.A. Catton[†], W.R. Remphrey, **S. St. George**, A dendrochronological evaluation of bur oak (*Quercus macrocarpa*) decline in the urban forest of Winnipeg, Manitoba. Canadian Botanical Association Annual Meeting, University of Manitoba. Winnipeg, Manitoba, June 26-30, 2004.

17. **S. St. George**, Tree-ring dating and the mystery of the *Mary Celeste*. GeoDaze, Department of Geosciences, University of Arizona. Tucson, Arizona, April 1-3, 2004.
16. B.H. Luckman, D.K. Youngblut, R.J.S. Wilson, E. Watson, M.E. Colenutt, **S. St. George**, Dendroclimatology in the Canadian Cordillera. Tree Rings and Climate: Sharpening the Focus, Tucson, Arizona, April 6-9, 2004.
15. **S. St. George**, E. Nielsen, Paleoflood records from anatomical tree-ring signatures. Environmental Assessment from the Width, Anatomy, and Chemical Composition of Tree Rings. American Geophysical Union Fall Meeting. San Francisco, California, December 8-12, 2003. Invited contribution
16. **S. St. George**, E. Watson, S.A. Wolfe, Tree-ring and eolian evidence for hydroclimatic variability in western Canada during the last several centuries. A Multi-Millennia Perspective on Drought and Implications for the Future, CLIVAR/PAGES/IPCC, University of Arizona, Tucson, Arizona, November 18-21, 2003.
13. **S. St. George**, A. Ruffman, E. Nielsen, A nascent tree-ring network for Nova Scotia. Canadian Quaternary Association-Canadian Geomorphology Research Group Biannual Meeting. Halifax, Nova Scotia, June 8-12, 2003.
12. **S. St. George**, E. Nielsen, Applications of dendrohydrology to flood hazards in the Red River basin. Sixth International Conference on Dendrochronology. Québec City, Québec, August 22-27, 2002.
11. G.R. Brooks, **S. St. George**, C.F.M. Lewis, B.E. Medioli, E. Nielsen, S. Simpson, L.H. Thorleifson, Geoscientific contributions to understanding flood hazards in the Red River valley, Manitoba. Canadian Water Resources Association Annual Meeting. Winnipeg, Manitoba, June 11-14, 2002.
10. **S. St. George**, E. Nielsen, G. Ferguson, Paleoenvironmental evidence for hydroclimatic change and extreme flooding in the Red River basin over the last 700 years. Canadian Water Resources Association Annual Meeting. Winnipeg, Manitoba, June 11-14, 2002.
9. **S. St. George**, E. Nielsen, Recent hydroclimatic change in the Red River basin inferred from tree rings. Great Plains geomorphology and environmental change. Geological Association of Canada– Mineralogical Association of Canada Joint Meeting. Saskatoon, Saskatchewan, May 27-29, 2002.
8. **S. St. George**, E. Nielsen, Paleoflood records for the Red River basin, Canada derived from anatomical signatures in *Quercus macrocarpa*. Tree Rings and People: An International Conference on the Future of Dendrochronology. Davos, Switzerland, September 22-26, 2001.
7. B.H. Luckman, R.J. Wilson, E. Watson, M.E. Colenutt, **S. St. George**, D.K. Youngblut, The IAI “Treelines” Project: Recent Developments in the Canadian Rockies and Adjacent Areas. HIGHEST Conference, Davos, Switzerland.
6. A. Ruffman, E. Nielsen, **S. St. George**, The development of softwood tree-ring chronologies in Nova Scotia: a tool for paleoclimate reconstruction, archaeological and heritage building research. Colloquium and Annual General Meeting, Current Research in the Atlantic Provinces, Atlantic Geoscience Society, February 9-10, Moncton, New Brunswick.
5. A. Ruffman, **S. St. George**, E. Nielsen, Developing a new tree-ring network in Nova Scotia for paleoclimatic reconstruction. Global Change and its Impact on the North Atlantic Borderlands. Geological Association of Canada – Mineralogical Association of Canada Joint Meeting, St. John’s, Newfoundland, May 27-30, 2001.
4. E. Nielsen, **S. St. George**, Paleoflood records and hydrological change in southern Manitoba since AD 1460. Global Change and its Impact on the North Atlantic Borderlands. Geological Association of Canada – Mineralogical Association of Canada Joint Meeting, St. John’s, Newfoundland, May 27-30, 2001.
3. W.M. Buhay, B. Mayer[‡], **S. St. George**, E. Nielsen, P. Harms[‡], D. Marcino[‡], Tree-ring stable oxygen isotope ratios indicating cooler and wetter climate conditions and high flood frequency periods in the Red River Basin, Manitoba, Canada. International Conference on the Study of Environmental Change Using Isotope Techniques, International Atomic Energy Agency, Vienna, Austria, April 23-27, 2001.
2. **S. St. George**, E. Nielsen, Paleoflood signatures in *Quercus macrocarpa* (Michx.) along the Red River, Manitoba, Canada. GeoCanada 2000. Calgary, Alberta. May 29-June 2, 2000.

1. **S. St. George**, E. Nielsen, Dendrohydrological reconstruction of flooding in the Red River valley, Canada. The International Conference on Dendrochronology in the Third Millennium. Mendoza, Argentina. April 2-7, 2000.

Other Contributions

23. B. Wilhelm, J.A. Ballesteros Casanovas, M. Ahlborn, V. Baker, G. Benito, P. Francus, R. Glaser, M. Kahle, M. Mudelsee, J.C. Peña, L. Schulte, **S. St. George**, T. Swierczynski, PAGES Floods Working Group: For an improvement for our flood knowledge through paleodata. White Paper released by PAGES (Past Global Changes), Bern, Switzerland, 15 pp (2017).
22. **PAGES 2k Network Coordinators**, Workshop report: Understanding the climate of the past 2000 years: Phase 3 of the PAGES 2K Network. *Past Global Changes Magazine* **25**, 110 (2017).
21. **S. St. George**, D.J. Sauchyn, R. Halliday, B.F. Cumming, Workshop report: Paleohydrology and water resources on the Canadian Prairies. *Canadian Water Resources Association Water News* (2008).
20. **S. St. George**, D.M. Meko, Using tree-ring data to understand summer drought in a key watershed for Manitoba Hydro; In *Report of Activities 2007*, Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, p. 155–160 (2007).
19. **S. St. George**, Hydrological dynamics in the Winnipeg River basin, Manitoba. In *Report of Activities 2006*, Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, p. 226-230 (2006).
18. **S. St. George**, A new tree-ring network for studying drought in southeastern Manitoba and northwestern Ontario; In *Report of Activities 2005*, Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, p. 164 – 166 (2005).
17. G. Brooks, **S. St. George**, Environmental geoscience and geomorphic systems in the Red River Valley, Manitoba: Field trip guide book. Canadian Quaternary Association Biennial Meeting, Winnipeg, Manitoba, Canada, 83 pp (2005).
16. **S. St. George**, Initial collection of dendrohydrological records to study drought in the Winnipeg River basin, Manitoba; In *Report of Activities 2004*, Manitoba Industry, Economic Development and Mines, Manitoba Geological Survey, p. 254 – 256 (2004).
15. **S. St. George**, Understanding drought in the Winnipeg River basin; in *Report of Activities 2003*, Manitoba Industry, Trade and Mines, Manitoba Geological Survey, p. 209 – 212 (2003).
14. G.R. Brooks, **S. St. George**, C.F.M. Lewis, B.E. Medioli, E. Nielsen, S. Simpson, L.H. Thorleifson, Geoscientific insights into Red River flood hazards in Manitoba. Geological Survey of Canada Open File Report 4473, 35 pp (2003).
13. E. Nielsen, **S. St. George**, G. Matile, G. Keller, Environmental geoscience in the Red River valley. CPG/NGSC field trip guidebook. 2002 Energy and Mines Ministers' Conference, Winnipeg, Manitoba (2002).
12. W.M. Buhay, D. Blair, E. Nielsen, **S. St. George**, G. Brooks, Isotopic records of past hydroclimatic change in the Red River basin, southern Manitoba, Canada. *PAGES Newsletter* **10**: 9-10 (2002).
11. **S. St. George**, E. Nielsen, Dendrochronological analysis of a coffin board recovered from Pukatawagan Bay, Manitoba. Report to Manitoba Historic Resources, Winnipeg, Manitoba (2002).
10. **S. St. George**, Dendrochronological analysis of timbers recovered from the Rochelais Reef shipwreck. Report to Geomarine Associates Limited, Halifax, Nova Scotia (2001).
9. **S. St. George**, T.W. Anderson, D. Forbes, C.F.M. Lewis, E. Nielsen, L.H. Thorleifson, Climatic extremes in southern Manitoba during the past millennium. Final Report to the Canadian Climate Change Action Fund, Environment Canada (2001).
8. A. Ruffman, E. Nielsen, **S. St. George**, A phoenix rising from the ashes: The Nova Scotia tree ring project and Saint George's Round Church. *The Griffin*, Heritage Trust of Nova Scotia, 25: 18-19 (2001).

7. E. Nielsen, **S. St. George**, The paleoenvironmental history of the Red River valley since AD 1463. In *Report of Activities*, Manitoba Industry, Trade and Mines, Geological Services (2000).
6. **S. St. George**, E. Nielsen, Developing tree-ring records for the Red River valley and southern Manitoba. Proceedings of the Red River Flood Project: Paleofloods in the Red River Basin Workshop. Manitoba Geological Survey. Winnipeg, Manitoba. April 15 (2000).
5. **S. St. George**, Geological Survey of Canada/Manitoba Geological Services Branch Tree-Ring Laboratory Guide. Unpublished manuscript. 16 pp (1999).
4. **S. St. George**, E. Nielsen, G. Brooks, Tree rings into the next millennium! In *Report of Activities*, Manitoba Industry, Trade and Mines, Geological Services, p. 126-129 (1999).
3. **S. St. George**, E. Nielsen, G. Brooks, Red River Research Project: 2. Flood record of the Red River determined by tree-ring analysis – preliminary results. In *Red River Flooding – Decreasing Our Risks*. Symposium of the Canadian Water Resources Association. October 27-28, 1999, Winnipeg, Manitoba (1999).
2. **S. St. George**, University of Western Ontario Tree-Ring Laboratory Guide. Unpublished manuscript. Department of Geography, University of Western Ontario. 18 pp (1998).
1. B.H. Luckman, D.P. McCarthy, E. Watson, **S. St. George**, T.A. Kavanagh, B.J. Robinson, M.E. Colenutt, Field investigations in the Canadian Rockies. Report to Parks Canada and BC Parks Service. 66 pp (1998).

PRESENTATIONS AND LECTURES

I've delivered public lectures on climate change, natural hazards, and science communication to universities, government agencies, and public audiences in Canada, the United States, and Europe.

University Lectures

Department of Soil, Water and Climate, University of Minnesota, St. Paul, USA, November 14, 2018.

Geographisches Institut, Johannes Gutenberg-Universität, Mainz, Germany, November 23, 2017.

Paleoclimate Seminar, Johannes Gutenberg-Universität, Mainz, Germany, November 15, 2017.

Institute of Geography, Universität Bern, Bern, Switzerland, November 1, 2017.

GoldenGate College, Kathmandu, Nepal, July 20, 2016.

Department of Geography, Trinity College, Dublin, Ireland, April 8, 2016

Water Supply Convergence Colloquium, University of Minnesota, Minneapolis, USA, February 16, 2016.

Buffett Institute for Global Studies, Northwestern University, Evanston, USA, February 9, 2016.

KlimaCampus Colloquium, University of Hamburg and the Max Planck Institute of Meteorology, Hamburg, Germany, July 9, 2015.

Earth and Atmospheric Sciences Department, Cornell University, Ithaca, USA, February 4, 2015.

Quaternary Paleoecology Seminar Series, University of Minnesota, Minneapolis, USA, October 29, 2014.

Department of Geography, University of North Carolina, Chapel Hill, USA, October 24, 2014.

Frontiers in the Environment series, Institute on the Environment, University of Minnesota, Minneapolis, USA, November 20, 2013.

Environmental Science Graduate Program, University of Iowa, Ames, USA, April 29, 2013.

Incorporated Research Institutions for Seismology, Early Career Investigators Working Group, April 10, 2013.

College of Science and Engineering Ambassadors, University of Minnesota, Minneapolis, USA, October 25, 2012.

University of Wisconsin-Platteville, Platteville, USA, October 24, 2012.

Climate Science, Statistics and the Computational Sciences Reading Group, School of Statistics, University of Minnesota, Minneapolis, USA, April 6, 2012.

Department of Anthropology, University of Minnesota, Minneapolis, USA, January 27, 2012.

Department of Soil, Water and Climate seminar series, University of Minnesota, Minneapolis, USA, November 16, 2011.

Frontiers in the Environment series, Institute on the Environment, University of Minnesota, Minneapolis, USA, February 23, 2011.

Department of Geography Coffee Hour series, University of Minnesota, Minneapolis, USA, December 10, 2010.

Quaternary Paleoecology Seminar Series, University of Minnesota, Minneapolis, USA, November 10, 2010.

School of Environmental Studies, Queen's University, Kingston, Canada. December 3, 2009.

Department of Biology, Queen's University, Kingston, Canada. October 21, 2009.

Bert Bolin Centre for Climate Research, Stockholm University, Stockholm, Sweden, May 11, 2009.

Department of Geography, University of Lethbridge, Lethbridge, Canada. April 3, 2009.

Department of Geography, University of Regina, Regina, Canada. March 30, 2009.

Laboratory of Tree-Ring Research, University of Arizona, Tucson, USA. February 20, 2008.

Seventieth Anniversary Symposium, Laboratory of Tree-Ring Research, University of Arizona, Tucson, USA. November 30, 2007.

Laboratory of Tree-Ring Research, University of Arizona, Tucson, USA. March 10, 2004.

Geography Alumni Lecture Series, University of Winnipeg, Winnipeg, Canada. November 29, 2000.

Agency Presentations

GFZ German Research Centre for Geosciences,
Potsdam, Germany, October 12, 2018.

Swiss Federal Institute for Forest, Snow and Landscape
Research, Birmensdorf, Switzerland, November 7,
2017.

Webinar hosted by the North Dakota Water Science
Center, U.S. Geological Survey, Bismarck, North
Dakota, May 13, 2016.

Workshop on the 'Nameless Oscillation' organized by
the California Department of Water Resources. San
Diego, California, May 27-28, 2014.

St. Paul District Office, United States Army Corps of
Engineers, St. Paul, Minnesota, April 23, 2012.

Review of the Earth Science Sector's Climate Change
Geoscience Program. Ottawa, Canada, April 6, 2010.

Public Presentations

Annual Conference, Minnesota Master Naturalists,
Brainerd, Minnesota, May 18-20, 2018 (withdrawn
due to family visa delays).

Minnesota Master Naturalist Volunteers, Minnetonka,
Minnesota, October 8, 2015.

'A Brighter U', College of Liberal Arts alumni event,
University of Minnesota, Minneapolis, USA, February
22, 2014.

Forestry Club Banquet, Department of Forest
Resources, University of Minnesota, St. Paul,
Minnesota, April 26, 2013.

A Sip of Science, National Center for Earth-Surface
Dynamics, Minneapolis, Minnesota, March 13, 2013.

Minnesota Society of American Foresters Annual
Meeting, Bunker Hills, Minnesota, February 26, 2013.

Minnesota Shade Tree Advisory Committee,
Minneapolis, Minnesota, December 13, 2012.

Climate Change Impacts and Adaptation Week,
Natural Resources Canada, Ottawa, Canada,
November 3, 2009.

Quaternary Discussion Group lecture series,
Geological Survey of Canada, Ottawa, Canada, June 5,
2006.

Quaternary Discussion Group lecture series,
Geological Survey of Canada, Ottawa, Canada, March
8, 2002.

Manitoba Climate Change Task Force, Brandon,
Canada. May 17, 2001.

Climate Research Branch Seminar. Meteorological
Service of Canada. Toronto, Canada. September 18,
2000.

Manitoba Industry, Trade and Mines, Winnipeg,
Canada. December 10, 1999.

Traffic Zone Center for Visual Art, Minneapolis,
Minnesota, August 17, 2012.

Minnesota Shade Tree Short Course, Bethel University,
Arden Hills, Minnesota, March 20 and 21, 2012.

Manitoba Branch of the Canadian Water Resources
Association, Winnipeg, Canada, November 27, 2008.

Quetico Provincial Park, Canada, July 21, 2004.

Arbour Day in the Park, Winnipeg, Canada, May 3,
2003

Manitoba Naturalists Society, Winnipeg, Canada,
March 12, 2003.

North Dakota Geological Society, Bismarck, USA,
September 24, 2002.

Manitoba Association of Plant Biologists Annual
Meeting, University of Winnipeg, Winnipeg, Canada,
May 4, 2002.

Wolseley School, Winnipeg, Canada, March 9, 2000.

TEACHING

University of Minnesota (Minneapolis, USA)

Associate Professor in the Department of Geography, Environment and Society

2015 to present

Assistant Professor in the Department of Geography

2010 to 2015

Semester	Course	Title	Enrollment
Fall 2010	GEOG5426	Climate Variations	6
Spring 2011	GEOG3839/5839	Introduction to Dendrochronology	10
	GEOG8260	The Art of Scientific Presentations	8
Fall 2011	GEOG1403	Biogeography of the Global Garden	437
Spring 2012	GEOG5426	Climate Variations	6
	GEOG8260	The Art of Scientific Presentations	5
Fall 2012	GEOG5839	Introduction to Dendrochronology	3
	GEOG8280	The Impact of Decadal Climate Variability on Terrestrial Ecosystems	8
Spring 2013	GEOG1403	Biogeography of the Global Garden	509
	GEOG5426	Climate Variations	8
Fall 2013	<i>Single-semester leave</i>		
Spring 2014	GEOG5426	Climate Variations	7
	GEOG8260	The Art of Scientific Presentations	22
Fall 2014	GEOG1403	Biogeography of the Global Garden	499
Spring 2015	GEOG5426	Climate Variations	12
	GEOG8260	The Art of Scientific Presentations	21
Fall 2015	GEOG1403	Biogeography of the Global Garden	465
Spring 2016	GEOG8260	The Art of Scientific Presentations	27
	GEOG8280	Frontiers in Paleoclimatology	6
F2016/S2017	<i>Sabbatical</i>		
Fall 2017	<i>Humboldt Fellowship leave</i>		
Spring 2018	GEOG5426	Climate Variations	4

GEOG1403, Biogeography of the Global Garden: Biogeography uses ideas from biology, geography and history to explain the panorama of life on Earth. This course provides students with a broad introduction to important concepts and issues in ecology and environmental science. Over the semester, we investigate how weather and climate affects the distribution of species, how individuals interact with their own species and others, and discuss why species expand or go extinct. Within this framework, we also examine the many ways humans, either as individuals or in groups, act as agents of biotic change.

GEOG3839/5839, Introduction to Dendrochronology: The annual growth rings from trees provide us with an incredibly powerful and adaptable tool to study Earth's history. Beyond just telling us a tree's age, tree rings also help us understand how our environment has changed in the past and how key processes in atmospheric, biological and geological systems operate over long timescales. This course teaches students the fundamental principles of dendrochronology through a combination of formal lectures, class discussion and laboratory exercises. By the end of the course, they are able to explain the key concepts underlying dendrochronology and discuss how evidence from tree rings is used to address contemporary issues in natural history, resource management and climate science.

GEOG5426, Climatic Variations: Does the past really matter? This seminar course discusses the major applications of paleoclimatology, which uses physical and cultural evidence to make inferences about climates of the past. Students review the processes that govern our modern climate and explore what paleoclimate records tell us about how these systems respond to (and express) climate change. In the process, they learn how insights drawn from the past can help inform discussions of contemporary issues linked to climate change, hazards and the management of natural resources. Case studies are selected to focus on the Holocene (the last 10 ka) and, to a lesser degree, the climate of North America and Minnesota.

GEOG8260, The Art of Scientific Presentations: The ability to deliver effective and engaging oral presentations is a critical skill for students in all disciplines. Unfortunately, despite the importance of clear communication, scientific presentations are too frequently confusing, abstract and boring. In this seminar, students are introduced to a diverse set of presentation methods and use exercises to apply these techniques to their own work and ideas. The course also examines the characteristics common to exceptional scientific talks, shows how basic design principles can be used to create more effective visual aids, and discusses the science behind effective communication techniques.

GEOG8280, The Impact of Decadal Climate Variability on Terrestrial Ecosystems: The field of decadal prediction has emerged as a priority area for climate research, largely because the upcoming ten to thirty years are often a critical period for planning, resource management and public policy. This course examines decadal and multidecadal variability in the global climate system and investigates how this behavior might plausibly influence the dynamics of terrestrial ecology and landscape-scale disturbances. Students are challenged to conduct their own analysis of decadal variability in climate or ecology through the semester, either working on their own or as part of a small team.

GEOG8280, Frontiers in Paleoclimate: Piecing together climates of the past provides us with a baseline to gauge current and future climate change, allows us to document potential 'climate surprises', and provides a broader perspective to evaluate the interconnections between climate, ecology, and society. But proxy data (and our interpretations of those data) can also be confounding, so much so that the field is often a crucible for debate among climate scientists and other parties. In this seminar, we will review current debates in paleoclimatology so that we may try to define the intellectual frontier(s) of this discipline.

University of Arizona (Tucson, USA)

Teaching Associate in the Laboratory of Tree-Ring Research
2003

University of Western Ontario (London, Canada)

Teaching Assistant in the Department of Geography
1995-1997

Graduate Student Advising and Committees

Advising

M. McPartland, Ph.D. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (in progress).

A. Hefner, *Holocene paleofloods in the United States and their relevance to flood mitigation, hazard assessment and policy*, M.A. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (in progress).

U.K. Thapa, *Evaluating the magnitude and causes of climate and hydrological variability across the Nepalese Himalaya during the last several centuries*, Ph.D. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (in progress).

S. Appleton, *Tree-ring reconstruction of winter precipitation from mountain hemlock (Tsuga mertensiana) in Crater Lake National Park, Oregon*. M.A. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (2015). Current position: Education Product and Programs Specialist, National Geographic.

X. Li, *Assessing forward modeling of tree-ring growth and the impacts of non-climatic factors on tree-ring width in the Northern Hemisphere*. M.A. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (2014). Current position: Ph.D. candidate, Department of Earth and Atmospheric Sciences, Cornell University.

M.C.A. Torbenson, *Assessing the response of upper montane forests to decadal variability in winter precipitation*. M.A. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (2013). Current position: Ph.D. candidate, Department of Geosciences, University of Arkansas.

Committees

S. Chaliyakunnel, Ph.D. in Land and Atmospheric Science, University of Minnesota, Minneapolis, Minnesota, USA (in progress).

M.L. Buchanan, *Drivers of the oak-maple transition across contrasting site types in southwestern Wisconsin*. Ph.D. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (in progress).

T.V. dos Santos, Ph.D. in Land and Atmospheric Science, University of Minnesota, Minneapolis, Minnesota, USA (2017).

M. Heyman, *Bootstrap estimator classification and applications of wavelet bases*. Ph.D. in Statistics, University of Minnesota, Minneapolis, Minnesota, USA (2016).

L. Dietz, *Applied statistical methods in climate change*. Ph.D. in Statistics, University of Minnesota, Minneapolis, Minnesota, USA (2016).

M. Mazzocato, *The impact of natural disturbance on subarctic alpine treeline dynamics in the southwestern Yukon*. M.Sc. in Environmental Studies, Queen's University, Kingston, Ontario, Canada (2015).

K.J. Harding, *An examination of changes in the strength of land-atmosphere coupling and vegetation memory over the Sahel due to climate change*. Ph.D. in Land and Atmospheric Science, University of Minnesota, Minneapolis, Minnesota, USA (2014).

L.J. Johnson, *Tree-ring reconstruction of island and mainland fire events along a historic canoe travel corridor in Minnesota's Boundary Waters Wilderness*. M.A. in Geography, University of Minnesota, Minneapolis, Minnesota, USA (2013).

External examiner

A. Quesada Román, *Deciphering natural hazard histories based on tree-ring analyses in contrasting tropical ecosystems of Costa Rica*. Ph.D. in Environmental Science, University of Geneva, Geneva, Switzerland (in progress).

S. Ma, *Lake level variation in south-eastern region of the Winnipeg River drainage basin over the past two millennia*. M.Sc. in Biology, Queen's University, Kingston, Ontario, Canada (2011).

H.A. Haig, *Diatom-inferred changes in effective moisture from Gall Lake, northwestern Ontario, over the past two millennia*. M.Sc. in Biology, Queen's University, Kingston, Ontario, Canada (2011).

Student recognition and awards

University of Minnesota

Carolyn Crosby Award: Uday Thapa

Herbert Wright Quaternary Paleoecology Fellowship: Max Torbenson, Uday Thapa

Newton Winchell Award for Excellence in Earth Science: Jacob Arndt

Graduate Fellowship, College of Liberal Arts: Xiaolu Li

Graduate Research Partnership Program, College of Liberal Arts: Max Torbenson, Sarah Appleton, Uday Thapa

Best Student Publication, Department of Geography, Environment and Society: Uday Thapa

Outstanding Graduating Senior, Department of Geography, Environment and Society: Daniel Crawford

Ralph Hall Brown Fellowship, Department of Geography, Environment and Society: Uday Thapa

COMMUNITY SERVICE

Professional Service

International Member, Discovery Grant Evaluation Group - Geosciences, Natural Sciences and Engineering Research Council of Canada, 2017 to present. *Through its Discovery Grant program, NSERC delivers more than \$22 million CDN in research funds each year to Canadian geoscientists.*

Member, Framework for technical review of paleoflood information, United States Geological Survey, 2018 to present.

Coordination Team Member, PAGES 2k Network, 2016 to present.

Member, Scientific Committee, PAGES Floods Working Group, 2015 to present.

Site Visit Committee, Collaborative Research and Development Grant Program, Natural Sciences and Engineering Research Council of Canada, University of Waterloo, 2018.

External Evaluator, Tenure and Promotion Committee, Department of Earth Sciences, University of Memphis, 2017.

Member, Scientific Committee, 4th International Conference of Asian Dendrochronology, Kathmandu, Nepal, March 4-8, 2015.

Member, Scientific Committee, 9th International Conference on Dendrochronology, Melbourne, Australia, January 13-17, 2014.

University Service

Members' Representative, University Corporation for Atmospheric Research, 2011 to present.

Host, Fulbright Scholar Program, Dr. Farid Seyfullayev, Azerbaijan Academy of Sciences, 2018.

College Service

Faculty Advisory Committee for the Undergraduate Research Opportunity Program, 2014-16.

Departmental Committees

Admissions and Financial Aid Committee, Department of Geography, University of Minnesota, 2010-2011, 2014-2018.

Graduate Education and Policy Committee, Research/Awards Committee, Department of Geography, Environment and Society, University of Minnesota, 2013-2014.

Search Committee for physical geography and urban geography positions (co-chair), Executive Committee, Undergraduate Education Policy Committee, Department of Geography, University of Minnesota, 2012-2013.

Graduate student representative, Five-year administrative review of Dr. Thomas Swetnam, Director, Laboratory of Tree-Ring Research, University of Arizona, 2006.

Scientific Reviewer

Arctic

Arctic, Antarctic and Alpine Research

Belgian Journal of Botany

Bermuda Biological Station for Research

Canadian Journal of Forest Research

Climate Dynamics

Climate of the Past

CONICYT (Chile)

Dendrochronologia

Ecological Applications

Ecology and Evolution

Environmental Pollution

Environmental Research Letters

Frontiers in Plant Science

Geographie physique et Quaternaire

Geology

Geomorphology

Geophysical Research Letters

Global and Planetary Change

Global Biological Change

International Journal of Climatology

International Journal of Wood Anatomists

Journal of Archeological Sciences

Journal of Biogeography

Journal of Climate
Journal of Great Lakes Research
Journal of Geophysical Research - Atmospheres
Journal of Hydrology
Journal of the American Water Resources Association
 NOAA Climate Program
 National Science Foundation
Natural Hazards and Earth System Sciences
 Natural Sciences and Engineering Council of Canada
Nature
Nature Communications
Nature Climate Change
New Phytologist
PAGES Magazine

PLOS ONE
Proceedings of the National Academy of Sciences
Progress in Physical Geography
Quaternary Research
 Swiss National Science Foundation
Tree Physiology
Tree Rings and Natural Hazards [Springer]
Trees
Tree-Ring Research
 University of California Press
 Wageningen University, Netherlands
Water Resources Research
WIREs Climate Change

Data Contributions

- PAGES2k Consortium, A global multiproxy database for temperature reconstructions of the Common Era. *figshare* <https://doi.org/10.6084/m9.figshare.c.3285353> (2017).
- S. St. George *et al.*, *Canadian Prairies regional drought indices*. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series # 2009-016. NOAA/NCDC Paleoclimatology Program, Boulder CO, USA (2009).
- S. St. George *et al.*, *Winnipeg River basin regional ringwidth series*. IGBP-PAGES World Data Center for Paleoclimatology Data Contribution Series #2008-065. NOAA/NGDC Paleoclimatology Program. Boulder, CO, USA (2008).
- S. St. George and E. Nielsen, *Southern Manitoba annual precipitation reconstruction*. International Tree-Ring Data Bank. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series #2002-060. NOAA/NGDC Paleoclimatology Program. Boulder, CO, USA (2002).

Editorial Service

- Y. Kushnir, C. Cassou, S. St. George, N. Caltabiano, L. von Gunten (editors), Special issue on decadal climate variability, Joint publication of *CLIVAR Exchanges* and *Past Global Changes Magazine*, 2017.
- Review editor, *Frontiers in Ecology and Evolution* (Paleoecology section), 2013-present.
- Guest editor (with David Sauchyn), *Canadian Water Resources Journal* (Special Issue – “Paleoenvironmental perspectives on drought in western Canada”), 2006.

Sessions, Workshops and Special Issues Organized

- CLIMATE ThenNowNext* (with Toby Ault and Singdhansu Chatterjee). A one-and-a-half day workshop on the application of statistics to problems in ancient, modern, and future climates. Institute for Research on Statistics and its Applications, University of Minnesota. Minneapolis, Minnesota, April 2019.
- Shifting extremes: Understanding hydrological events for societal benefit* (with Seyedehzahra Samadi, Micheala Bray, and Stacey Archfield). A special session at the American Geophysical Union Fall Meeting. San Francisco, California, December 12 - 16, 2016.
- Fight the PowerPoint! Become a science presentation superstar* (with Todd Reubold). A one-hour workshop to develop effective and engaging oral presentations. American Association for the Advancement of Science Annual Meeting. Chicago, Illinois, February 14, 2014.
- Challenges in dendrochronology* (with Kurt Kipfmüller, Kevin Anchukaitis, and Neil Pederson). A special session at the American Association of Geographers Annual Meeting. New York, New York, February 24 - 28, 2012.
- Environmental and cultural insights from tree rings* (with Mike Pisarcic). A special session at the Canadian Association of Geographers Annual Meeting. Sponsored by the Canadian Geomorphology Research Group. Carleton University, Ottawa, Ontario, May 26 – 30, 2009.

Physical geography and tree-ring analysis (with Dan Smith and Louise Filion). A special session at the Canadian Association of Geographers Annual Meeting. Sponsored by the Canadian Geomorphology Research Group and the Canadian Dendrochronology Research Group. Université de Laval, Québec, Québec, May 20 – 24, 2008.

Drought in western Canada: Proxies, paleoclimate observations and human interactions (with David Sauchyn). A special session at the Canadian Quaternary Association Biennial Meeting. University of Manitoba, Winnipeg, Manitoba, June 5 – 9, 2005.

Past climatic change in Manitoba (with Danny Blair), a one-day workshop highlighting ongoing scientific research in Manitoba dealing with climate change. University of Winnipeg, Winnipeg, Manitoba, August 30, 2001.

Workshops Attended

Riederalp 2018 workshop on disasters and societies, a four-day workshop dedicated to the exposure, vulnerability and resilience of human societies to climate- and weather-related disasters from the Holocene to the Anthropocene. Riederalp, Switzerland, March 20-24, 2018.

PAGES NAM2k Phase Two, a four-day workshop focused on advancing understanding and reconstructions of North American climate over the past 2,000 years. Fort Collins, Colorado, October 12-15, 2015.

PAGES NAM2K tree ring, a two-day meeting to compile and analyze climate reconstructions from tree rings for North America. Tucson, Arizona, October 27-28, 2011.

Presenting data and information, a one day course on information design taught by Edward Tufte. Albuquerque, New Mexico, January 30, 2009.

Past and future hydroclimatic variability: applications to water resource management in the Prairie Provinces, a two-day workshop communicating paleoenvironmental research to water managers. Canmore, Alberta, March 16-18, 2008.

Applying paleoenvironmental data to hydropower management in Manitoba, a one-day workshop reviewing paleoclimate research projects sponsored by Manitoba Hydro and educating environmental scientists on current practices related to hydropower planning. University of Winnipeg, September 20, 2007.

Climate change and hydropower, a two-day workshop to examine the impacts of climate change on hydropower in Canada, and the US, and determine knowledge needed to facilitate future adaptation. Canadian Climate Impacts and Adaptation Research Network – Water Sector. Winnipeg, Manitoba, March 2-3, 2006.

Planning workshop to develop hydroclimatic reconstructions for decision support in the Colorado River basin, a two-day workshop to develop proposals, collaborations and/or pilot projects to broaden the use of paleoclimate data in the Colorado River basin management and decision making. University of Arizona, Tucson, Arizona, May 4-5, 2005.

A multi-millennia perspective on drought and implications for the future, a four-day workshop to define the state-of-the-art with respect to the record and mechanisms of drought in North America and Northern Africa. CLIVAR/PAGES/IPCC, University of Arizona, Tucson, Arizona, November 18-21, 2003.

Paleoenvironmental records for climate change impacts and adaptation, a two-day workshop to improve linkages between paleoenvironmental researchers and non-traditional user groups. Prairie Adaptation Research Collaborative, University of Regina, Regina, Saskatchewan, March 21-22, 2003.

Social dimensions of adaptation to climate change on the prairies, a one-day workshop discussing potential contributions of social scientists to the study of climate change in Manitoba. University of Winnipeg, Winnipeg, Manitoba, February 13, 2002.

Hydroclimatic variability in North America, a two-day meeting to establish a continent-wide hydrological database. Lamont-Doherty Earth Observatory, Columbia University, Palisades, New York. May 24-25, 2001.

Field Trips and Field Schools

Training workshop on dendrochronology as a tool of understanding climate change, Tree-Ring Society of Nepal and University of Minnesota, Resources Himalaya Foundation, Kathmandu, Nepal, July 5-8, 2016.

North American Dendroecological Fieldweek, Group leader, Valles Caldera National Preserve, New Mexico, May 28 - June 5, 2012.

Environmental geoscience and geomorphic systems in the Red River Valley, Manitoba (with Greg Brooks). Canadian Quaternary Association Biennial Meeting. University of Manitoba, Winnipeg, Manitoba, June 3 – 4, 2005.

CPG/NGSC Field trip, co-leader (with Erik Nielsen) of trip featuring environmental geoscience in the Red River Valley, 2002 Energy and Mines Ministers' Conference, Winnipeg, Manitoba, September 14, 2002.

Media Interviews and Features

Physics Today, *Four ways we know pre-Columbian America was plagued by megadroughts*, August 1, 2018

Championing Science, *Teaching grad students the art of communicating science*, July 27, 2018.

El Pais, *Los árboles no olvidan la guerra*, April 19, 2018.

Sciences Et Avenir, *Des arbres racontent le combat à mort d'un cuirassé allemand*, April 13, 2018.

As It Happens, *How Norwegian trees tell the story of a cloaked Nazi war ship*, April 12, 2018.

Smithsonian Magazine, *Norwegian trees still bear evidence of a World War II German battleship*, April 11, 2018.

Popular Mechanics, *How the Nazis' largest battleship is still affecting Norway today*, April 11, 2018.

BBC Science & Environment, *Nazi legacy found in Norwegian trees*, April 11, 2018.

Eos, *Tree rings tell a tale of wartime privations*, April 11, 2018.

Scientific American, *Taming the mighty Mississippi may have caused bigger floods*, April 10, 2018.

Southeastern Missourian, *Study fingers engineering along Mississippi for worsened floods*, April 5, 2018.

The Weather Network, *Flood controls blamed for floods in Mississippi, Louisiana*, April 5, 2018.

The Times-Picayune, *Mississippi River flood control blamed for flooding Louisiana*, Mississippi, April 5, 2018.

News@Northeastern, *Mississippi River keeps flooding and humans are to blame, data show*, April 5, 2018.

Minnesota Star-Tribune, *Study: flood control engineering likely has worsened floods*, April 4, 2018.

Washington Post, *Scientists say the Mississippi is flooding more than it has in 500 years — and we caused it*, April 4, 2018.

Chicago Tribune, *Study: flood control engineering likely has worsened floods*, April 4, 2018.

Science News, *Efforts to contain Mississippi floods may have made them worse*, April 4, 2018

Lake City Graphic, *Felled tree has stories to tell*, March 22, 2018.

Physics Today, *What causes megadroughts?* February 2018.

Newsweek, *Is the U.S. heading for a giant drought? Climate history offers vital clues about the next century*, December 15, 2017.

Warm Regards, *Climate change and the world of Game of Thrones*, September 8, 2017.

Independent, *Climate change: Nearly 700 'natural thermometers' demonstrate the world is warmer than its ever been*, July 12, 2017.

Science Daily, *Most comprehensive database on past global changes is online*, July 11, 2017.

Nature Climate Change, *The visceral climate change experience*, March 2017.

College of Liberal Arts, University of Minnesota, *Let's talk about trees*, December 20, 2016.

Forecast: A podcast about climate science and climate scientists, *Scott St. George on tree rings*, September 16, 2016.

Smithsonian Magazine, *This song is composed from 133 years of climate change data*, September 21, 2015.

Minneapolis Star-Tribune, *U students play the music of the warming spheres*, June 1, 2015.

Gaia Dergi, *Tek bir şarkıda 133 yılın iklim değişikliğini dinleyin*, May 27, 2015.

Sopitas, *Así suena el Calentamiento Global*, May 23, 2015.

EOS, *Musical composition conveys climate change data*, May 21, 2015.

Scientific American, *Now you can "hear" climate change*, May 21, 2015.

nrc.nl, *Luister dit muziekstuk en hoor hoe snel de aarde opwarmt*, May 15, 2015.

Wise Society, *Il riscaldamento climatico in una canzone*, May 15, 2015.

Climate Central, *What climate change sounds like from Amazon to Arctic*, May 10, 2015.

New York Times, *A Minnesota quartet, tuned to temperatures from the equator to the arctic, performs global warming*, May 8, 2015.

Winnipeg Free Press, *Ancient trees discredit drought*, Winnipeg Free Press, July 26, 2014.

New York Times, *Performing global warming*, October 31, 2013.

Popular Science, *Listen to 130 years of global warming, played on the cello*, July 19, 2013.

Slate, *The haunting melody of global warming*, July 18, 2013.

MinnPost, *U of M cellist renders climate as music to our ears, and it's lovely*, July 11, 2013.

The Weather Channel, *A tune to raise climate change awareness*, July 10, 2013.

MPR News, *How a University of Minnesota student set global warming to music*, July 9, 2013.

Slate, *This is what global warming sounds like*, July 3, 2013.

New York Times, *Global warming trend and variations charted by cello*, July 2, 2013.

io9, *130 years of global temperature data, converted to music*, July 1, 2013.

Minnesota Daily, *U student reads flood history in trees*, Minnesota Daily, April 26, 2012.

Minneapolis Star-Tribune, *U student's flood data project gets national attention*, April 6, 2012.

Mid-Can Studios (Winnipeg), *Red River floods*, December 28, 2011.

WCCO Radio (Minneapolis), *Flooding and Minnesota's natural history*, March 17, 2011.

KSTP-TV (St. Paul), *How Minnesota's geography plays a role in flooding*, February 23, 2011.

Power Week Canada, *Long-term study of river flows points to bright future for Manitoba power supply*, February 5, 2007.

Lac du Bonnet Leader, *River flow picks up 58 percent*, January 26, 2007.

Winnipeg Free Press, *Winnipeg River a turn-on for Manitoba Hydro*, January 22, 2007.

The Independent of London, *Dating of wreck's timbers puts wind in sails of the 'Mary Celeste' mystery*, January 23, 2005.

Country Canada digital channel, *Country Wide*, November 13, 2002.

Winnipeg Free Press, *Imagine 100-year drought: Researchers use tree rings in climate study*, November 1, 2002.

Winnipeg Free Press, *The record of the rings*, October 30, 2001.

RESEARCH GRANTS

I have served as Principal Investigator or co-Principal Investigator on funded projects on climate change, drought, and water resources with budgets totaling nearly two million USD.

External Agencies

- S. St. George**, J. Zeleznik, 2018-2022. Paleohydrological assessment of extreme flooding events, Geography and Spatial Sciences Program, National Science Foundation, Award 1830640, \$349,934 USD.
- S. St. George**, 2017-2018. Decadal-to-multidecadal variability in the Earth's climate as viewed through the lens of ancient trees. Alexander von Humboldt Foundation, €89,398 EUR.
- S. Chatterjee, **S. St. George**, 2016-2019. On conditional statistical procedures for simultaneous model selection, inference and prediction in complex climate systems. Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences, Division of Mathematical Sciences, National Science Foundation, Award 1622483, \$174,997 USD.
- T. Ault, **S. St. George**, 2016-2019. Collaborative research: Quantifying the risk of widespread megadrought in North America. Paleoclimate Program, Directorate for Geosciences, National Science Foundation, Awards 1602512 and 1602564, \$530,940 USD.
- T. Edevold, J. Zeleznik, **S. St. George**, 2016. Survey of settlement-era buildings and remnants in Clearwater, Polk, and Mahanomen Counties. Minnesota Historical Society, \$10,000 USD.
- M. Jonason, A. Degerstrom, S. Kitchell, M. Peihl, J. Zeleznik, **S. St. George**, 2015. Survey of settlement-era buildings and remnants in Clay, Becker and Norman Counties. Minnesota Historical Society, \$9,800 USD.
- E.R. Cook, U. Lall, N. Pederson, N. Devineni, C.A. Woodhouse, E.K. Wise, **S. St. George**, 2014-2017. Collaborative research: Multi-site paleo-reconstruction of Missouri River streamflows from tree ring data. Paleoclimate Program, Directorate for Geosciences, National Science Foundation, Awards 1401698, 1404188, 1401549, 1403957, and 1403102, \$553,435 USD.
- K.F. Kipfmuehler, **S. St. George**, 2011-2014. The impact of exceptionally strong decadal climate variability on recent fire, tree recruitment, and hydro-ecological dynamics within four Klamath Network park units. Great Lakes Northern Forest Cooperative Ecosystem Studies Unit, National Park Service, \$56,507 USD.
- S. St. George**, 2003-2007. The frequency, severity and causes of extreme droughts in the Winnipeg River basin. Research and Development Grant, Manitoba Hydro. \$98,200 CDN.
- E. Nielsen, T.W. Anderson, W.M. Buhay, D.L. Forbes, C.F.M. Lewis, **S. St. George**, L.H. Thorleifson, 2000-2001. Climatic extremes in southern Manitoba during the past millennium. Environment Canada, Climate Change Action Fund. \$25,000 CDN.

Internal Grants

- S. St. George**, 2016-2017. The long view on drought in Nepal. Talle Faculty Research Award, College of Liberal Arts, University of Minnesota. \$47,996 USD.
- J. Arndt, **S. St. George**, 2016. Climate variability and its relationship with air travel times in the Seattle-Minneapolis/St. Paul corridor. Undergraduate Research Opportunities Program, Office of the Vice President for Research, University of Minnesota. \$1,400 USD.
- X. Duan, **S. St. George**, 2015. Quantifying long-term trends in the Red River of the North to inform decisions on flood protection. Undergraduate Research Opportunities Program, Office of the Vice President for Research, University of Minnesota. \$1,400 USD.
- S. St. George**, S. Chatterjee, 2012-2013. Decadal climate predictability in the Earth's climate system. Institute on the Environment, University of Minnesota. \$2,558 USD.
- D. Crawford, **S. St. George**, 2013. The sound of our warming planet: expressing global temperature change as a series of musical notes. Undergraduate Research Opportunities Program, Office of the Vice President for Research, University of Minnesota. \$1,400 USD.
- S. St. George**, 2011. Educational exchange with the University of Bergen (Norway). International Travel Grant, Global Programs and Strategic Alliance, University of Minnesota. \$1,600 USD.

- E.L. Wertz, **S. St. George**, 2011. Searching for tree-ring evidence of the 2009 Red River flood in Minnesota and North Dakota. Undergraduate Research Opportunities Program, Office of the Vice President for Research, University of Minnesota. \$1,400 USD.
- S. St. George**, 2011-2012. Searching the north shore of Lake Winnipeg for paleobotanical evidence of ancient droughts. Grant-In-Aid Program, Office of the Vice President for Research, University of Minnesota. \$47,772 USD.

Partnerships

Indian Ocean World Center, 2018-2025. Appraising risk, past and present: Interrogating historical data to enhance understanding of environmental crises in the Indian Ocean World. Social Sciences and Humanities Research Council of Canada, \$2.5M CAN.

Computing Allocations

T. Ault, **S. St. George**, 2017. Feedbacks and forcings of medieval megadroughts in the western US. University Large Request, Computational & Information Systems Laboratory, National Corporation for Atmospheric Research. 2,400,000 core-hours.