

LESLEY-ANN DUPIGNY-GIROUX, Ph.D.

Vermont State Climatologist

Department of Geography

(Secondary appointment - Department of Geology; College of Education & Social Services)

(Canadian Studies, Center for Research on Vermont affiliate)

University of Vermont

200 Old Mill Building

94 University Place

Burlington, Vermont 05405-0114

(802) 656-2146 (telephone)

(802) 656-3042 (facsimile)

ACADEMIC EXPERIENCE

University of Vermont	Associate Professor, 2003 - present Assistant Professor, 1997 - 2003
Southern Illinois University at Edwardsville	Assistant Professor, 1996 - 1997
McGill University	Lecturer, 1994 1995

EDUCATION

<u>Doctor of Philosophy</u> , McGill University. Climatology and Geographic Information Systems	1996 (Oct.)
Dissertation: Techniques for rainfall estimation and surface characterization over northern Brazil.	
<u>Master of Science</u> , McGill University. Climatology and Hydrology.	1992 (Feb.)
Thesis: An analysis of the Temporal and Spatial Variability of the Rainfall and Runoff Regimes of Drainage Basins in Trinidad.	
<u>Bachelor of Science</u> , University of Toronto (High Distinction). Physical Geography and Development Studies.	1989
Thesis: An Analysis of Textural Variability in a Forest Soil.	
<u>G.C.E. (Cambridge) Advanced Level</u> , St. Joseph's Convent (Trinidad).	1979-1986

SCHOLARSHIPS/AWARDS

* Warren Fund for Geographical Information Systems (McGill University)	1995
* IGIF Award for the Best Proposed Research (Ph.D. thesis)	1994
* AM/FM International Scholarship	1993
* NOAA Colloquium on Operational and Environmental Prediction	1992
* Canadian Centre for GIS in Education Scholarship	1991

- * Intergraph Award for excellence in computer cartography. 1991
- * Scarborough College In-Course scholarship. 1987
- * Medal of Merit for Outstanding Contribution to Geography (St. Joseph's Convent) 1986

UNIVERSITY RECOGNITION

- University of Vermont
 - * Faculty Fellow in Service-Learning 2004
 - * Fellow - Centre for Research on Vermont 2000
 - * Vermonters in pursuit of excellence in research series 1999

SCHOLARSHIP

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

- Dupigny-Giroux, L.-A. (2010) "Addressing the challenges of climate science literacy: Lessons from students, teachers & lifelong learners, *Geography Compass*, 4/9 (2010): 1203–1217, 10.1111/j.1749-8198.2010.00368.x.
- Prevatt, D.O., Dupigny-Giroux, L. and Masters, F.J. (2010) "Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands" *Natural Hazards Review*, due in November.
- Prevatt, D.O., Dupigny-Giroux, L.A. and Masters, F.J. (2010) Chapter 13 "Twenty-five years of Caribbean hurricane disaster mitigation" in *Wind Storm and Storm Surge Mitigation*, (CDRM4), American Society of Civil Engineers, Reston VA, pp. 153-161.
- Dupigny-Giroux, L.-A. (2009) "Backward seasons, droughts and other bioclimatic indicators of variability," in Historical climate variability and impacts in North America, Lesley-Ann Dupigny-Giroux and Cary Mock (Editors), Springer Publishers, pp.231-250.
- Dupigny-Giroux, L.-A. and Mock, C.J. (co-editors)(2009) Historical climate variability and impacts in North America, Springer Publishers.
- Dupigny-Giroux, L.-A. (2008) "Introduction - Climate science literacy - A state of the knowledge overview", *Physical Geography*, 29(6):483-486 [guest editor].
- Dupigny-Giroux, L.-A. and Furtak-Cole, E. (2008) "Multiangular imaging of wetlands in New England," in Wetlands: Ecology, Conservation and Restoration, Raymundo Russo (editor), Nova Science Publishers, Inc. pp. 7-14.
- Dupigny-Giroux, L.-A., Ross, T.F., Elms, J.D., Truesdell, R. and Doty, S.R. (2007) "NOAA's Climate Database Modernization Program - Rescuing, archiving and digitizing history," *Bulletin of the American Meteorological Society*, Volume 88, No. pp.1015-1017.
- Dupigny-Giroux, L.-A. (2007) "Using AirMISR data to explore moisture-driven land use-land cover variations at the Howland Forest, Maine - a case study" *Remote Sensing of Environment*, 107, pp.376-384.

- Biglin, K.A. and Dupigny-Giroux, L.-A. (2006) "The ecological impact of the Chittenden County Circumferential Highway: Mapping the road-effect zone" *Journal of Conservation and Planning*, Volume 2, pp. 1-31 (<http://www.journalconsplanning.org/volume2/bb8b/finalmanuscript.pdf>)
- Dupigny-Giroux, L.-A. Hanning, J.R. and Engstrom, E. (2006) "Orographic influence on frontally-produced flooding in northern Vermont - The 14-15 July 1997 event", *Physical Geography*, Volume 26, No. 2, pp. 1-38.
- Dupigny-Giroux, L.-A., Blackwell, C.F., Bristow, S.W. and Olson, G.M. (2003) "Vegetation response to ice disturbance and consecutive moisture extremes," *International Journal of Remote Sensing*, Volume 24, No. 10, 20 May, pp. 2105-2129.
- Dupigny-Giroux, L.-A. (2002) "Climate variability and socioeconomic consequences of Vermont's natural hazards: A historical perspective," *Vermont History*, Volume 70, Winter/Spring, pp. 19-39.
- Dupigny-Giroux, L.-A. (2001) "Towards characterizing and planning for drought in Vermont. Part I. A Climatological Perspective," *Journal of the American Water Resources Association*, Volume 37, No. 3, pp.505-525.
- Dupigny-Giroux, L.-A. (2001) "Towards characterizing and planning for drought in Vermont. Part II. Policy Implications," *Journal of the American Water Resources Association*, Volume 37, No. 3, pp. 527-531.
- Dupigny-Giroux, L.-A. (2000) "Impacts and Consequences of the Ice Storm of 1998 for the North American northeast," *Weather*, Volume 55, No.1, pp.7-14.
- Dupigny-Giroux, L.-A. (1999) "The Influence of the El Niño-Southern Oscillation and other Teleconnections on Winter Storms in the North American Northeast - A Case Study," *Physical Geography*, Volume 20, No. 5, pp.394-412.
- Dupigny-Giroux, L.-A. and Lewis, J.E. (1999) "A Moisture Index for Surface Characterization over a Semiarid Area," *Photogrammetric Engineering and Remote Sensing*, Volume 65, No. 8, pp. 937-945.
- Dupigny-Giroux, L.-A. (1999) "Localized Thunderstorm Activity and Flash Flooding in Vermont," *NESTVAL '98 Proceedings*, Volume XXVIII, pp. 41-49.
- Dupigny-Giroux, L.-A. (1998) "Drought & its Monitoring: An Interdisciplinary Perspective," *NESTVAL '97 Proceedings*, Volume XXVII, pp.90-95.

OTHER SCHOLARLY PUBLICATIONS

- Dupigny-Giroux, L.-A. and Loughner, C. (2004) "A synoptic climatology of flooding in New England," *Preprints, 14th Conference on Applied Climatology*, Seattle, Washington, Paper 1.3 (2 pages).
- Dupigny-Giroux, L.-A., Ross, T.R., Doty, S.R. (2004) "Developing climate station histories for pre-20th century U.S. observing sites," *Preprints, 14th Conference on Applied Climatology*, Seattle, Washington, Poster 1.2 (8 pages).
- Lee, J.E., Cannon, J.W., Ronco, J.A., Colby, J.A., Schoof, J., Sisson, P., McGill, C., Edson, J.B., Dupigny-

Giroux, L.-A., Atkins, N.T., Taylor, D.M., Keim, B., Yang, H., Sawyer, C., Michaels, M. and Tongue, J.S. (2001) "The New England Weather Observation Network: A 21st Century Vision for Environmental Monitoring and Science Education in the New England States," *Preprints, 17th International Conference on Interactive Information and Processing Systems*, American Meteorological Society, Albuquerque, NM, pp. 92-96.

Dupigny-Giroux, L.-A. (1999) "Drought follows the deluge in Vermont," *Drought Network News*, Volume 11, No. 2, pp. 8-14.

REPORTS

Dupigny-Giroux, L.-A. (2009) Blue sky thinking for climate education, Innovations in International Research, Research Media, United Kingdom.

Dupigny-Giroux, L.-A. (2009) Vermont's Changing Forests: Key Findings on the Health of Forested Ecosystems from the Vermont Monitoring Cooperative, Vermont Monitoring Cooperative, Co-lead author of the chapter on Weather and Climate.

Dupigny-Giroux, L.-A. (2003) Revision of the CLIM-60 - Climate of Vermont publication of the National Climatic Data Center.

Dupigny-Giroux, L.-A. with the assistance of Blackwell, C.F., Bristow, S.W. and Olson, G.M. (2000) Mapping Ice Storm Damage in Vermont via SPOT/Landsat Imagery, Vermont Department of Forests, Parks & Recreation.

Dupigny-Giroux, L.-A. (1999) Winter/Spring Drought Conditions in Vermont, *Bug Bytes*, June, p.1.

Dupigny-Giroux, L.-A. (1998) "Highlights from Vermont Climate Symposium," *The State Climatologist*, Volume 21, Issue 4, Winter 1997, pp.2-3.

Dupigny, L.-A. (rapporteur) (1995) "Overview of NOAA's Role in Environmental Prediction," by Dr. William Hooke, Lecture Notes from the 1992 NOAA Colloquium on Operational and Environmental Prediction, June 2-26, Camp Springs, Maryland, pp. 1-7.

Dupigny, L.-A. (rapporteur) (1995) "Runoff Modeling," by Dr. Eric Anderson, Lecture Notes from the 1992 NOAA Colloquium on Operational and Environmental Prediction, June 2-26, Camp Springs, Maryland, pp.350-361.

Dupigny, L.-A. (1994) "The climatological context of drought in the Horn of Africa", in the Report on Drought in the Horn of Africa, prepared by the EROS Data Center for the USAID. Presented to the United States House of Representatives.

Dupigny, L.-A. (1992) An analysis of the Temporal and Spatial Variability of the Rainfall and Runoff Regimes of Drainage Basins in Trinidad, M.Sc. thesis, McGill University, published as C²GCR Report No.92-18.

BOOK REVIEWS

Dupigny-Giroux, L.-A. (2004) New England Weather, New England Climate, by G. Zielinski and B. Keim, reviewed in *Bulletin of the American Meteorological Society*, Vol., Number .

Dupigny-Giroux, L.-A. (2004) New England Weather, New England Climate, by G. Zielinski and B. Keim,

reviewed in *Vermont History*, Vol., Number pp.6-7.

Dupigny-Giroux, L.-A. (1995) Managing Geographic Information Systems, by N. J. Obermeyer and J. K. Pinto, reviewed in *Cartographica*, Vol.32, Number 3.

Dupigny, L.-A. (1995) Simple Computer Imaging and Mapping - Practical Guide, by M. Pazner, N. Thies and R. Chavez, reviewed in *ACMLA Bulletin*, Number 92.

PRESENTATIONS

PRESENTATIONS AT SCHOLARLY CONFERENCES

2010

Dupigny-Giroux, L.-A., Raphael, M., Shepard, J.M. and Mote, T.L. “Attracting and retaining minority students in the climate sciences – the Diversity Climate Network (D-ClimNet)”, presented at the American Geographers meeting, Washington, D.C., April 14-18.

Dupigny-Giroux, L.-A. “Satellites, Weather and Climate (SWAC): Remote sensing meets the atmospheric sciences to enhance climate literacy”, American Meteorological Society meeting, Atlanta Georgia, January 17-21.

2009

Dupigny-Giroux, L.-A. “A new indicator-based drought index for quantifying spatio-temporal fluctuations in 18th century New England,” presented at the Association of American Geographers meeting, Las Vegas Nevada, March 22-27.

Dupigny-Giroux, L.-A. “Challenges to promoting climate literacy at the secondary and undergraduate levels”, presented at Global Climate Change Research and Education Workshop, World Meteorological Organization, Geneva Switzerland, January 25-28.

2008

Dupigny-Giroux, L.-A. “Satellites, Weather and Climate (SWAC): A professional development program for K-12 teachers: Contributing to climate literacy,” presented at the American Geophysical Union, San Francisco, CA, December 15-19.

Dupigny-Giroux, L.-A. “New England’s changing climate: Implications for regional emergency management,” presented at the National Emergency Management Association Mid-Year conference, March 8-13.

2007

Dupigny-Giroux, L.-A., “Improving the climate literacy of students, educators and the public: The AAG Climate Literacy Initiative,” presented at American Geophysical Union, San Francisco, CA, December 9-14.

Dupigny-Giroux, L.-A., “Towards an improved understanding of climate and atmospheric processes in education and the media,” presented at American Geophysical Union, San Francisco, CA, December 9-14.

Dupigny-Giroux, L.-A. “Using Service-Learning to enhance student learning in the atmospheric and geospatial sciences,” presented at NESTVAL ‘07, New Haven, CT, November 2-4.

Dupigny-Giroux, L.-A. “Wetland monitoring using AirMISR imagery,” presented at 103rd annual meeting of the AAG, San Francisco, California, April 17-21.

Dupigny-Giroux, L.-A., Hanning, J.R., Engstrom, E.E. and Brouillette, M. “Using geospatial technologies in

a local-mesoscale hydrometeorological flooding analysis,” presented at the 2007 Vermont EPSCoR Annual Conference, Burlington, Vermont, March 28.

2006

Dupigny-Giroux, L.-A. “Multi-angular compositing of AirMISR data for surface feature characterization,” MISR Data Users Science Symposium, California Institute of Technology, Pasadena, California, December 7-8.

2005

Dupigny-Giroux, L.-A., Hanning, J.R. and Engstrom, E. “Orographic influence on frontally-produced flooding in northern Vermont presented at the 15th Conference on Applied Climatology, Savannah, Georgia, June 20-24.

Dupigny-Giroux, L.-A. “Using MISR data for monitoring surface moisture,” presented at the 101st annual meeting of the AAG, Denver, Colorado, April 5-9.

2004

Dupigny-Giroux, L.-A. “A synoptic climatology of flooding in New England,” presented at the 14th Conference on Applied Climatology, Seattle, Washington, January 11-15.

Dupigny-Giroux, L.-A., Ross, T.R., and Doty, S. “Developing climate station histories for pre-20th century U.S. observing sites” presented at the 14th Conference on Applied Climatology, Seattle, Washington, January 11-15.

2003

Biglin, K. and Dupigny-Giroux, L.-A. “Data collection techniques for a fire management project on the San Diego National Wildlife Refuge” presented at NESTVAL ‘03, East Hartford, Connecticut, October 10-11. (Kevin Biglin presenter)

Burke, E.E. and Dupigny-Giroux, L.-A. “Fluctuations in the Bermuda-Azores High and its influence on hurricane tracks in the North Atlantic Ocean” presented at NESTVAL ‘03, East Hartford, Connecticut, October 10-11. (Erin Burke presenter)

2002

Dupigny-Giroux, L.-A. “Exploring moisture indices for characterizing drought in Vermont,” presented at the 13th Conference on Applied Climatology, Portland, Oregon, May 12-16.

Dupigny-Giroux, L.-A. “Hydrometeorological extremes in Vermont: Towards enhanced mitigation,” presented at the Vermont EPSCoR Annual State Meeting, Burlington, Vermont, April 17.

Dupigny-Giroux, L.-A. “Could Maddox cold fronts be a contributor to flooding northern Vermont,” presented at 98th Annual Meeting of the AAG, Los Angeles, California, March 19-23.

Dupigny-Giroux, L.-A. “Identifying preferred locations for flooding in northern New England,” presented at 98th Annual Meeting of the AAG, Los Angeles, California, March 19-23.

2001

van Loon, Harry and Dupigny-Giroux, L.-A. “Some Aspects of the Variability of the North Atlantic Oscillation,” International Symposium on Climate Change and Variability in Northern Europe, Turku, Finland, June 6-8. (Harry van Loon, presenter).

Rock, Barrett N., Dupigny-Giroux, L.-A. and von Turkovich, Edward “Enhancing collaboration between emergency management and academia: Understanding climate variability and hazards in Vermont,”

presented at the Colloque Désordres Climatiques obligent!, St-Laurent, Québec, May 9-10 (en français).

Dupigny-Giroux, L.-A. "Linking Vermont's hydrometeorological extremes to large-scale forcings," presented at the 97th Annual Meeting of the AAG, New York, February 27 - March 3.

2000

Dupigny-Giroux, L.-A. and Hanning, J.R. "Precipitation & Topography in GIS - Key Factors in Predicting and Mitigating Damaging Floods to Farmlands in Vermont: A Watershed Approach," presented at the Northeast Arc Users Group Conference, Killington, Vermont, October 1-4.

Dupigny-Giroux, L.-A. "Updating the ice storm damage - Mapping ice storm damage in Vermont via SPOT/Landsat Imagery," Ice Storm Research Monitoring Workshop, USDA Forest Service, Dorchester, New Hampshire, September 21.

Dupigny-Giroux, L.-A. "The drought planning process in Vermont - Where do we go from here?" presented at the American Association of State Climatologists Meeting, Logan, Utah August 6-9.

Dupigny-Giroux, L.-A., Blackwell, C.F., Bristow, S.W. and Olson, G.M. "Mapping Ice Storm Damage in Vermont via SPOT/Landsat Imagery," presented at the American Geophysical Union, Washington D.C., May 29 - June 3.

Dupigny-Giroux, L.-A. "Towards Drought Planning for Vermont," presented at 96th Annual Meeting of the AAG - Pittsburgh, Pennsylvania, April 4-8.

1999

Dupigny-Giroux, L.-A. "Climate Outreach Activities in Vermont" presented at the 11th Conference on Applied Climatology, 79th American Meteorological Society Annual Meeting, 10-15 January, Dallas, Texas.

1998

Dupigny-Giroux, L.-A. "Thunderstorm Activity and Flash Flooding in Vermont," presented at NESTVAL '98, Montreal, Quebec, October 16-18.

Dupigny-Giroux, L.-A. "The Vermont State Climatology Office - Overview of Activities" presented at the American Association of State Climatologists Meeting, Duluth, Minnesota, August 5-8.

Dupigny-Giroux, L.-A. "Did El Niño help to spawn the Ice Storm of 1998?" presented at the American Geophysical Union Spring Meeting, Boston, Massachusetts, May 26-29.

Dupigny-Giroux, L.-A. "Remote Sensing Applications in Hydroclimate Studies," presented at 94th Annual Meeting of the AAG - Boston, Massachusetts, March 25-29.

1997 and earlier

Dupigny-Giroux, L.-A. "Drought and Drought Monitoring - An Interdisciplinary Review", presented at NESTVAL '97, Salem, Massachusetts, November 7-9.

Dupigny-Giroux, L.-A. "The proposed validation of a NOAA/AVHRR rainfall algorithm," presented at the American Geophysical Union Spring Meeting, Baltimore, Maryland, May 27-30.

Dupigny-Giroux, L.-A. "Surface feature characterization over Northern Brazil using PCA," presented at the Association for Arid Lands Studies 20th Annual Conference, Albuquerque, New Mexico, April 23-26.

Dupigny-Giroux, L.-A. "Moisture characterization over Northern Brazil," presented at GIS/LIS '96, Denver, Colorado, November 19-21, 1996. <http://www.asprs.org/asprs/GIS96.html>

Dupigny, L.-A. and Lewis, J.E. "Precipitation Generating Systems - Spatial Integrity and Resolution Size," presented at the International GCIP/MAGS Workshop on Scaling in Hydrometeorological/Hydrologic Processes and Models, Victoria, British Columbia, September 19-23, 1994.

Dupigny, L.-A. and Lewis, J.E. "The role of teleconnections in influencing the rainfall patterns on the Caribbean island of Trinidad," presented at the Fourth International Conference on Precipitation - Hydrological and Meteorological Aspects of Rainfall Measurement and Predictability, Iowa City, April 26-28, 1993.

INVITED LECTURES/PRESENTATIONS

"Reconstructing the climate history of New England" Shirley Historical Society, Shirley Massachusetts, 12 March, 2010

"Understanding climate change locally" The Nature Conservancy, Vermont Natural History Series, Castleton State College, Castleton, 11 March, 2010

"What's happening in our backyards - Understanding climate change locally," Springfield Osher Lifelong Learning Institute, Springfield, Vermont, 9 March 2010.

"Storms, droughts and floods: The influence of weather and climate on our forests", Vermont Monitoring Cooperative meeting, UVM, 26 October, 2009

"What's happening in our backyards - Understanding climate change locally," Osher Lifelong Learning Institute, Montpelier, Vermont 7 October 2009.

"Climate history of New England: special reference to Vermont and New Hampshire", Harvard Forest (Harvard University), Petershan, Massachusetts, 1 October, 2009.

"Everything you wanted to know about climate", Wake Robin Community, Shelburne, Vermont 14 July, 2009

"So you want to know about climate change?" Junior Jump Off, UVM, 22 May, 2009.

"Mining historical weather records across Vermont", Rutland Free Library, Rutland, Vermont, 20 May, 2009.

"Everything you wanted to know about climate (and more)", Elder Education Enrichment Spring 2009 Series (associated with UVM's Osher Lifelong Learning Institutes), 20 March 2009.

"The climate of Lake Champlain: 1609-present" Lake Champlain Basin Program, Champlain Quadricentennial Workshop, St. Michael's College, 19 March, 2008.

"Impacts of storms in Vermont on our forests," Storms mitigation, planning, response and recovery focusing on urban trees workshop, Vermont Department of Forests, Parks and Recreation, Montpelier, Vermont, 19 September, 2007.

"Vermont's natural hazards: climate meets the landscape" presented at Vermont Geographic Alliance Teachers' workshop, St. Michael's College, 24 July, 2007.

"Vermont in a variable and changing climate," presented at The Nature Conservancy, Kellogg Hubbard

Library, Montpelier, Vermont, May 26, 2006.

“The role of climate in Vermont’s development and settlement” presented at the McClure Library, Pittsford, VT, September 20, 2005.

“How does a climatologist use remote sensing?” presented at the ECHO at the Leahy Center for Lake Champlain, July 2005.

“Treasure hunting for historical weather records in Vermont - the CDMP project,” presented at the Center for Research on Vermont - Research-in-Progress Seminar Series, February 28, 2005.

Luncheon speaker, American Association of University Women, New England Regional Conference, Wellesley College, Massachusetts, presented October 16, 2004.

“Mining the treasure trove of historical climate data in Vermont,” Brownell Library, Essex Junction, Vermont, April 28, 2004.

“Ongoing research on Vermont’s climate and natural hazards,” St. Albans Rotary Club, St. Albans, Vermont, November 4, 2003

“The flood of 1927 - A hydroclimatological overview,” Vermont Social Studies Summer Institute, July 1, 2002.

“Climate of Vermont - A primer,” Field Naturalists program, School of Natural Resources, University of Vermont, March 3, 2002.

“ Clouds, thunderstorms and lightning,” Vermont Torah Academy, February 7, 2002.

“Implications of changing temperatures and precipitation patterns for Vermont’s surface waters,” Potential Impacts of Global Climate Change on Vermont’s Surface Waters panellist, Vermont Water Resources and Lake Studies Center, 2001 Annual Meeting, October 12, 2001.

“Introducing mapping: On the road to GIS” Williston School, Williston Vermont, May 14, 2001.

“How has climate influenced Vermont’s economy? A Historical Perspective,” presented at the Vermont Landscape Conference: Views of the Past, Visions of the Future, Center for Research on Vermont, March 31, 2001.

“The role of climate in Vermont’s agriculture” presented to the International Dwarf Fruit Tree Association, June 25, 2000.

“The face of drought in Vermont and lessons learned from the 1998-1999 event,” presented at the Center for Research on Vermont - Research-in-Progress Seminar Series, April 26, 2000.

“When the mountain roars, close your doors - and other features of Vermont’s climate,” Grand Isle Rotary Club, September 21, 1999.

“The Whys and Wherefores of Vermont’s Climate,” University of Vermont, Ecology Evolution Lunch Seminar, Department of Biology, September 17, 1999.

“ State of Vermont Climate Activities,” Northeast State Climatologists Meeting, Cornell University, June 21, 1999.

“Hurricanes, Tornadoes and other severe storms,” Camel’s Hump Middle School, Richmond Vermont, June 8, 1999.

“The Face of Flooding in Vermont - Towards an updated hydroclimatology for the state”, Middlebury College, Environmental Studies Colloquium Program, March 4, 1999.

“The Great Ice Storm of January 1998”, Lake Champlain Basin Science Centre - “Eyes on the Ice Storm Speaker Series”, Burlington, Vermont, February 22, 1998.

OTHER PRESENTATIONS

“What caused the Great Ice Storm of January ‘98?” University of Vermont, Department of Geography, Brown Bag Lunch Seminar, March 11, 1998.

“The challenge of spatial interaction”, Inaugural Symposium for Statewide Collaboration in Geographic Information Systems in Vermont, University of Vermont, December 9, 1997.

“The status of climate in Vermont”, Inaugural Symposium for Statewide Collaboration in Climatology/Meteorology in Vermont, University of Vermont, December 2, 1997.

FUNDING

EXTRAMURAL FUNDING

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| * National Science Foundation | 2010-2014 |
| “Track 2: Satellites, Weather and Climate: A professional development teacher collaborative to enhance literacy in the climate, atmospheric and geospatial sciences”
[PI with R. Toolin (CESS), L. Morrissey (RSENr), B. Berryman & J. Shafer (Lyndon State College)] | \$489,381 |
| * National Science Foundation | 2009-2012 |
| “Creating a Diversity Climate Network (D-ClimNet) to enhance the climate sciences pipeline of minority students from high school to graduate levels” [PI with Marilyn Raphael (UCLA), Marshall Shepherd and Thomas L. Mote (UGA)] | \$199,519 |
| * National Science Foundation | 2009-2014 |
| “Robert Noyce Scholarship Program at the University of Vermont”
[with Regina Toolin PI (CESS) and Rory Waterman (Chemistry)] | \$899,926 |
| * Vermont Department of Education - Math & Science Grant | 2009-2010 |
| “Vermont Secondary Science Partnership (VSSP): Developing Professional Learning Communities (TLC) in Science Education [Regina Toolin (PI) (CESS) and Rory Waterman (Chemistry)] | \$74,990 |
| * National Science Foundation | 2008-2010 |
| “Satellites, Weather and Climate (SWAC) - Contributing to climate education and literacy”
[PI with Regina Toolin (CESS)] | \$149,466 |
| * National Climatic Data Center | 2006 |
| “Enhancing the Vermont SCO’s historical and data access mission” | \$5,500 |
| * National Climatic Data Center | 2005 |

“Enhancing the Vermont SCO’s historical and data access mission”	\$1,977	
* National Climatic Data Center		
“Task order for continuing CDMP FORTS database build addition for State Climatologists’ mini-projects”	\$6,700	2004
“Expanding the pre-1948 climate station histories for Vermont”	\$2,500	2003
* AAUW Educational Foundation - American Fellowship - Shirley Farr Fellowship		2003
Summer Publication Grant “A synoptic climatology of flooding in New England”	\$6,000	
* AAAS Women’s International Science Collaboration (WISC) Program (NSF funded)		2002
“Quantifying the role of Maddox and other frontal events in severe flooding in northeastern North America (with special reference to Québec and Vermont)”	\$4,000	
* NSF EPSCoR (Vermont)		2001
Supplemental start-up funding	\$9,688	
* EPA EPSCoR Stimulus Grants Program (Vermont)		2000
“Developing a baseline for monitoring drought stress on forested ecosystems in Vermont”	\$5,000	
* Vermont Department of Forests, Parks and Recreation		1999
“On-going assessment of ice-affected foliage via remotely- sensed imagery”	\$6,000	
* 1998 State Climatologist Exchange Program		1998
“Updating the climate resource base of Vermont”	\$2,500	

INTRAMURAL FUNDING

* University of Vermont, Service-Learning course planning and implementation grant		2009
“Creating a field experience for remote sensing undergraduates to focus on the dynamics of wetland health and moisture characteristics”	\$700	
* University of Vermont, Spring 2009 President’s Distinguished Lecture series		2009
Kerry A. Emanuel, MIT	\$5,000	
* University of Vermont, Service-Learning course planning and implementation grant		2008
“Retooling a first-year Service-Learning course on remote sensing to focus on the stream morphology policy issues”	\$570	
* University of Vermont, Instructional Incentive Grant		2006
“Expanding the Geography department’s curriculum with a new Service-Learning TAP course on remote sensing”	\$3130.66	
* University of Vermont, International Instructional Incentive Grant		2006
“Enhancing remote sensing pedagogy by creating a new linkage between the University of Vermont and the Joint Research Centre (JRC) of the European Commission	\$940	
* University of Vermont, Service-Learning course planning and implementation grant		2005
Climatology and natural hazards	\$943	

* University of Vermont, Fall 2004 President's Distinguished Lecture series (co-hosted with Prof. Robert Rodgers) Richard Talbert, UNC	\$5,000	2004
* University of Vermont, Faculty Fellowship for Service-Learning	\$1,000	2004
* University of Vermont, Instructional Incentive Grant "Enhancing the Geography Department's intermediate remote sensing course via fieldwork and an international visit to the Canadian Centre for Remote Sensing"	\$3,000	2003
* University of Vermont Centre for Teaching and Learning Teaching Support Award (advanced GIS course)	\$450	2003
* University of Vermont Centre for Teaching and Learning Teaching Support Award (intermediate remote sensing course)	\$200	2001
* University of Vermont, Dean's Fund for Faculty Development "Enhancing GIS teaching potential by attending an ArcView workshop" (joint proposal with Professors Carmody and Wemple)	\$4,068	2000
* University of Vermont, Instructional Incentive Grant "Enhancing Teaching Effectiveness via a Geosciences Faculty Workshop"	\$644	2000
* University of Vermont, College of Arts & Sciences Dean's Discretionary Fund "Creating an alliance with the University of Nebraska-Lincoln"	\$350	1999
* University of Vermont, Instructional Incentive Grant "Climatology and Natural Hazards" - new course	\$2,500	1998
* University of Vermont, University Committee on Research and Scholarship "Severe Precipitation Events in Vermont During 1997 and 1998: A Quantification using Remotely-Sensed Imagery"	\$5,000	1998
* University of Vermont, Dean's Fund for Faculty Development "Inaugural Symposium for state wide collaboration in Climatology/Meteorology & Geographic Information Systems in Vermont"	\$2,000	1997

RESEARCH EXPERIENCE

2000 (August) National Center for Atmospheric Research SCIENTIFIC VISITOR

▶ Examined variations in the North Atlantic Oscillation from sea level pressure data.

1998 (July) National Climatic Data Center

▶ Participated in the State Climatologist Exchange Program to update existing reports on the climate of Vermont; to document climate-related hazards across the state; and to reorganize the Vermont State Climatologist World Wide Web homepage to facilitate accessibility and readability.
<http://www.uvm.edu/~ldupigny/sc>

1992 (June) National Oceanic and Atmospheric Administration

▶ Participated in the NOAA Colloquium on Operational and Environmental Prediction, for doctoral students to acquire familiarity with techniques used in climate monitoring, weather analysis, hydrologic and oceanographic prediction, via a series of lectures and interactive workshops and demonstrations.

1992 (January)

▶ Invited participant (rapporteur) at the conference on the Impacts of Climatic Variations and Sustainable Development in semi-arid regions (ICID), Fortaleza (Brazil), January 27-February 1.

1990-1996

McGill University

RESEARCH ASSISTANT

▶ Involved in the analysis of hydroclimatological data via statistical, GIS and remote sensing techniques.

1990 (Summer)

National Center for Atmospheric Research

SCIENTIFIC VISITOR

▶ Analyzed rainfall and runoff data via spectral techniques.

1988 (Summer)

University-of-Toronto

RESEARCH ASSISTANT

▶ Performed pedologic analyses on the characteristics of soil cores extracted from Perch Lake (Ontario), as part of my Bachelor of Science thesis.

TEACHING

TEACHING EXPERIENCE

Fall 1997 -

University of Vermont

ASSOCIATE PROFESSOR

- ▶ Weather and Climate (GEOG 043)
- ▶ Geotechniques (GEOG 081)
- ▶ Satellites and airplanes: examining the earth (GEOG 095)
- ▶ Climatology (GEOG 143)
- ▶ Intermediate GIS (GEOG 184)
- ▶ Remote Sensing (GEOG 185)
- ▶ Climatology and Natural Hazards (GEOG 242)
- ▶ Advanced GIS & applications (GEOG 281)
- ▶ Satellite Climatology and land-surface processes (GEOG 281)

Fall 1996 - Spring 1997

Southern Illinois University at Edwardsville

ASSISTANT PROFESSOR

- ▶ Meteorology (GEOG 211-003, 004)
- ▶ Climatology (GEOG 314)
- ▶ Geography of Latin America (GEOG 334)

1995 (Winter)

McGill University

LECTURER

1994 (Summer)

- ▶ Geographic Information Systems II (183-306B,C).

1993 (Fall)

McGill University

TEACHING ASSISTANT

- ▶ Geographic Information Systems II (183-306A).
- ▶ Geography of the Caribbean (183-310B).

(Fall 1993)
(Winter 1990)

TEACHING MODULES

Dupigny-Giroux, L-A. (1998) "Tutorial for Designing a Digitizing Project," The NCGIA GIS Core Curriculum for Technical Programs, Unit 13. http://www.ncgia.ucsb.edu/cctp/units/dig_tutorial/tutorial_f.html

Dupigny-Giroux, L-A. (1997) "Digitizing Maps," The NCGIA GIS Core Curriculum for Technical Programs, Unit 13. <http://www.ncgia.ucsb.edu/education/curricula/cctp/units/unit13/13.html>

GRADUATE STUDENTS SUPERVISED

K. Biglin, "Ecological impacts of the Chittenden County Circumferential Highway: Mapping the Road-effect zone." M.A. 2005

K. Halverson, "A regional assessment on the influence of climate forcings on wildfire characteristics across the United States: 1986-1996". M.A. 2002

E. Seddon, "Trace Metals in Peabody Pond and Jordon Pond: A Case Study of New England's Historical Landscape Change in the Former Mill Ponds of the Scituate Reservoir Watershed, Rhode Island." M.A. 2008

T. Kirchoff, "Hydroclimatological effects of ice-jam flooding on the Passumpsic River, Lyndonville, Vermont" M.A. incomplete.

ACADEMIC/PROFESSIONAL WORKSHOPS ATTENDED

Workshop on exploring and using Multi-angle Imaging SpectroRadiometer (MISR) data, NASA Langley Atmospheric Science Data Center (ASDC), American Geophysical Union Spring meeting, May 21, 2004.

Service Learning Institute with Edward Zlotzak, Vermont Campus Compact, September 26, 2003.

Engaging students in the classroom, University of Vermont, Faculty Mentoring Program, March 29, 2002.

Advanced ArcView GIS, Environmental Systems Research Institute Inc., January 3-5, 2001.

Workshop for Early Career Faculty in the Geosciences: Teaching, Research and Managing Your Career, Montana State University, July 25-30, 2000.

Severe Weather and Radar Bow Echo Workshop, National Weather Service at University of Vermont, May 23, 2000.

Communication & Learning Styles Workshop, University of Vermont, Centre for Teaching and Learning, September 24, 1999.

GCIP/DACOM (GEWEX Continental-Scale International Project/Data Collection and Management) Data Short Course, St. Louis University, June 7, 1998.

NAGT (National Association of Geoscience Teachers) Workshop on Innovative and Effective Teaching in the Geosciences, American Geophysical Union Meeting, May 31, 1997.

Technical Seminar on VXI and VXI based data acquisition, National Instruments, St. Louis, Missouri, May 7, 1997.

Primary Trait Analysis: Assessment for the Classroom and the Senior Assignment, SIUE (Southern Illinois

University at Edwardsville), April 7, 1997.

Strategies for the Improvement of Writing in your Classroom, SIUE (Southern Illinois University at Edwardsville), March 3, 1997.

Assessment in the Classroom: Guiding Our Students Toward Success, SIUE (Southern Illinois University at Edwardsville), January 22, 1997.

ACADEMIC AND OTHER UNIVERSITY RELATED SERVICE

University of Vermont

- * CUPS (Community-University Partnerships and Service-Learning) 2005 - 2009
- Advisory Committee member
- * Faculty Senate Educational Technologies Subcommittee (member) 2005 - 2006
- * Faculty Senate Educational and Research Technologies committee (member) 2006 - 2008
- * Center for Research on Vermont Program (Executive Committee member) 2005 - 2008
2008 - 2011
- * NSF EPSCoR Environmental Science Initiative
- Focus group member 2001 - 2002
- GIS coordinator for research data program 2003 - 2006
- * Search Committee member for the Chair
- Department of Geology (Committee Chair) 2010
- Department of Geography 2004
- Department of Art 1999
- * Office of Sponsored Programs (OSP) Grant Writing Workshop (presenter) 1999
- * Accreditation process - Areas of Emphasis discussion 1999
- Faculty and Staff panellist
- Knight Roundtable Committee member
- * Industrial Liaison Programme Committee (member) 1998 - 1999
- * Provost's Blue Ribbon Committee on Technology Investment (member) 1998 - 1999
- * Inaugural Symposium for statewide collaboration in Climatology/Meteorology in Vermont. (December 2) - Organizer & Convenor. <http://www.uvm.edu/~ldupigny/sc/clim-met97> 1997
- * Inaugural Symposium for statewide collaboration in Geographic Information Systems in Vermont. (December 9) - Organizer & Convenor. <http://www.uvm.edu/~ldupigny/vtgis-conf97> 1997

Southern Illinois University at Edwardsville 1996 - 1997

- * Coordinator of senior undergraduate thesis programme.
- * Ad-hoc committee member for the evaluation of undergraduate and graduate curricula.

McGill University 1989 - 1991

- * Faculty Council - Department of Geography student representative.
- * Centre for Climate and Global Change Research (C²GCR) - Department of Geography student

representative.

* Graduate Affairs Committee - Department of Geography.

University of Toronto

1988

* Orientation Planning Committee.

Discipline

Association of American Geographers (AAG)

* Director - Climate Specialty Group

2006 - 2008

* Founder - AAG Climate Mentoring & Climate Literacy initiatives

2007 - present

* Climate Specialty Group Student Paper Competition Judge

2001, 2005

Manuscript reviewer

* *Geography Compass*

2010

* *Northeastern Geographer*

2009

* *Climatic Change*

2008

* *Natural Hazards*

2008

* *Earth Science Reviews*

2007

* *Infrared Physics & Technology*

2007

* *Scientia Agricola*

2007

* *International Journal of Climatology* (2)

2005, 2007

* *Irish Geography*

2007

* *Journal of Environmental Management* (1)

2004

* *NESTVAL '02 Proceedings* (1)

2003

* *Annals of the Association of American Geographers* (1)

2002

* *Geophysical Research Letters* (2)

2002, 2004

* *Journal of Climate* (1)

2001

* *Water International* (3)

2000 - 2002

* *Journal of the American Water Resources Association* (2)

1999, 2002-3

* *Physical Geography* (1)

1999

* *The Professional Geographer* (1)

1998

Vermont State Geography Bee

* Moderator for the Final and Championship rounds

2001

* Judge

1999, 2007

Vermont Geographic Alliance- Summer Geography Institute

* Lecture on Climate and hazards in Vermont - Castleton State College

1999

* "Vermont's natural hazards: climate meets the landscape" - UVM

2007

Profession

American Association of State Climatologists

* Secretary

2010 - 2011

* Vermont State Climatologist

1997 - present

American Water Resources Association (Publications Committee member)

1997 - 1999

Grant proposal reviewer

* U.S. Civilian Research & Development Foundation

2004

* American Association for the Advancement of Science (WISC) (10)

2003

* Lake Champlain Research Consortium (2)

2000, 2001

* Connecticut Institute of Water Resources	1999
* National Science Foundation (NSF)	
- CAREER (2)	1997
- Divisions of Earth Sciences (1)	1998
- Division of Geography and Regional Science (2)	1998, 2004
- Division of Ecosystem Studies (1)	1998
- Directorate for Geosciences (1)	2010
National Science Foundation (NSF) pre-proposal panel review	2004
National Science Foundation (NSF) Senior advisory panel	2004 - 2006
National Science Foundation (NSF) merit review panel	2008
National Science Foundation (NSF) merit review panel (2)	2009
National Science Foundation (NSF) merit review panel (new program) (2)	2010
Editorial Board member	
* <i>Physical Geography</i> (Climatology)	2007 - 2012
* <i>Northeastern Geographer</i>	2007 - present
Vermont Academy of the Arts and Sciences (Executive Committee member)	2007 - present
Vermont Center for Geographic Information (Board of Directors)	2008 - 2010
Technical reviewer	
* US Global Change Research Program - National Assessment Synthesis Team (NAST) for the Potential Consequences of Climate Variability and Change for the United States	1999
- Reviewer of the summary report on the Northeast and US Affiliated Islands	
* Intergovernmental Panel on Climate Change (IPCC)	1995 - 1997
- International reviewer of the Working Papers on climate change impacts	
Steering Committee / Programme Committee	
* COSPAR 2008 (Montreal, PQ)	2007 - 2008
* Association of American Geographers (Local Planning Committee)	2007
* American Society for Photogrammetry and Remote Sensing (ASPRS) Central New York Region (Nominations Committee member)	2004
* Chittenden County Regional Planning Commission	2000
- Regional Plan - Natural Resources Task Force member	
* FGDC (Federal Geographic Data Committee) Working Group on Spatial Climate Subcommittee member	2000 - 2004
* GCIP Mississippi River Climate Conference - St. Louis, Missouri, June 8-12, 1998	
- Programme Committee	
* National Drought Policy Commission (Monitoring and Prediction Program)	1999
* NCDC- (National Climatic Data Center) sponsored Review of the State Climatologist Programme - Committee member	1998 - 1999
* NCGIA Core Curriculum for Technical Programs	1998

-“Wrap-up committee” member - Santa Barbara, California, July 30- August 2.

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|--|----------------|
| * New England Mesonet Steering Committee | 1998 - 2000 |
| * Preparing for an Academic Career in the Geosciences: A Workshop for Graduate Students and Post-doctoral Fellows - Workshop facilitator | 2005 |
| * Quebec Labrador Foundation/Atlantic Center for the Environment Steering Committee - The Impacts of Climate Change on Vermont’s Economy | 1999 |
| * Vermont Drought Task Force member | 1999 - 2002 |
| Scientific advisory subcommittee - Chair | 2002 |
| * Vermont State Emergency Board | 2002 |
| * Western Education/Extension and Research (WERA 1012) Volunteer Education committee member | 2009 - present |
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PROFESSIONAL AFFILIATIONS

- * American Association of State Climatologists
 - * Association of American Geographers
 - * American Geophysical Union
 - * American Meteorological Society
 - * American Society for Photogrammetry and Remote Sensing
 - * Congressional Natural Hazards Caucus - Natural Hazard Caucus Working Group
 - * National Association of State Universities and Land Grant Colleges
 - * Universities Council on Water Resources
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TECHNICAL EXPERTISE

Geographical Information Systems (GRASS, IDRISI, ArcView, ArcGIS, MapInfo, ATLAS/GIS) under both UNIX and Windows
 Image Processing (ENVI, ER Mapper)
 Design and presentation software (Adobe Photoshop, PowerPoint)
 Fortran 77 Programming language
 Spreadsheet and statistical analysis software (LOTUS 1-2-3, Excel, Quattro Pro, SYSTAT, MINITAB, AXUM, SPSS)

COMMUNITY ACTIVITIES

Committee on Temporary Shelter (C.O.T.S.) fundraising walk participant.
 Volunteer - McGill University Cancer Research Auction.
 Volunteer - Québec Special Olympics for the physically challenged.
 Volunteer reader for blind students at McGill University.
 Volunteer leader of the St. Barnabas Youth Corps, Toronto.

LANGUAGES

English, French, Portuguese
