

MARIO DAOUST – CURRICULUM VITAE

GENERAL INFORMATION	
Birthplace: Valleyfield, Province of Quebec, Canada , 13 January 1956	
Citizenship: Canadian	
Civil Status: Married (Wendy), one child (Julie Gabrielle)	
Address: 1239 E Cozy St., Springfield, MO, USA, 65804	
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Written and Spoken Languages: English, French	
EDUCATION	
McGill University, Montreal, Canada	
Ph.D. (1992) Physical Geography (Climatology and Statistical Methods) <i>Thesis: Inter-Annual Temperature Variability and Cyclone Frequency over Eastern Canada and the New England States. A Case Study: Winter Seasons 1931-32 to 1984-85.</i>	
Supervisor: Professor John E. Lewis	
Examiners: Professor Roger G. Barry (University of Colorado - NCAR) Professor Ian McKendry (University of British Columbia)	
McGill University, Montreal, Canada	
M.Sc. (1982) Physical Geography (Environmental Studies – Climatology)	
Supervisor: Professor Benjamin Garnier	
Université de Sherbrooke, Sherbrooke, Canada	
B.Sc. (1980) Physical Geography	
GRANTS, AWARDS AND FELLOWSHIPS	
2013	CNAS Faculty Award determined by CNAS Students
2012	CNAS Faculty Excellence in Teaching Award
2003	Faculty Research Grant, Southwest Missouri State University
1986-88	FCAR, Quebec Government Fellowship for Graduate Students
1980-82	J.W. McConnell Memorial Fellowship
1980-82	FCAR, Quebec Government Fellowship for Graduate Students
1980	Graduate Faculty Summer Fellowship Program
PROFESSIONAL EXPERIENCE	
2002 -	Assistant Professor (Tenured) Missouri State University Department of Geography, Geology and Planning

1994-2001	Lecturer University of Papua New Guinea Department of Geography
1984-86	Teaching Assistant (Instructor) McGill University Department of Geography
1980	Teaching Assistant (Instructor) McGill University Department of Geography

SUPERVISION OF GRADUATE STUDENTS

University of Papua New Guinea

Department of Geography

1998-2001	Mr. Michael Viula BA (1998) BAH (2001) Topic: <i>An Assessment of the Tropical Cyclone Activities in Papua New Guinea using Principal Component Analysis. A Case Study: the Misima District.</i>
1998-2000	Mr. Kuriya Kiap BA (1998) BAH (2001) Topic: <i>Recent Regional Climatic Variability in Temperature and Rainfall at Selected Sites on Mainland Papua New Guinea.</i>
1997-1999	Mr. Terence Simbiwen BA (1997) BAH (1999)* Topic: <i>The Impact of Land-Use Processes on the Quality of Water in the Eworogo Creek near Sogeri, Central Province.</i>

* After completing his BAH, Mr. Simbiwen was awarded the *Shell Centenary Scholarship Fund* to complete a master's degree at Cambridge University, England. Mr. Simbiwen was awarded an M.Sc. from this institution in 2001 and is currently a faculty member at the University of Papua New Guinea, Department of Environmental Sciences.

CO-SUPERVISION OF GRADUATE STUDENTS

Missouri State University

Department of Geography, Geology and Planning

2013	Ms. Brianna Sales (thesis topic to be determined)
2013	Mr. Andrew Foreman (thesis topic to be determined)
2013	Mr. John Gold Thesis: <i>Steering Mechanisms of North Atlantic Tropical Cyclones</i> (expected to submit end of summer 2013)
2012	Ms. Megan Harrington Thesis: <i>Stream discharge-drainage area relationships in Missouri</i>
2007	Mr. Jeff Gray Poster Session: <i>Global warming and land use: is there a connection? A comparison of rural and urban climate zones in the US.</i>

CURRENT RESEARCH ACTIVITIES

Missouri State University

Department of Geography, Geology and Planning

1- **Palmer Drought Severity Index (PDSI) periodicities in Missouri (1895-2012).**

This research is near completion (Fall 2013). This is an exploratory analysis to unveil PDSI periodicities in Missouri (1895-2012) and their connection to specific atmospheric oscillations, namely the PDO and AMO. The research involves advanced statistical analysis, including cross-correlation, and spectral analysis.

A paper will be submitted to the "Professional Geographer" by the end of 2013.

2- **The impact of the North Atlantic Oscillation on extreme weather conditions in Central and Southeastern USA. Part 1 Winter season – Anomalous Cold Temperatures 1900-2013.**

So far, this research has revealed that if standardized temperature departures exceed -1 in the research area, there is a 40 to 55% probability that the North Atlantic Oscillation (NAO) Index will be smaller than -1. When standardized temperature departures exceed -1.5, the probability increases to 55-70%; while with standardized temperature departures exceeding -2 the probability reaches 60 to 100% depending on the region.

The original analysis ended with the winter season 2010-11. However, before sending for publication, the database will be updated to include the last 2 winter seasons (2011-12 and 2012-13).

Final analysis and write-up should start in late fall 2013 and a paper submitted to the "Professional Geographer" by Spring 2014.

3- **A multivariate analysis linking atmospheric oscillations and extreme temperature variations during the winter season over the eastern half of the USA.**

This project is an extension of research #2 above. It seeks to integrate several atmospheric oscillations in a model using multiple regression analysis to better understand extreme temperature variations experienced during the winter seasons over the eastern half of the USA. Cross correlations and time lag factors will also be considered to examine the impact of atmospheric oscillations on surface temperatures.

Work on this project should start later in 2014.

CONSULTANCIES AND ADVISORY SERVICES

Missouri State University

Department of Geography, Geology and Planning

2005 **Reviewer:** Area (published by the Royal Geographic Society) Alastair Bonnett (Editor) and Heather Viles (Co-Editor, Physical Geography)

Paper: ***Problems and Methods: Investigating the USA***

Tornado Season with the Multivariate ENSO index

2004	Reviewer: Prentice-Hall Publishers <i>Task:</i> To review the book “Understanding Weather and Climate” 3 rd edition, by Dr. Edward Aguado and Dr. James E. Burt.
2003	Reviewer: Prentice-Hall Publishers <i>Task:</i> To review an animation CD which will be used for illustrating physical geography concepts in the upcoming 4 th edition of Elemental Geosystems by Dr. Robert W. Christopherson.
2003	City Utilities, Springfield MO. (Program on Alternative Energy) On file as a potential future research consultant on matters related to climate and energy.
University of Papua New Guinea Department of Geography	
1999	Consultant: Food and Agriculture Organization (FAO) Evaluation of the PNG climate station network, data availability and reliability. <i>For:</i> Mr. Raffaello Marsili and Mr. Charles A. Nadeau (Global Information and Early-Warning Systems) and Ms. Annamaria Bruno (Food and Nutrition Officer – SAPA).
1998	Consultant: World Vision International (WVI) The Aitape tsunami disaster. Discussions on the physical dynamics of tsunamis and on the organization of relief aid and reconstruction priorities. <i>For:</i> Mr. Rupen Das, Director (WVI – PNG).
1997	Consultant: World Vision International (WVI) The PNG Drought of 1997. Discussion on the physical dynamics on the 1997 El Nino, and on its impact on the PNG agricultural system. <i>For:</i> Mr. Rupen Das, Director (WVI – PNG).
1997	Consultant: PNG Geological Survey Division Discussions on issues related to the dynamics of the 1997 El Nino and its impact on the PNG climate. <i>For:</i> Mr. Matthew Tutton, Chief Geologist/Director.
1996-97	Consultant: PNG National Weather Service Discussions on the implementation of quality-control analyses on climatic data for primary weather stations in PNG. <i>For:</i> Mr. Kevin Luana (Head/Climate Research Centre).

MANUSCRIPTS, PUBLICATIONS, REPORTS, CONFERENCE PROCEEDINGS AND THESES

Daoust, M. (2008) *Atmospheric oscillations and Temporal variations of the Standardized Precipitation Index (SPI) for the State of Missouri 1950-2007.* (unpublished manuscript).

Daoust, M. (2006) *An analysis of snow precipitations for Springfield (1950-2005).* (unpublished manuscript).

Daoust, M. (2005) *Uncovering Annual Patterns of the Palmer Drought Severity Index Using Cluster Analysis. A Case Study: Missouri, 1895-2003.* (unpublished manuscript).

Daoust, M., (2004) *An analysis of Tornado Days in Missouri for the period 1950- 2002,*

Physical Geography, vol. 24, No.6, p 467-487.

Daoust, M. (2003) *An analysis of Tornado Days in Missouri for the period 1950- 2002*, Abstract published in the conference proceedings of the AAG East/West Lakes Meeting, Kalamazoo, October 2003.

Daoust, M. (2003) *Soil Moisture Variations in Papua New Guinea (1970-2002). An Exploratory Analysis Using the NCEP-NCAR Reanalysis Project Database*. (unpublished manuscript)

Daoust, M., (2001) *Regional Warming in Papua New Guinea. A Case Study: the Coastal Regions Surrounding the Bismarck Sea*. (unpublished manuscript).

Daoust, M., and Viula M., (2001) *Tropical Cyclone Activities in Papua New Guinea. A Case Study: the Misima District*. (Internal report for the Papua New Guinea Natural Disaster Emergency Service).

Daoust, M., and Lewis, J.E., (1996) *Interannual Variability of Temperatures and Cyclone Frequencies for Eastern Canada During the Winter Seasons 1930-1985*. (unpublished manuscript).

Daoust, M., (1994) *Reliability of the CCHS Network in Southwestern Ontario. A Comparison with the Longwoods – CAPMON Station*. (Internal report for Health and Welfare Canada, Environmental and Occupational Toxicology Division, LRTAP – Health Effect Section, Ottawa, Canada).

Daoust, M., (1992) *Interannual Temperature Variability and Cyclone Frequency over Eastern Canada and the New England States. A Case Study: Winter Seasons 1931-32 to 1984-85*. McGill University, Department of Geography, Ph.D. Thesis, 192pp.

Daoust, M., (1991) *The CCHS Air Monitoring Network: Assessment and Characterization of Air Quality Exposure in Southwestern Ontario and Saskatchewan*. Health and Welfare Canada, Environmental and Occupational Toxicology Division, LRTAP – Health Effect Section, Ottawa, Canada.

Daoust, M., Boisvert, J.J., and Bousquet, G., (1985) *Climatologie: Science du Temps et du Climat*. Notes de cours pour GEO 1223 Climatologie, Université de Sherbrooke, Département de Géographie.

Daoust, M., (1982) *Etude des Pluies Acides à Schefferville, Nouveau Québec, et de leur Possible Association à un Transport Atmosphérique de Polluants sur de Longues Distances*. McGill University, Département de Géographie, M.Sc. Thesis, 192pp.

Daoust, M., Prefontaine, J.C., and van Wyngarden, R., (1981) *Note on a Relationship Between Daily Hours of Bright Sunshine and Mean Daily Atmospheric Transmissivity*. Climatological Bulletin, No.30, pp. 15-19

Daoust, M., (1980) *Applications de la Cartographie Automatisée dans l'Etude des Degrés-Jours de Croissance dans l'Estrie et dans la Plaine du St-Laurent*. 48^e Congrès de l'ACFAS, Sommaire des Communications, Québec.

Daoust, M., (1979) *Applications de la Cartographie Automatisée dans l'Etude des Degrés-Jours de Croissance dans l'Estrie et dans la Plaine du St-Laurent*. Université de Sherbrooke, Département de Géographie, B.Sc. Honors Thesis, 88pp.