

Mohamed Ali Ben Alaya

Postdoctoral fellow, Pacific Climate Impacts Consortium
University House 1. PO Box 1700 STN CSC
University of Victoria, Victoria, British Columbia, Canada V8W 2Y2
mohamedalibenalaya@uvic.ca

Research domain

- Climate change and climate variability
- Hydro-meteorological engineering
- Statistical downscaling
- Flood risk assessment in a changing climate

Education

- Sep. 2011 - Marsh-2016

Ph. D. in Water Sciences, National Institute of Scientific Research - Research Center of Water, Earth and the Environment (INRS-ETE), Quebec, Canada.

- Sep. 2009 - Jul. 2011

MSc. in Water Sciences National Institute of Scientific Research - Research Center of Water, Earth and the Environment (INRS-ETE), Quebec, Canada.

- Sep. 2006 - Jul. 2009

Hydro-meteorological engineering degree, National school of engineering of Tunis (ENIT), department of civil engineering, Tunis El-manar University, Tunis, Tunisia.

Publications

- 1- **M.A. Ben Alaya**, F. Chebana, and T. Ouarda, 2015: Multisite and multivariable statistical downscaling using a Gaussian copula quantile regression model. *Climate Dynamics*, 1-15.
- 2- C. Ternynck, C., **M. A. Ben Alaya**, F. Chebana, S. Dabo-Niang, and T. B. Ouarda, 2016: Streamflow Hydrograph Classification Using Functional Data Analysis. *Journal of Hydrometeorology*, 17, 327-344.
- 3- **Ben Alaya, M. A.**, F. Chebana, and T. Ouarda, 2015: Probabilistic multisite statistical downscaling for daily precipitation using a bernoulli–Generalized Pareto multivariate autoregressive model. *Journal of Climate*, 28, 2349-2364.

- 4- **M.A. Ben Alaya**, F. Chebana, and T. Ouarda, 2014: Probabilistic Gaussian Copula Regression Model for Multisite and Multivariable Downscaling. *Journal of climate*, 27, 3331-3347.
- 5- **M.A. Ben Alaya**, F. Chebana, and T. B. M. J. Ouarda, 2015: Non-Gaussian spatiotemporal simulation of multisite daily precipitations: downscaling framework. **Climate Dynamics**, submitted.
- 6- **M.A. Ben Alaya**, F. Dominique, T. B. M. J. Ouarda and F. Chebana, 2015: Application of spatial Bayesian model for downscaling daily temperatures and comparison with two probabilistic regression approaches. In preparation.
- 7- **M.A. Ben Alaya**, F. Chebana, and T. B. M. J. Ouarda, 2015: Multisite precipitation simulation using quantile regression multivariate autoregressive model. In preparation.

Scientific Reports

- 1- **M.A. Ben Alaya**, 2016: Probabilistic regression for multisite and multivariable climate downscaling. **Ph.D. in Water Sciences**. (INRS-ETE), Quebec, Canada.
- 2- **M.A. Ben Alaya**, 2011: Spatial Bayesian method for climate downscaling. **MSc. in Water Sciences** INRS-ETE, Quebec, Canada.
- 3- **M.A. Ben Alaya**, 2009: Effect of climate extremes on the hospital morbidity. Final project for engineering study in hydrometeorology. ENIT, Tunis, Tunisia.

Conference presentations

- 1- **M.A. Ben Alaya**, F. Chebana, and T.B.M.J. Ouarda: On the use of copulas for downscaling multisite daily precipitations, Congr s  tudiants INRS-ETE, Quebec (QC), Canada, November 4-6, 2015.
- 2- **M.A. Ben Alaya**, F. Chebana, and T.B.M.J. Ouarda: Multisite precipitation downscaling using a quantile regression multivariate autoregressive model, 68th National Canadian Water Resources Association (CWRA) conference, Winnipeg, Manitoba, June 2-4, 2015.
- 3- **M.A. Ben Alaya**, F. Chebana, and T. B. M. J. Ouarda: Downscaling using Probabilistic Gaussian Copula Regression model, American Geophysical Union (AGU) Fall Meeting, San Francisco, 15-19 December 2014.

- 4- **M.A. Ben Alaya**, C. Ternynck, S. Dabo-Niang, F. Chebana, T.B.M.J. Ouarda (Canada, France, UAE): Change point detection of flood events using a functional data framework. International Commission on Statistical Hydrology (STAHY). Abu Dhabi, 2014.
- 5- **M.A. Ben Alaya**, F. Chebana, and T.B.M.J. Ouarda (Canada, UAE): Statistical downscaling using probabilistic Gaussian copula regression model. International Commission on Statistical Hydrology (STAHY). Abu Dhabi, 2014.
- 6- **M.A. Ben Alaya**, F. Chebana, and T. B. M. J. Ouarda: Multivariate multisite statistical downscaling using a probabilistic Gaussian copula regression model. 48th Canadian Meteorological and Oceanographic Society (CMOS) Congress, 1-5 June 2014.
- 7- **M.A. Ben Alaya**, D. Fasbender, and T. B. M. J. Ouarda : Méthode Bayésienne de mise à l'échelle (Downscaling) spatiale, Séminaires d'Econométrie et Statistique, Université Lille 3, Lille, France, April 2013.
- 8- **M. A. Ben Alaya**, D. Fasbender, and T. B. M. J. Ouarda: Spatial Bayesian method for downscaling AOGCM predictors to minimum and maximum daily temperatures in Quebec. Workshop: Probabilistic assessment of regional changes in climate variability and extremes, Montreal, 16-17 march 201.