FATEH CHEBANA
Full professor (INRS), fateh.chebana@ete.inrs.ca
Institut National de la Recherche Scientifique (INRS), Centre Eau, Terre et Environnement (ETE), Québec

Education: Msc (late 1999) and Ph.D (late 2003) in Statistics, University Paris 6, France
Main research interests: Applied Statistics; Hydrological statistics; Environmental and Climate effects on Health

MAIN PROFESSIONAL ACTIVITIES

- Director MSc Professional program in Water Sciences, INRS-ETE, June 2017-…
- Associate Editor, *Environmetrics* (Wiley), 2020-…
- Associate Editor, *Journal of Hydrology* (Elsevier), 2015-…
- Guest-editor, special issue "Special Issues for Advances in Meteorology 2015"
- Guest-editor, special issue "Statistical Methods in Environmental Epidemiology 2020"
- Co-editor, *Encyclopedia Environmetrics*, 2nd ed. 2013, Wiley (Major work, 650 authors, 4000 pages)
- Chair (scientific and organization), Statistical Hydrology Commission workshop, Quebec, 2016
- Co-chair, International CRM–CANSSI Workshop, New Horizons in Copula Modeling. Montréal, 2014

FUNDS (MAIN PROJETCS as PI SINCE 2014)

Names	Topic	Amount	Source
Chebana	Water demand forecasting	25 K$ 2020	NSERC-ENGAGE
Chebana	Advanced statistical approaches for hydrological frequency analysis	215 K$ 2019-2024	NSERC-Discovery
Chebana, Campagna	Health-Weather alerte system	300 K$ 2017-20	Ouranos
Chebana	Long term streamflow forecasting	25 K$ 2018	NSERC-ENGAGE
Chebana, Bélanger, Gosselin, Ouarda	Health and Climate : knowledge transfer	100 K$ 2016-17	Ministère de la santé et des services sociaux de Québec
Chebana, St-Hilaire, Bergeron	Laboratoire analyse modélisation habitats aquatiques	500 K$ 2016	Canada Foundation for Innovation
Chebana	Urban Water Demand	25 K$ 2016	ENGAGE-NSERC
Chebana, Ouarda	Software update	50 K$ 2015	Ministère Transports Québec Ministère Enviro. Québec
Chebana, Dabo-Niang, Ouarda	Fonctionnal data analysis	22 K$ 2013-15	Ministère relations internationals, Québec
Chebana	Regional frequency analysis	138 K$ 2012-18	NSERC-Discovery
Chebana, Bélanger, Gosselin, Ouarda	Research program on Health and Climate Change	918 K$ 2011-16	Ministère de la santé et des services sociaux de Québec

SELECTED PUBLICATIONS since 2014, total 105 peer reviewed papers (FC = Fateh Chebana)

1. Ben Alaya, Ternynck, Dabo-Niang, FC, Ouarda (2020). Change point detection of flood events using a functional data framework. *Adv. Water Resour.*,
2. Serinaldi, FC, Kilsby (2020). Dissecting innovative trend analysis. *Stoch. Environ. Res. Risk Asses.*,
3. Alobaidi, Meguid, FC (2019). Predicting seismic-induced liquefaction through ensemble learning frameworks. *Nature Scientific Reports*,
4. Ben Nasr, FC (2019). Homogeneity testing of multivariate hydrological records, using multivariate copula L-moments. *Adv. Water Resour*
5. Ben Nasr, FC (2019). Multivariate L-moment based tests for copula selection, with hydrometeorological applications. *J. Hydrol.*,
6. Curceac, Ternynck, Ouarda, FC, Dabo-Niang (2019). Short-term air temperature forecasting using Nonparametric Functional Data Analysis and SARMA models. *Environ. Model. Soft.*,
7. Masselot, FC, Lavigne, Campagna, Gosselin, Ouarda (2019). Toward an improved air pollution warning system in Quebec. *Int. J. Environ. Res. Public Health*,

8. Alobaidi, Chebana, Meguid (2018). Robust ensemble learning framework for day-ahead forecasting of household based energy consumption. *Appl. Ener.*,
9. Chiu, Abdous, Bélanger, Gosselin (2018). Mortality and morbidity peaks modeling: An extreme value theory approach. *Stat. Methods Med. Res.*,
10. Larabi, St-Hilaire, FC, Latraverse (2018). Using functional data analysis to calibrate and evaluate hydrological model performance. *J. Hydrol. Eng.*,
11. Larios, FC, Godbout, Brar, Valera, Palacios, Avalos Ramirez, Saldoval-Salas, Larouche, Medina-Hernàndez, Potvin (2018). Analysis of atmospheric ammonia concentration from four sites in Quebec City region over 2010-2013. *Atmos. Pollut. Res.*,
12. Masselot, FC, Bélanger, St-Hilaire, Abdous, Gosselin, Ouarda (2018). Aggregating the response in time series regression models, applied to weather-related cardiovascular mortality. *Sci. Total Environ.*,
13. Masselot, FC, Ouarda, Bélanger, St-Hilaire, Gosselin (2018). A new look at weather-related health impacts through functional regression. *Scientific Reports*,
14. Ouarda, Charron, Hundecha, St-Hilaire, FC (2018). Introduction of the GAM model for regional low-flow frequency analysis at ungauged basins and comparison with commonly used approaches. *Environ. Model. Soft.*,
15. Rahman, Charron, Ouarda, FC (2018). Development of regional flood frequency analysis techniques using generalized additive models for Australia. *Stoch. Environ. Res. Risk Asses.*,
16. Masselot, FC, St-Hilaire, Abdous, Gosselin, Ouarda 2018 EMD-regression for modelling multi-scale relationships, and application to weather-related cardiovascular mortality. *Sci. Total Environ.*,
17. Requena, FC, Ouarda 2018 A functional framework for flow-duration-curve and daily streamflow estimation at ungauged sites. *Advances in Water Resources*
18. Genest, FC 2017 Copula modeling in hydrologic frequency analysis. *Handbook App. Hydrology*,
19. Masselot, FC, Ouarda 2016 Fast and direct nonparametric procedures in the L-moment homogeneity test. *Stoch. Environ. Res. Risk Asses.*,
20. Durocher, FC, Ouarda 2016 On the prediction of extreme flood quantiles at ungauged locations with spatial copula. *J. Hydrol.*
21. Ouali, FC, Ouarda 2016 Non-linear canonical correlation analysis in regional frequency analysis. *Stoch. Environ. Res. Risk Asses.*,
22. Ouali, FC, Ouarda 2016 Quantile regression in regional frequency analysis: a better exploitation of the available information. *J. Hydrometeorol.*,
23. Requena, FC, Mediero 2016 A complete procedure for multivariate index-flood model application. *J. Hydrol.*
24. Masselot, Dabo, FC, Ouarda 2016 Streamflow forecasting using functional regression. *J. Hydrol.*
25. Wazneh, FC, Ouarda 2016 Identification of hydrological neighborhoods for regional flood frequency analysis using statistical depth function. *Adv. Water Resour.*,
26. Ternynck, Ben Alaya, FC, Dabo, Ouarda 2016 Streamflow Hydrograph Classification Using Functional Data Analysis. *J. Hydrometeorology*
27. Ben Alaya, FC, Ouarda 2016 Multisite and multivariable statistical downscaling using a Gaussian copula quantile regression model. *Climate Dynamics*
28. Ben Alaya, FC, Ouarda 2015 Probabilistic Multisite Statistical Downscaling for Daily Precipitation Using a Bernoulli–Generalized Pareto Multivariate Autoregressive Model. *J. Climate*
29. Alobaidi, Marpu, Ouarda, FC 2015 Regional frequency analysis at ungauged sites using a two-stage resampling generalized ensemble framework. *Adv. Water Resour.*,
30. Durocher, FC, Ouarda 2015 A nonlinear approach to regional flood frequency analysis using projection pursuit regression. *J. Hydrometeorology*
31. Brahimi, FC, Necir 2015 Copula representation of bivariate L-moments: A new estimation method for multiparameter 2-dimentional copula models, *Statistics*,
32. Ben Alaya, FC, Ouarda 2014 Probabilistic Gaussian Copula Regression Model for Multisite and Multivariable Downscaling. *Journal of Climate*

SUPERVISING

Postdocs (1 current, 6 finished); PhD students (4 current, 9 finished), Master (2 current, 3 finished), Trainees (0 current, 19 finished). Because of Covid-19, I don't have any trainee this summer.