



WORK
SHOP



STOCHASTIC WEATHER GENERATORS

VANNES
17>20
MAY
2016



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DESIGN: MATTHIEU DESAILLY
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IMPRESSION: MEDIA GRAPHIC

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Tuesday 17th May

09h15-09h45 Registration & Welcome Coffee

Multivariate models (moderator: V. Monbet)

- **09h45-10h20** William Kleiber (University of Colorado, USA). *Stochastic Weather Generators: From WGEN to BayGEN.*
- **10h20-10h55** Denis Allard (INRA, France). *A multivariate multi-site Weather Generator based on a Flexible Class of Non-separable Cross-Covariance Functions.*

10h55-11h25 Coffee break

Multivariate models (moderator: V. Monbet)

- **11h25-12h00** Thi Thu Huong Hoang (EDF R&D, France). *Joint simulations of temperature, precipitation, solar and wind.*
- **12h00-12h35** Vincent Cailliez (Chambre d'agriculture de la Creuse, France). *A stochastic weather generator for daily temperatures and precipitations : usability for climate change adaptation in agriculture.*

12h30-14h00 Lunch at University restaurant

Multivariate models (moderator: Y. Sun)

- **14h00-14h35** Nina A. Kargapolova (Novosibirsk National Research State University, Russia). *Monthly average temperatures and precipitation stochastic simulation in the Lake Baikal region.*
- **14h35-15h10** Komlan Kpogo-Nuwoklo (Freie Universität Berlin, Berlin, Germany). *Stochastic swell events generator.*

15h10-15h40 Coffee break

Data Assimilation (moderator: Y. Sun)

- **15h40-16h15** Marc Bocquet (CEREA, France). *Estimating model evidence using data assimilation.*
- **16h15-16h50** Redouane Lguensat (Telecom Bretagne, France). *Analog Data Assimilation.*

Wednesday 18th May

Downscaling (moderator: E. Mémin)

- **09h00-09h35** Philipp Sommer (University of Lausanne, Switzerland). *Fundamental statistical relationships between monthly and daily meteorological variables: Temporal downscaling of weather based on a global observational dataset.*
- **09h35-10h10** Liliane Bel (INRA, France). *“Spatial Hybrid Downscaling” (SHD) for statistical spatial downscaling of extreme precipitation fields.*
- **10h10-10h45** Samuel Groyer (Ecole Nationale de la Météorologie, France). *Fine scale stochastic downscaling of re-analysis data along an elevation gradient.*

10h45-11h15 Coffee break

Stochastic climate models (moderator: E. Mémin)

- **11h15-11h50** Christian Franzke (University of Hamburg, Germany). *Systematic stochastic modeling of atmospheric variability.*
- **11h50-12h25** Valentin Resseguier (INRIA, France). *Randomized fluid dynamics based on subgrid transport.*

12h30-14h00 Lunch at University restaurant

Simulating Precipitation (moderator: W. Kleiber)

- **14h00-14h35** Clément Guilloteau (LEGOS, Toulouse). *Stochastically Generated High Resolution Precipitation Ensembles Constrained by Satellite Observations.*
- **14h35-15h10** Erwan Koch (ETH Zurich, Switzerland). *A frailty-contagion model for multi-site hourly precipitation driven by atmospheric covariates.*

15h10-15h40 Coffee break

Simulating Precipitation (moderator: W. Kleiber)

- **15h40-16h15** Christoph Ritshel (Freie Universität Berlin, Berlin, Germany). *Intensity-Duration relationships in a seasonal Bartlett-Lewis rectangular Pulse model.*
- **16h15-16h50** Gregoire Mariethoz (University of Lausanne, Switzerland). *Estimating local space-time properties of rainfall from a dense gauge network.*

19h00-22h00 Dinner cruise

Thursday 19th May

Space-time Models (moderator: D. Allard)

- **09h00-09h35** Valérie Monbet (Université de Rennes 1, France). *Time varying autoregressive models for multisite weather generators.*
- **09h35-10h10** Ying Sun (KAUST, Saudi Arabia). *Stochastic simulation models for multi-site nonstationary time series using wavelets.*
- **10h10-10h45** Pierre Pinson (Technical University of Denmark). *Generating and evaluating space-time trajectories of renewable power generation.*

10h45-11h15 Coffee break

Space-time Models (moderator: D. Allard)

- **11h15-11h50** Julie Bessac (Argonne National Laboratory, USA). *Stochastic simulation of predictive space-time scenarios of wind speed using observations and physical models.*
- **11h50-12h25** Dionissios Hristopulos (Technical University of Crete, Greece). *Stochastic Local Interaction Models and Space-Time Covariance Functions based on Linear Response Theory.*

12h30-14h00 Lunch at University restaurant

Extreme Events (moderator: P. Tandeo)

- **14h00-14h35** Cameron Bracken (University of Colorado, USA). *Generating gridded extreme precipitation fields for large domains with a Bayesian hierarchical model.*
- **14h35-15h10** Reik Donner (Potsdam Institute for Climate Impact Research, Germany). *Quantile regression for trend assessment of heavy rainfall events and bias correction of regional climate models.*

15h10-15h40 Coffee break

Analogues and Resampling Methods (moderator: P. Tandeo)

- **15h40-16h15** Pascal Yiou (LSCE, France). *Stochastic weather generators and conditional detection and attribution of singular events.*
- **16h15-16h50** Dimitris Giannakis (Courant Institute of Mathematical Sciences, USA). *Kernel methods for nonparametric analog forecasting.*
- **16h50-17h25** Aitor Atencia (McGill University, Canada). *Probabilistic comparison of the information in the rainfall field from NWP and analogue-based forecasts.*

Friday 20th May

Non-Gaussian Processes (moderator: P. Ailliot)

- **09h00-09h35** Anastassia Baxevasi (University of Cyprus). *Use of latent Gaussian processes in certain environmental applications.*
- **09h35-10h10** Sara Martino (SINTEF Energy AS, Norway). *Spatio-temporal precipitation generator based on latent Gaussian field.*

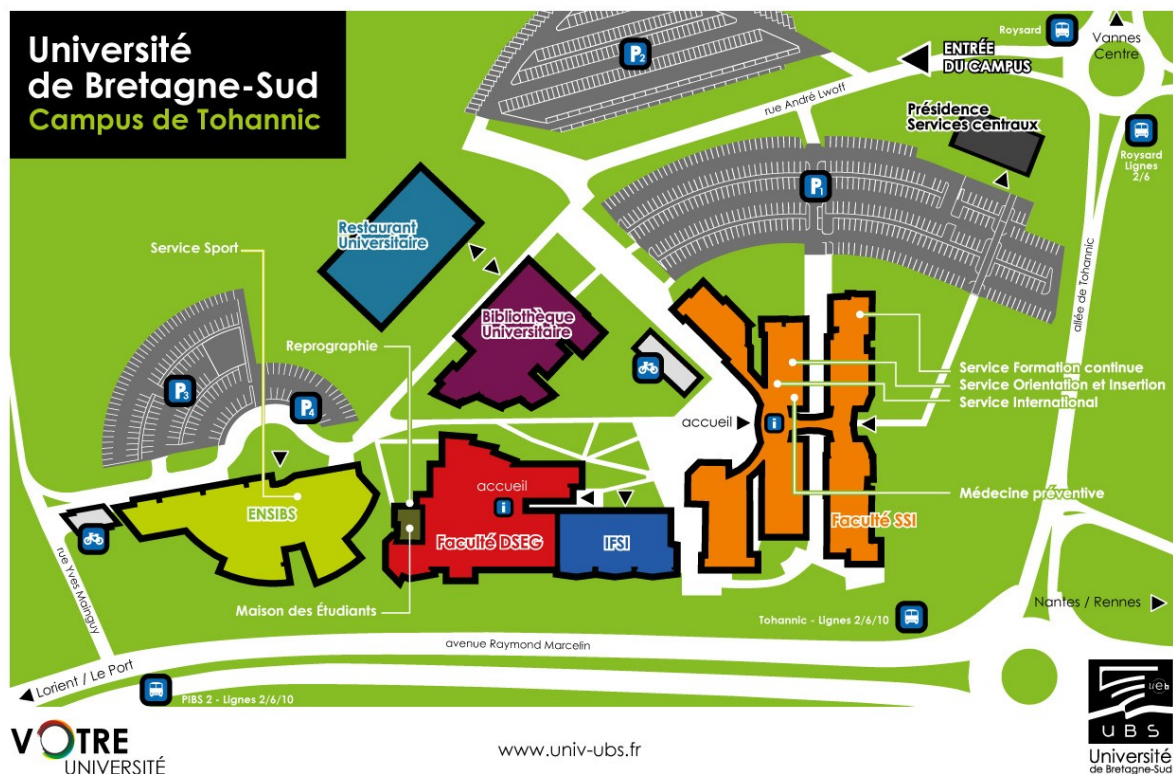
10h10-10h40 Coffee break

Non-Gaussian Processes (moderator: P. Ailliot)

- **10h40-11h15** Vasily A. Ogorodnikov (Novosibirsk National Research State University, Russia). *Numerical stochastic models of conditional meteorological fields.*
- **11h15-11h50** Marc Genton (KAUST, Saudi Arabia). *Tukey g-and-h Random Fields.*

12h00-13h00 Lunch at University restaurant

The talks will be given in the Amphithéâtre 103 in the building “DSEG” (red building on the map).



To get to the University of Bretagne Sud, you can take one of the city busses:

- From Vannes railway station ("Gare SNCF"): bus 6 (direction "Vannes agglo"), stop at "Université".
- From Vannes city center: bus 2 (direction "Petit Tohannic"), stop at "Université"; bus 10 (direction "Theix"), stop at "Tohannic".

The cruise dinner will start from the “Gare Maritime” (Navix flag on the map).

SWGEN

SWGEN workshop

- Gare de Vannes
- Hôtel de France Citotel
- Hôtel Escale Oceania
- NAVIX VANNES
- Université de Bretagne Sud - Campus de Tohannic

