ESF-COST High-Level Research Conference

Extreme Environmental Events

Selwyn College • Cambridge • United Kingdom
13 - 17 December 2010

Chair: Dr. Andrew Parnell, School of Mathematical Sciences, University College Dublin, IE

www.esf.org/conferences/10345
Final Programme

Monday 13 December

Noon/Early afternoon
Check-in
Registration at the ESF desk

15:30-16:00 Coffee break
16:00-16:15 Words of Welcome
16:15-16:30 Presentation of ESF and COST

Session 1

16:30-17:15 Renato Vitolo
University of Exeter, UK
*Hydrometeorological extremes: Clustering, robustness and predictability*

17:15-18:00 Philippe Naveau
IPSL-CNRS, FR
*Applying Multivariate Extreme Value Theory to Environmental Data*

18:00-19:00 Dinner

Short Talks
Chaired by: Petra Friederichs, University of Bonn, DE

19:00-19:15 Sophie Fukutome
Federal Office of Meteorology and Climatology, MeteoSwiss, CH
*Automating Peak-over-Threshold with the Information Matrix test*

19:15-19:30 Didier Dacunha-Castelle
Université Paris Sud (Orsay), FR
*Models of non linear time series whose extremes values are bounded. Application to temperatures*

19:30-19:45 Lasse Juhani Makkonen
Technical Research Centre of Finland, FI
*Have we underestimated climate extremes?*

19:45-20:15 Discussion
20:15-21:30 Welcome Drinks

Tuesday 14 December

Session 2

08:30-9:15 Martin Beniston
University of Geneva, CH
*Current and future extreme climate events in the Alps*

09:15-10:00 Hans De Boeck
University of Antwerp, BE
*An experimental study on the interactive effects of heat waves and droughts*

10:00-10:30 Coffee break
Short Talks
Chaired by: Hans De Boeck, University of Antwerp, BE
10:30-10:45
Deniz Bozkurt
Istanbul Technical University, TR
*Modeling an extreme precipitation event over the southwest coast of Black Sea: impact of SSTs and cumulus parameterization schemes*

10:45-11:00
Frank Kwasniok
University of Exeter, UK
*Predicting extremes in the midlatitudinal atmospheric circulation using regime-dependent statistical modelling*

11:00-11:15
Olivia Martius
University of Bern, CH
*On the dynamics of the Russian heat wave and floods in Pakistan in Summer 2010*

10:15-11:30
Franziska Strauss
University of Natural Resources and Life Sciences Vienna, AT
*Statistical climate modelling of droughts for Austria and the period 2008-2040*

11:30-12:00
Discussion

12:00-13:45 Lunch

Session 3
14:00-14:45
Anke Jentsch
Helmholtz Centre for Environmental Research, DE
*Climate extremes initiates plant regulating functions while maintaining productivity*

Short Talks
Chaired by: Philippe Naveau, IPSL-CNRS, FR
14:45-15:00
Chunsheng Ma
Wichita State University, US
*Extreme value analysis of Kansas temperature data*

15:00-15:15
Ewa Bogdanowicz
Polish Academy of Sciences, PL
*The estimation of annual peak flows*

15:15-15:30
Discussion

15:30-16:00 Coffee break

Short Talks
Chaired by: Peter Challenor, National Oceanography Centre, UK
16:00-16:15
Ida Bülow Gregersen
Technical University of Denmark, DK
*Identification and modeling of non-stationary tendencies in extreme rainfall*

16:15-16:30
Witold Gustaw Strupczewski
Polish Academy of Sciences, PL
*Non-stationary approach to Flood Frequency Modelling and Hydrological Design*
16:30-16:45  Christoph Zingerle  
Central Institute of Meteorology and Geodynamics, AT  
*Regionalization of future extreme hydro-meteorological events in Austria*

16:45-17:00  Tieh-Yong Koh  
Nanyang Technological University, SG  
*Statistical distribution of tropical radiosonde wind data in relation to equatorial wave dynamics*

17:00-17:15  Robert Toderascu  
University of Dunarea de Jos, RO  
*Implementation of a joint modeling system to provide support in the prediction of the extreme environmental events in the Black Sea*

17:15-17:30  *Discussion*

18:00-19:00  Dinner

**Session 4**

19:00-19:45  Gabi Hegerl  
University of Edinburgh, UK  
*Towards understanding and attributing the causes for changing probability of climate extremes*

19:45-20:15  *Discussion*

**Wednesday 15 December**

**Session 5**

08:30-9:15  Francis Zwiers  
Pacific Climate Impacts Consortium, CA  
*Detection and Attribution of human influence on temperature and precipitation extremes*

09:15-10:00  Janneke Ettema  
University of Twente, NL  
*Risk Assessment of Hydro-Meteorological hazards in a changing climate (CHANGES-project)*

10:00-10:30  Coffee break

**Short Talks**

Chaired by: Janneke Ettema, University of Twente, NL

10:30-10:45  Ivan Nijs  
University of Antwerp, BE  
*Simulating the impact of extreme events on ecosystems with infrared irradiation in the field*

10:45-11:00  Christoph Schleip  
Technische Universität München, DE  
*Extreme event ecology (E3): Long-term changes in phenological extremes over six decades in Germany*

11:00-11:15  Beyza Ustaoğlu  
Sakarya University, TR  
*The Possible Effects of Climate Change on Hazelnut Farming in Turkey*

11:15-11:30  Vivek Walia
National Center For Research on Earthquake Engineering

Earthquake surveillance in Taiwan using continuous soil monitoring: A case study

11:30-11:45

Elena Novenko
Russian Academy of Science, RU
Paleoenvironment reconstructions for the south of Valdai Hills (European Russia) as paleo-analogues of possible regional vegetation changes under short-term climatic changes

11:45-12:00
Discussion

12:00-13:45 Lunch

Poster Session

14:00-15:30 Poster Presentations
15:30-16:00 Coffee break

Short Talks
Chaired by: Francis Zwiers, Pacific Climate Impacts Consortium, CA

16:00-16:15
Nicole Estrella
Technische Universität München, DE
Recent and future climate extremes - bivariate changes in temperature and precipitation in Bavaria

16:15-16:30
Erich Fischer
ETH Zurich, CH
Consistent geographical patterns of changes in high-impact European heat waves

16:30-16:45
Sylvie Parey
EDF/R&D, FR
High temperature extreme values in the climate change context: EDF experience

16:45-17:15 Discussion

18:00-19:00 Dinner

Session 6

19:00-19:45
Farrokh Nadim
International Centre for Geohazards, NO
Practical challenges in using statistical methods for predicting extreme events

19:45-20:15 Discussion

Thursday 16 December

Session 7

08:30-9:15
Petra Friederichs
University of Bonn, DE
Extreme weather and probabilistic forecast approaches

09:15-10:00
Lynn Rothschild
NASA, US
Life in Extreme Environments
10:00-10:30 Coffee break

Short Talks
Chaired by: Gabi Hegerl, University of Edinburgh, UK
10:30-10:45 Lidia Gaslikova
GKSS Research Center, DE
*Storm surge extremes for present and future and their impact on the insurance losses for the North Sea coastal areas*

10:45-11:00 Johannes Rempfer
University of Bern, CH

11:00-11:15 Helmi Saidi
National Council of Research – Institute of Ecosystem Study, IT
*The climatic characteristic of extreme precipitations for short-term intervals in the watershed of Lake Maggiore*

11:15-11:30 Wyss Yim
City University of Hong Kong, HK
*Extreme regional precipitation events related to volcanic eruptions*

11:30-11:45 Miguel Mahecha
Max Planck Institute for Biogeochemistry, DE
*Assessing the impact of meteorological extremes on the terrestrial carbon cycle over Europe*

11:45-12:00 Discussion

12:00-13:45 Lunch

Session 8
14:00-14:45 Carl Beierkühnlein
University of Bayreuth, DE
*Variability of response to climatic extremes within key species of central European ecosystems*

Short Talks
Chaired by: Renato Vitolo University of Exeter, UK
14:45-15:00 Anastassia Baxevani
University of Gothenburg, SE
*Prediction of Catastrophes in Space and Time*

15:00-15:15 Nicolas Raillard
Université de Rennes 1, FR
*Modelling extreme values of processes observed at irregular time step*

15:15-15:30 Geraldine Wong
University of Oslo, NO
*Methodologies for the spatial and temporal analysis of European droughts*

15:30-16:00 Coffee break

Short Talks
Chaired by: Carl Beierkühnlein, University of Bayreuth, DE
16:00-16:15  Juan Gonzalez  
Consejo Superior de Investigaciones Cientificas (CSIC), ES  
*Role and potential impact of thermophilic microorganisms in temperate terrestrial environments during extreme conditions*

16:15-16:30  Staytcho Kolev  
Bulgarian Academy of Sciences, BG  
*The contribution of the COST-ESSEM activities to the topic of Extreme Environmental Events*

16:30-16:45  Juergen Kreyling  
University of Bayreuth, DE  
*Trajectories of succession impaired by extreme climatic events*

16:45-17:00  Discussion

17:00-19:00  Free time

19:00  Get-together & Conference Dinner

---

**Friday 17 December**

**Session 9**

08:30-9:15  Peter Challenor  
National Oceanography Centre, UK  
*Obtaining extremes from models of future climate*

**Short Talks**  
Chaired by: Lynn Rothschild, NASA, US

09:15-09:30  Nicolas R. Dalezios  
University of Thessaly, GR  
*Potential Impact of Regional Drought on Vulnerable Agriculture in Greece*

09:30-09:45  Piero Lionello  
University of Salento, IT  
*Extreme in the Mediterranean region (an analysis based on the results of the CIRCE project)*

09:45-10:00  Jadranka Sepic  
Institute of Oceanography and Fisheries, HR  
*Extreme meteorological tsunamis and their environmental impact*

10:00-10:30  Coffee break

**Session 10**

10:30-11:15  Brian Huntley  
University of Durham, UK  
*Impacts of extreme climatic events upon species and ecosystems*

**Forward Look Plenary Discussion**

11:15-12:00  Discussion

12:00-13:45  Lunch

From 13:45  Departure