# EGU General Assembly 2011

## Programme Group Programme

### NP – Nonlinear Processes in Geophysics

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Monday, 04 April

**HS7.3/CL3.7/NP1.4 – Climate, water and health (co-organized) – Orals**
Convener: Andreas Langousis | Co-Conveners: Alexander Kolovos, Alin Andrei Carsteanu
**Room: 33**
Chairperson: A. Langousis and A. Carsteanu

13:30–13:45 EGU2011-7940
Oleksandr Kvit, Matthias Luedeke, Diana Reckien, and Martin Budde
Assessment of vulnerability of urban slums to extreme precipitation events using remote sensing data in Hyderabad/India

13:45–14:00 EGU2011-5145
Olga Khabarova
People and environment: how and why we react to weather and space weather changes.

14:00–14:15 EGU2011-5058
Enrico Bertuzzo, Lorenzo Mari, Lorenzo Righetto, Renato Casagrandi, Marino Gatto, Ignacio Rodriguez-Iturbe, and Andrea Rinaldo
A spatially distributed model for the future evolution of the current Haiti cholera outbreak

14:15–14:30 EGU2011-6981
Evangelos Rozos and Christos Makropoulos
Ensuring water availability with complete urban water modelling

14:30–15:00 EGU2011-8918
Shafiqul Islam and Eltahir Eltahir
Hydroepidemiology: A synthesis of hydrological and epidemiological understanding for better intervention of water related diseases

**HS7.3/CL3.7/NP1.4 – Climate, water and health (co-organized) – Posters**
Convener: Andreas Langousis | Co-Conveners: Alexander Kolovos, Alin Andrei Carsteanu
Hall A | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: A. Carsteanu and A. Langousis

A394 EGU2011-117
Andrey Guber, Yakov Pachepsky, and Daniel Shelton
Microbial water quality in streams as affected by high flow events

A395 EGU2011-4691
Antarpreet Jutla, Ali Akanda, and Shafiqul Islam
Hydroepidemiology of Cholera: Predicting Outbreaks using Satellite Derived Global Cholera Index

A396 EGU2011-5542
Cheng Yu She, Bing Mu Hsu, Shih Wei Huang, Po Min Kao, Shao Yu Liao, and Jung Sheng Chen
Evaluation of Cryptosporidium Inactivity in Different Concentration of Chlorination

A397 EGU2011-5499
Hsiang Yu Hsiao, Bing Mu Hsu, Kuan Hao Huang, Shih Wei Huang, Po Min Kao, Hung Jen Wang, Kuo Chih Tseng, Ming Jen Su, and Jung Sheng Chen
Detection and Identification of Salmonella spp. in a Taiwan Watershed by Molecular Technology

A398 EGU2011-13200
Annemiek Gärdenäs, Solomon Gebreyohannis Gebrehiwot, Per-Erik Mellander, Jan Selbert, Kevin Bishop, and Woldeamlak Bewket
The potential impact of climate change on water balances of five catchments within the Blue Nile Basin for different scenarios of land-use

A399 EGU2011-5148
Hatim Sharif
The Relationship between Climate and Influenza at Monthly Timescale

A400 EGU2011-5483
Hsiu Feng Tsai, Bing Mu Hsu, Shih Wei Huang, Po Min Kao, Cheng Yu She, Jung Sheng Chen, and Liang Chen
Detection and Identification of Acanthamoeba in Taiwan aquatic Environment

A401 EGU2011-4364
Ali S Akanda, Antarpreet Jutla, Eltahir Eltahir, and Shafiqul Islam
Hydroepidemiology of Cholera Transmission in Bangladesh: A Spatially Explicit and Seasonally Varying Cholera Prevalence Model

A402 EGU2011-9478
Philippe Larroude
Climate change and indicator of vulnerability with a 2DH model on four French beaches
A403  EGU2011-4507
Lorenzo Mari, Enrico Bertuzzo, Lorenzo Righetto, Renato Casagrandi, Marino Gatto, Ignacio Rodriguez-Iiturbe, and Andrea Rinaldo
Hydrological transport, human mobility and cholera epidemics: a spatially explicit modeling approach

A404  EGU2011-6679
Adrian Tompkins, Francesca Di Giuseppe, Rachel Lowe, Franco Molteni, Andrew Morse, Claudio Piani, and Frederic Vitart
Using ECMWF precipitation and temperature forecasts to predict vector-borne disease in the QWeCI project

A405  EGU2011-8467
Tabea Lissner, Dominik Reusser, Eva Kirschenmann, Anne Holsten, and Jürgen Kropp
Exploring the consequences of changes in water resource availability on human health and well-being

A406  EGU2011-7062
Kuan Hao Huang, Bing Mu Hsu, Shih Wei Huang, Po Min Kao, Hung Jen Wang, Hsiang Yu Hsiao, Kuo Chih Tseng, Ming Jen Su, and Jung Sheng Chen
Seasonal distribution of Salmonella in stream water in Taiwan

A407  EGU2011-9571
Belie Sivakumar and Ashish Sharma
Impacts of global climate change on water resources: assessment, challenges, and remedies

NP3.7 – Geophysical Downscaling Methods – Posters
Convenor: Tobias Sauter | Co-Conveners: Victor Venema, Douglas Maraun, Erika Coppola
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 13:30–15:00
Chairperson: Tobias Sauter

XY524  EGU2011-1174
amadou Idrissa bokoye
Assessment of the influence of the calibration period choice on empirical statistical downscaling modeling

XY525  EGU2011-4753
Pascal Horton, Michel Jaboyedoff, and Charles Obled
The Analogs method in the framework of severe rainfall forecasting in the Swiss Alps

XY526  EGU2011-4806
Jiri Miksovsky, Petr Stepanek, Ales Farda, and Michal Belda
Inter-variable relationships in the outputs of dynamical and statistical downscaling models

XY527  EGU2011-5500
Alexandru Dumitrescu, Aristita Busuioc, Baciu Madalina, Sorin Cheval, and Liana Cazacioc
ENSEMBLE RCM performance in reproducing temperature and precipitation regime in Romania. Application for Banat and Oltenia Plains.

XY528  EGU2011-7632
Douglas Maraun
How robust is bias correction under climate change? Assessing the direct approach for temperature and precipitation in a pseudo reality?

XY529  EGU2011-7699
Douglas Maraun, Fredrik Wetterhall, Martin Widmann, Sven Kotlarski, and Erika Coppola
VALUE - A European wide network for the validation and development of downscaling methods

XY530  EGU2011-8659
Anahita Amiri Farahani, Douglas Maraun, and Juerg Luterbacher
Large-scale atmospheric circulation characteristics and their relations to local daily precipitation extremes in Hesse, central Germany

XY531  EGU2011-8668
Bruno Emanuela, Portoghese Ivan, Guyennon Nicolas, Iacobellis Vito, and Vurro Michele
Stochastic rainfall scenarios for hydrological impact studies

XY532  EGU2011-9208
Aristita Busuioc, Alexandru Dumitrescu, Madalina Baciu, Liana Cazacic, and Sorin Cheval
Estimation of changes in monthly temperature and precipitation over the Banat and Oltenia Plains in Romania. Comparison between statistical and dynamical downscaling techniques

XY533  EGU2011-9216
Marlis Hofer, Ben Marzeion, and Thomas Mölg
Skill assessment of reanalysis data for local-scale, daily air temperature on a tropical, glaciated mountain range (Peru)

XY534  EGU2011-9536
Martin Dubrovsky, Martin Hirschi, and Christoph Spirig
HOWGH: an hourly weather generator for pests modeling in present and future climates
Regional climate model simulation of projected 21st century climate change over an all-Africa domain:
Comparison analysis of nested and driving model results.

Grid point bias correction of climate models: remaining problems and suggested solutions.

Probabilistic Downscaling of Precipitation Data in a Subtropical Mountain Area: A two-step approach

Downscaled GCM projections of winter and summer mass balance for Central European glaciers (2000-2100)
from ensemble simulations with ECHAM5- MPIOM

The analog method as a MOS-like downscaling for ENSEMBLES RCM-precipitation: application over Spain

A comparative study of uncertainty, originating from bias correction and other sources, in scenario discharge
time series

Quantifying the uncertainty on urban runoff associated to unmeasured small-scale rainfall variability: a comparison of two cases study

Separating signal and noise in radar-rainfall fields to generate meaningful ensembles

Statistical modelling of rainfall for drought risk assessment in southeast England

Rainfall interpolation and simulation in hilly and mountainous regions using spatial copulas

Spatial and temporal block conditioned rainfall simulation; an application using an hourly punctual raingauges network and an instantaneous 1km2-pixel estimated precipitation from weather radar

Analysis and stochastical modelling of extreme rainfall events. Application in the spanish mediterranean region

A comparative study of uncertainty, originating from bias correction and other sources, in scenario discharge
time series

Precipitation Downscaling under Climate Change

A comparative study of uncertainty, originating from bias correction and other sources, in scenario discharge
time series

HS7.1/AS4.8/NH1.10/NP3.9 – Precipitation: from measurement to modelling and application in catchment hydrology (co-organized) – Orals
Convener: Remko Uijlenhoet | Co-Conveners: Alin Andrei Carsteau, Chris Onof, Alexis Berne, Paolo Burlando, Tim Bellerby, Roberto Deidda, Giovanna Grossi, Andreas Langousis
Room: 33
Chairperson: Remko Uijlenhoet and Tim Bellerby

Quantifying the uncertainty on urban runoff associated to unmeasured small-scale rainfall variability: a comparison of two cases study

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COFFEE BREAK

Chairperson: Tim Bellerby and Remko Uijlenhoet
HS7.1/AS4.8/NH1.10/NP3.9 – Precipitation: from measurement to modelling and application in catchment hydrology (co-organized) – Posters
Convener: Remko Uijlenhoet | Co-Conveners: Alin Andrei Carsteaun, Chris Onof, Alexis Berne, Paolo Burlando, Tim Bellerby, Roberto Deidda, Giovanna Grossi, Andreas Langousis
Hall A | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Remko Uijlenhoet and Tim Bellerby

A367 EGU2011-374
Roberto Moncho
A generalization of the log-logistic distribution for the probability of daily precipitation

A368 EGU2011-1927
Renji Remesan, Tim Bellerby, Asnor Ishak, and Dawei Han
Uncertainties in hydrological prediction using input ensembles from different cumulus parameterization schemes (CPSs)

A369 EGU2011-2214
Brandon Parkes
Improvements in early flood forecasting using a 1-hour gridded precipitation dataset to drive a hydrological model. A case study of the summer floods in the Upper Severn, UK

A370 EGU2011-2548
Christopher Skinner, Helen Greatrex, Tim Bellerby, and David Grimes
Impact of Rainfall Estimation Uncertainty on Hydrological Modelling of the Senegal River Basin

A371 EGU2011-2747
Daniel Lindsey
An Objective Probabilistic Prediction Product for Severe Hail Using Satellite Observations

A372 EGU2011-3044
Hannes Müller and Uwe Haberlandt
Effect of different temporal rainfall disaggregation methods on derived flood frequency analysis

A373 EGU2011-5993
Ioannis Sideris, Marco Gabella, Urs Germann, Rebekka Erdin, and Christoph Frei
Real-time radar-raingauge spatiotemporal combination in Switzerland.

A374 EGU2011-6123
Marielle Gosset and Julien Viarre
evaluation of satellite rainfall products used for hydrological applications in West Africa

A375 EGU2011-6143
Max Kigobe, Ann van Griensven, Yunqing Xuan, Giuliano Di Baldassarre, Neil Mc Intyre, and Howard Wheeler
Stochastic Rainfall Modelling in the Upper Nile

A376 EGU2011-6428
Mojca Sraj and Urska Bajc
Calculations and analyses of systematic errors in precipitation measurements
E377  EGU2011-7737  
**Maurizio Savina** and Paolo Burlando  
Precipitation field driven weather radar conversion

E378  EGU2011-7761  
**Ageel Bushara**, Mekonnen Gebremichael, Thomas Over, Riccardo Rigon, and Christa D. Peters-Lidard  
Utility of remotely-sensed precipitation products for hydrological simulations at basin scale

E379  EGU2011-9165  
**Francesco Lo Conti**, Kuo-lin Hsu, Soroosh Sorooshian, and Leonardo V. Noto  
Evaluation and comparison of satellite precipitation estimates with reference to a local area

E380  EGU2011-9438  
**Limin Wu**, John Schaake, Julie Demargne, James Brown, and Robert Hartman  
Using the GFS Ensemble Mean to Generate Medium-range Precipitation Ensemble Forecasts for Hydrologic Ensemble Prediction

E381  EGU2011-10423  
**Martinus van den Berg**, Bernard de Baets, and Niko Verhoest  
Copula-based downscaling of rainfall

E382  EGU2011-10791  
**Fabrizio Fenicia**, Laurent Pfister, Patrick Matgen, and Lucien Hoffmann  
Estimating rainfall with microwave links. Insight from an experimental setup in Luxembourg-City

E383  EGU2011-6217  
**Dionysia Panagouli** and Chrys Caroni  
Modelling maximum monthly precipitation in temporal climate evolution

E384  EGU2011-7379  
**Muhammad Rehan Anis** and Michael Rode  
An improved method for the temporal disaggregation of rainfall at a finer time scale

E385  EGU2011-7861  
**Klaus Haslinger**, Barbara Chimani, and Reinhard Boehm  
Solid and Liquid Precipitation in major river catchments originating in the European Alps

E386  EGU2011-8798  
**David Ian Francis Grimes**, Helen Greatrex, and Tim Wheeler  
Ensemble approach to disaggregation of seasonal rainfall forecasts in the context of crop yield prediction. Case study: maize yield in Ethiopia.

E387  EGU2011-9816  
**Marcus Malsy**, Tim aus der Beek, and Martina Flörke  
Sensitivity of water availability in Central Asia with respect to various climate datasets in particular the input parameter precipitation

E388  EGU2011-11378  
**Reinhard Teschl**, Walter L. Randeu, and Franz Teschl  
Investigating the variability of precipitation in a mountainous catchment using data-driven approaches

E389  EGU2011-12743  
**Sadegh Ghazanfari**, Aa Alizadeh, Aa Farid, and Mm Bannayan  
Comparison the PERSIANN model with interpolation methods to estimate daily precipitation (A case study: North-Khorasan, Iran)

E390  EGU2011-12834  
**Li-Pen Wang**, Christian Onof, and Cedro Maksimovic  
An improved discrete cascade method for sub-daily rainfall modelling

E391  EGU2011-13482  
**Yisak Abdella**, Kolbjern Engeland, Jean-Marie Lepioufle, and Knut Alfredsen  
Distributed modelling of catchment hydrology using radar derived precipitation

E392  EGU2011-13640  
**Maurice Schmeits** and Kees Kok  
A comparison between raw ensemble output, (modified) Bayesian model averaging and extended logistic regression using ECMWF ensemble precipitation reforecasts

E393  EGU2011-12262  
**Nan Yu**, Pieter Hazenberg, Guy Delrieu, Brice Boudevillain, and Remko Uijlenhoet  
The parameterization of the general raindrop size distribution by the gamma probability density function

**AS1.5/NP3.10/OS2.6 – Recent Developments in Geophysical Fluid Dynamics (co-organized) – Orals**  
**Room: 14**  
Chairperson: n.n.
13:30–13:45  EGU2011-13883
Ray Bates
On the relevance of Charney-Drazin (1961) for our understanding of the dynamical influence of the stratosphere on the troposphere.

13:45–14:00  EGU2011-13792
Nathan Paldor
Laplace's Tidal Equations: Revisiting a 400 year old basic problem of GFD

14:00–14:15  EGU2011-13246
Riwal Plougouven and Chris Snyder
Gravity waves emitted from jets: lessons from idealized simulations

14:15–14:30  EGU2011-1950
Nils Wedi and Piotr Smolarkiewicz
A nonlinear perspective on the dynamics of the MJO: idealized large-eddy simulations

14:30–14:45  EGU2011-4391
Bruno Ribstein and Vladimir Zeitlin
Inertial instability in the 2 layer rotating shallow water model

14:45–15:00  EGU2011-7474
Anna Rabitti and Leo R. M. Maas
Internal inertial wave characteristic paths in a sphere and in a spherical shell

Chairperson: Vanda Grubišić

15:30–15:45  EGU2011-8908
Andrew Stewart and Paul Dellar
A numerical study of cross-equatorial abyssal ocean currents with a complete representation of the Coriolis force

15:45–16:00  EGU2011-513
Gaelle Perret, Thomas Dubos, and Alexandre Stegner
How oceanic anticyclones are favoured through large-scale and cyclogeostrophic barotropic instabilities

16:00–16:15  EGU2011-4070
Alexandre Stegner, Gaelle Perret, Ayah Lazar, Rui Caldeira, and Charles Dong
Island wake dynamics: various parameters and regimes of asymmetry

16:15–16:30  EGU2011-910
Ayah Lazar, Eyal Heifetz, and Alexandre Stegner
Inertial instability in island wakes

16:30–16:45  EGU2011-2147
Rieke Heinze and Siegried Raasch
Atmospheric vortex streets: structure and properties derived from large eddy simulations

16:45–17:00  EGU2011-7492
Rui Caldeira, Maxime Schmerber, and Pablo Sangrà
Oceanic eddy response to atmospheric forcing: near- and far-field consequences

AS1.5/NP3.10/OS2.6 – Recent Developments in Geophysical Fluid Dynamics (co-organized) – Posters

Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: n.n.

XY1  EGU2011-8566
Ayah Lazar, Alexandre Stegner, Rui Caldeira, Samuel Viboud, and Henri Didelle
Stability of submesoscale wake vortices in a rotating and stratified shallow-water layer: laboratory experiments.

XY2  EGU2011-10164
Rui Caldeira, Alain Chelius, Maxime Schmerber, and Pablo Sangrà
Contribution of island asymmetry and neighboring islands to the formation of oceanic wakes: a quasi-geostrophic study of near- and far-field implications

XY3  EGU2011-10304
Luis C. Cana Cascallar, Diana Grisolia-Santos, and Leopoldo Álvarrez
Firsts results on the modelling of the Gran Canaria atmospheric wake

XY4  EGU2011-10328
Luis C. Cana Cascallar, Diana Grisolia-Santos, and Leopoldo Álvarrez
Local flow under weak trade wind flow regime

XY5  EGU2011-3478
Marion Kersalé, Alvaro J. Peliz, Andrea M. Doglioli, and Anne A. Petrenko
A numerical study on the collision of a Meddy with a seamount
XY6  EGU2011-7405  
Xavier Couvelard, Isabel B. Araujo, Rui Caldeira, and Ricardo Tome  
Atmospheric-induced effects on the sea surface: Madeira Island wake case study

XY7  EGU2011-3691  
Vanda Grubišić, Johannes Sachsperger, and Rui Caldeira  
The atmospheric wake of Madeira Island: i-WAKE Campaign

XY8  EGU2011-7987  
Uwe Harlancer, Yongtai Wang, Kiril Alexandrov, Torsten Seelig, Christoph Egbers and the MetStröm rotating annulus Team  
Intercomparison of numerical models simulating rotating annulus flows

XY9  EGU2011-12553  
Eckhard Dietze, Heiko Schmidt, Juan Pedro Mellado, and Bjorn Stevens  
Comparison of LES and DNS results for a two-dimensional evaporatively driven cloud-top mixing layer

XY10  EGU2011-2063  
Fabian Senf and Ulrich Achatz  
On generalized linear flows: from compressible to sound-proof dynamics

XY11  EGU2011-5675  
Michael Kurgansky  
Dynamical and statistical characteristics of atmospheric dust devils

XY12  EGU2011-12473  
Haraldur Olafsson, Halldin Ágústsson, and Ólafur Rignvaldsson  
Patterns of the fine-scale wind climatology of Iceland from numerical downscaling

XY13  EGU2011-14096  
Andreas Will and Jack Ogaja  
Convergence properties of the spatial schemes in the COSMO model and requirements on higher order spatial convergence

XY14  EGU2011-11619  
Marcin Kurowski, Bogdan Rosa, and Michal Ziemianski  
Upstream effects of the atmospheric flow over a mountain ridge as represented by the anelastic nonhydrostatic model EULAG

XY15  EGU2011-3323  
Urs Schaefer-Rolffs and Erich Becker  
Scale-invariant Horizontal Diffusion in a Global Circulation Model

XY16  EGU2011-6565  
Liang Sun  
General stability criteria for inviscid rotating flow

XY17  EGU2011-9297  
Melitta Fiebig-Wittmaack, Wolfgang Boersch-Supan, Ingeborg Bischoff-Gauss, and Orlando Astudillo  
Convergence acceleration for difference equations with flat grids: Application to incompressible atmospheric flow

XY18  EGU2011-10221  
Remi Tailleux  
Compressibility effects in nearly incompressible turbulent stratified fluids: Do they matter or do they not?

XY19  EGU2011-1535  
Jose M. Redondo, Otman Ben Mahjoub, Roberto Castilla, Margarita Diez, and Emil Sekula  
Mixing and diffusion in buoyancy driven self-similar flows

XY20  EGU2011-3207  
Richard Blender  
Instability of planetary flows based on Riemannian geometry

XY21  EGU2011-9967  
Christoph Egbers, Marcus Gellert, Uwe Harlander, Yongtai Wang, and Günther Rüdiger  
Investigation of Stratorotational Instability (SRI) in Taylor-Couette flows with axial temperature gradient

SSS2.6/HS12.12/NP3.12 – Sediment dynamics, models and scaling (co-organized) – Orals  
Convener: Mike Kirkby | Co-Conveners: Ana Maria Tarquis, Yves Le Bissonnais, Nikolaus J. Kuhn, Anthony Parsons, Klaudia Oleschko, Anne Gobin, Jose A. A.Gomez, Saskia Keesstra, Manuel Seeger, Marcel Van der Perk  
Room: 9  
Chairperson: Mike Kirkby  

13:30–13:45  EGU2011-9467  
Klaudia Oleschko, Eusebio Ventura, Genaro Armendáriz, Ana Maria Tarquis, and Edith Perrier  
Topological invariance and spatial scaling of surface roughness in two highly eroded zones of Mexico: a comparative study
EGU General Assembly 2011

13:45–14:00  EGU2011-688
Diana Vieira, Jacob Keizer, João Nunes, Isabel Fernandes, Silvia Faria, Raquel Ferreira, Elisabete Pedrosa, Maria Varela, and Luísa Pereira
Runoff and erosion at the micro-plot and slope scale in a small burnt catchment, central Portugal

14:00–14:15  EGU2011-3632
Magalie Delmas, Olivier Cerdan, and Jean-Marie Mouchel
Origin of river sediment exports: Taking into account hillslopes characteristics and spatial variability

14:15–14:30  EGU2011-10829
Alemanyehu Muluneh and Ólafur Arnalds
Synthesis of Research on Land Use and Land Cover Dynamics in the Ethiopian Highlands

14:30–14:45  EGU2011-11239
Irene Marzolf, Johannes B. Ries, and Jean Poesen
Short-term vs. medium-term monitoring for detecting gully-erosion variability in a Mediterranean environment: Addressing the time-scale problem in gully dynamics

14:45–15:00  EGU2011-4580
Gianbattista Bussi and Félix Francés
Calibration of TETIS-SED model by using check dams sedimentation volumes with different temporal resolutions. Application to a Mediterranean medium size basin (Rambla del Poyo, Spain).

Chairperson: Saskia Keesstra

15:30–15:45  EGU2011-13170
Joris de Vente, Jean Poesen, Matthias Vanmaercke, and Gert Verstraeten
Predicting soil erosion and sediment yield at the catchment scale: scale issues, modelling and understanding

15:45–16:00  EGU2011-569
Léonard Bernard-Jannin, Didier Orange, Pham Dinh Rinh, Thierry Henry des Tureaux, Mathieu Laissy, Pascal Jouquet, and Tran Duc Toan
The contribution of erosion in a small cultivated hilly catchment of North Vietnam due to an exceptional rainfall event

16:00–16:15  EGU2011-4542
alessio radice and elisa giorgetti
On sediment transport modelling in mountain environments

16:15–16:30  EGU2011-12269
A.N. Thanos Papanicolaou and Dimitrios Dermisis
Investigating the effects of land management practices on upland erosion using a state-of-the-art laser scanner technique

16:30–16:45  EGU2011-7386
Victor Jetten, BV Rajesh Shruthi, and Norman Kerle
Object-based gully feature extraction using high spatial resolution imagery

16:45–17:00  EGU2011-7673
Jesús Rodriguez González, Pablo J. Zarco-Tejada, and José Afonso Gómez
Inversion of the Hapke model with diurnal multispectral reflectance data for assessing soil surface roughness

SSS2.6/HS12.12/NP3.12 – Sediment dynamics, models and scaling (co-organized) – Posters
Convener: Mike Kirkby | Co-Conveners: Ana Maria Tarquis, Yves Le Bissonnais, Nikolaus J. Kuhn, Anthony Parsons, Klaudia Oleschko, Anne Gobin, Jose A. A.Gomez, Saskia Keesstra, Manuel Seeger, Marcel Van der Perk
Hall Z | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: AnaMaria Tarquis

Z58  EGU2011-1016
Lionel Mabit
Sediment dynamics assessed at catchment scale using nuclear techniques with the support of Geographical Information Systems

Z59  EGU2011-1031
Achim A. Beylich
Mass transfers, sediment budgets and relief development in four drainage basins in Iceland, Swedish Lapland and Finnish Lapland

Z60  EGU2011-1397
Achim A. Beylich, Susan Liermann, and Katja Laute
Spatio-temporal variability of chemical and mechanical denudation in glacier-fed mountain catchments in Nordfjord, western Norway
Effect of stone cover on rainfall-driven soil erosion with negligible surface roughness

A 1D runoff-runon model: scale and connectivity

Testing LAPSUPS-D, a daily sediment delivery model, in a meso-scale Mediterranean catchment: a case study in Israel.

Comparison of soil erosion models (USLE, RUSLE) and a new adapted model in a basin of central Spain

Spatial scale dependency of runoff and sediment connectivity in small sub-catchments in the Spanish Pyrenees

Development of Modified MMF (Morgan-Morgan-Finney) soil erosion model for various spatial and temporal scales

Concepts of catchment-scale sediment connectivity for physically-based and dynamic modeling

Susceptibility models for pipe collapse in loess-derived soils in a temperate humid climate

Inter-annual variation of runoff and soil loss in Europe and the Mediterranean in relation to land use and climate

Influence of the map complexity of saturated hydraulic conductivity on runoff and soil erosion modeling. A case study in Ribeira Seca, Santiago Island, Cape Verde.

The importance of Sediment Yield as a Desertification Indicator

Tracing sediment by enhancing soil magnetic properties

Automatic recognition of road and pathway induced slope instabilities by high resolution topography

Description of suspended sediments and three phosphorus forms concentrations at the outlet of an agroforestry catchment by multifractal parameters

The role of humans as (dis)connectors in small fluvial systems: sedimentological effects and their implications

NP4.1 – Time Series Analysis in the Geosciences - Concepts, Methods & Applications – Orals
Convener: Reik Donner | Co-Conveners: Susana Barbosa
Room: 13
Chairperson: Reik Donner, Susana Barbosa
08:30–08:45  EGU2011-291
Diego Rybski, Anne Holsten, and Jürgen P. Kropp
Analyzing the phase statistics of phenological records: fluctuations and correlations with temperature

08:45–09:00  EGU2011-5747
Sylvie Parey
Seasonality and climate change in temperature series of Europe and the United States

09:00–09:15  EGU2011-6382
Sebastian Bathiany, Martin Claussen, and Klaus Fraedrich
On the detectability of Early Warning Signals in a global atmosphere-vegetation model

09:15–09:30  EGU2011-1472
Valerie N. Livina and Timothy Lenton
Tipping points toolbox: novel techniques of time series analysis for studying transitions and bifurcations in climatic records

09:30–09:45  EGU2011-4344
Kira Rehfeld, Norbert Marwan, Jobst Heitzig, and Jürgen Kurths
Kernel-based correlation estimation for irregularly sampled time series

09:45–10:00  EGU2011-13320
George Caminha-Maciel and Marcia Ernesto
Spectral analysis of nonuniformly sampled data series: smoothing and improving resolution of spectral estimates by combining information from multiple series

COFFEE BREAK

Chairperson: Reik Donner, Susana Barbosa

10:30–10:45  EGU2011-6440
Andreas Groth and Michael Ghil
Robust identification of phase synchronization clusters via multivariate singular spectrum analysis

10:45–11:00  EGU2011-4367
Nishant Malik, Yong Zou, Norbert Marwan, and Jürgen Kurths
Employing nonlinear similarities to identify distinct dynamical regimes in short palaeo records

11:00–11:15  EGU2011-8408
Jobst Heitzig and Jakob Runge
Entropy train diagrams for information-based measures of statistical association

11:15–11:30  EGU2011-8056
Jin Chen, Marion Jegen-Kulcsar, Max Moorkamp, and Bjoern Heincke
Using Empirical Mode Decomposition (EMD) for the processing of marine MT data

11:30–11:45  EGU2011-4493
Mahmoud El Araby, Noelle Odling, and Roger Clark
Borehole water level response to barometric pressure fluctuations as an indicator of semi confined aquifer vulnerability: application to the East Yorkshire Chalk aquifer, UK

11:45–12:00  EGU2011-10331
Sylvain Mangiarotti, Laurent Drapeau, Raphaël Coudret, and Lionel Jarlan
Low-dimensional modeling of the dynamics of rainfed wheat in semi-arid region of Settat (Morocco), from NDVI satellite data

NP4.1  Time Series Analysis in the Geosciences - Concepts, Methods & Applications – Posters
Convener: Reik Donner | Co-Conveners: Susana Barbosa
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Norbert Marwan

XY543  EGU2011-13461
Sarah Hallerberg, Alexander Ruzmaikin, and Joan Feynman
Can high-energy proton events in solar wind be predicted via classification of precursory structures?

XY544  EGU2011-5242
Alejandro Ramirez-Rojas and Elsa Leticia Flores-Marquez
Non-extensivity analysis of seismicity occurred within four subduction regions in Mexico.

XY545  EGU2011-5779
Nasim Karamzadeh, Peter Voss, Gholam Javan Doloei, and Alireza Moghadamjoo
Local Earthquake Onset Detection Based on Short Time Fourier Transform
XY546  EGU2011-8942
**Octavian G. Duliu** and Nelida Florea
19 years of continuous observation of Radon and Thoron emissions: a Time Series Analysis

XY547  EGU2011-13643
**Susana Barbosa**, Hovav Zafrir, Gideon Steinitz, Uri Malik, and Oksana Piatibratova
Scale-based analysis of simultaneous $\gamma$ rays and $\beta$ particles time series from subsurface radon

XY548  EGU2011-13660
**Manuel Scotto**, Susana Barbosa, and Andres Alonso
Clustering analysis of air temperature time series over Europe: quantile regression approach

XY549  EGU2011-1985
**António R. Tomé** and Pedro M. A. Miranda
Piecewise continuous trends of time series

XY550  EGU2011-14013
**Reik Donner** and Marieke Lewanzik
Nonparametric quantile regression for assessing the nonstationarity of extreme values in geoscientific time series

XY551  EGU2011-13911
**Reik Donner** and Maria Koch
Linear and nonlinear spatio-temporal dependences of precipitation and river runoffs in a catchment

XY552  EGU2011-8392
**Carlos Pires**
estimation of Mutual Information from Maximum Entropy distributions and its application to geophysical time series

XY553  EGU2011-11552
**Jakob Runge**, Jobst Heitzig, and Jürgen Kurths
Information-theoretic methods to find possible causalities and relevant time lags between multiple time series

XY554  EGU2011-4516
**Robin Crockett**
Innate Cycle Correlation.

XY555  EGU2011-10681
**Elena Szolgayova**
Modelling and forecasting daily river discharge considering autoregressive heteroscedasticity

XY556  EGU2011-2149
**Xavier Lana**, August Burgueño, Dolors Martinez, and Carina Serra
**NONLINEAR ANALYSIS OF THE NORTH ATLANTIC (NAO), ATLANTIC MULTIDECADAL (AMO) AND WESTERN MEDITERRANEAN (WeMO) OSCILLATIONS FOR THE COMMON PERIOD 1856-2009**

XY557  EGU2011-5014
**Kreso Pandzic** and Tanja Likso
Comparing the Palmer Drought Index and the Standardized Precipitation Index for Pannonian Part of Croatia

XY558  EGU2011-10210
**Tamara Shulgina**, Elena Genina, and Evgeny Gordov
Selection of a dataset to characterize climate dynamics in Siberia

XY559  EGU2011-2274
**Michael Friedel** and Keith Long
A data-driven economic filter for mineral resource assessments

NP4.2 – Satellite time series analysis – Orals
Convener: Rosa Lasaponara | Co-Conveners: Antonio Lanorte, George Petropoulos
**Room**: 13
Chairperson: Rosa Lasaponara, George Petropoulos

13:30–13:45  EGU2011-2188
**Garik Gutman**
Long-term time series of the Earth's land surface observations from the U.S. space programs

13:45–14:00  EGU2011-1783
**Javier Litago**, Margarita Huesca, Alicia Palacios-Orueta, Silvia Merino-de-Miguel, Javier San Román-Ortiz, and María Quiróz-Segovia
Dynamic Influence of Climate and Vegetation on Fire Potential

14:00–14:15  EGU2011-3318
**Yves Govaerts**, Alessio Lattanzio, Kenneth Knapp, Jessica Matthews, Arat Okuyama, and Lothar Schüller
Generation of a surface albedo data set from a constellation of archived geostationary satellite observations
14:15–14:30 EGU2011-6819
Fabia Huesler, Stefan Wunderle, Tobias Jonas, and Christoph Neuhaus
Towards a 25 year snow cover time series over the European Alps derived from AVHRR satellite data:
Validation and first results

14:30–14:45 EGU2011-8389
Francesca Cigna, Chiara Del Ventisette, and Nicola Casagli
Monitoring of ground displacements and identification of trend deviations during post-processing of
satellite InSAR time series

14:45–15:00 EGU2011-9060
Albert Kettner and Robert Brakenridge
Estimating time series of fluvial suspended sediment by applying remote sensing techniques

Chairperson: George Petropoulos, Rosa Lasaponara

15:30–15:45 EGU2011-9805
Michele Volpi and Mikhail Kanevski
Kernel-based methods for change detection in remote sensing optical images

15:45–16:00 EGU2011-11904
Mirco Boschetti, Francesco Nutini, Pietro Alessandro Brivio, Etienne Bartholomé, Agata Hoscilo,
Daniela Stroppiana, and Stefano Bocchi
Analysis of NDVI and RFE time series to monitor vegetated ecosystem dynamics in Sahel

16:00–16:15 EGU2011-13969
Fernando Sedano, Pieter Kempeneers, Peter Strobl, and Jesus San-Miguel
An estimation of tree cover from medium spatial resolution remote sensing data using an orthogonal
vegetation index and Kalman filter

16:15–16:30 EGU2011-13971
Pieter Kempeneers, Fernando Sedano, Peter Strobl, and Jesus Ayanz San-Miguel
Building a Time Series of Pan-European Forest Type Maps Based on Data Fusion of Multispectral and
Multitemporal MODIS data

16:30–16:45 EGU2011-4164
Andrea Taramelli, Francesco Zucca, Emiliana Valentini, and Federica Braga
Modelling coastal processes by means of innovative integration of remote sensing time series analysis

16:45–17:00 EGU2011-7040
Holger Lange, Miguel Mahecha, and Michael Hauhs
Characterizing fAPAR variability and complexity on multiple scales

NP4.2 – Satellite time series analysis – Posters
Convener: Rosa Lasaponara | Co-Conveners: Antonio Lanorte, George Petropoulos
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Antonio Lanorte, George Petropoulos

XY560 EGU2011-13915
Hristo Nikolov and Denitsa Borisova
Precise Forest Classification Applying the Unmixing Methods

XY561 EGU2011-12515
Antonio Loperte, Maria Teresa Carone, Mariagrazia D'Emilio, Annibale Guariglia, Vito Imbrenda, Antonio
Satriani, and Tiziana Simonello
Analysis of vegetation pattern evolution in a coastal area affected by salt water intrusion

XY562 EGU2011-3623
Tiziana Montesano, Antonio Lanorte, Fortunato De Santis, and Rosa Lasaponara
MODIS time series for the analysis and characterization of vegetation dynamics before and after fire
occurrence

XY563 EGU2011-3690
Antonio Lanorte, Tiziana Montesano, Fortunato De Santis, and Rosa Lasaponara
Vegetation recovery monitoring using time series of vegetation indexes obtained from SPOT/VEGETATION
data

XY564 EGU2011-4973
Marily Xigaki, Giorgos Stavroulakis, and Nune Igityan
Mapping and Monitoring of urban growth using remote sensing imagery analysis: the case of Chania, Crete

XY565 EGU2011-7949
Fortunato De Santis, Rosa Lasaponara, Antonio Lanorte, and Tiziana Montesano
Estimating variation of Snow cover mapping using MODIS satellite time series
<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>XY566</td>
<td>Multitemporal analysis and archaeogeophysical methods to monitor and face the archaeological looting: the experience in Nasca (Southern, Peru)</td>
<td>Nicola Masini, Maria Danese, Rosa Lasaponara, and Giuseppe Orefici</td>
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<td>XY567</td>
<td>Multitemporal aerial LiDAR data for landslide monitoring</td>
<td>Rosa Coluzzi and Rosa Lasaponara</td>
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<td>XY568</td>
<td>A review on Satellite time series for Aerosols Monitoring and air quality estimation in urban area</td>
<td>Fortunato De Santis, Rosa Lasaponara, Antonio Lanorte, and Tiziana Montesano</td>
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<tr>
<td>XY569</td>
<td>Monitoring the changing position of coastlines using Landsat TM imagery: an example from the Pinios river, Greece</td>
<td>Marily Xigaki, George Petropoulos, Dionissios Kalivas, and Vassiliki Kollias</td>
</tr>
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<td>XY570</td>
<td>Post-fire Vegetation regeneration mapping using Landsat TM imagery: the case study of Mt. Parnitha, Greece</td>
<td>George Petropoulos, Dionissios Kalivas, and Vassiliki Kollias</td>
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<td>XY571</td>
<td>Kenan Bolat, Serdar Surer, Orhan Gokdemir, and Zuhal Akyurek</td>
<td>Fortunato De Santis, Rosa Lasaponara, Antonio Lanorte, and Tiziana Monteseno</td>
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<td>XY573</td>
<td>Federico Santini, Mito Omolu Collins, Lorenzo Fusilli, Giovanni Laneve, Angelo Palombo, and Stefano Pignatti</td>
<td>Hans-Jürgen Bolle, Maria Danese, Federico Martellozzo, Rosa Lasaponara, and Beniamino Murgante*</td>
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<td>XY574</td>
<td>Gabriele Nolè, Maria Danese, Federico Martellozzo, Rosa Lasaponara, and Beniamino Murgante*</td>
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<td>Hans-Jürgen Bolle</td>
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<td>XY577</td>
<td>Bogdan Mihai, Ionut Sandric, Zenaida Chitu, and Ionut Savulescu</td>
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<td>Paolo Pasquali, Damien Closson, Paolo Riccardi, Alessio Cantone, and Massimo Barbieri</td>
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<td>Bernard Lacaze and Aydin Ertürk</td>
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<td>Peter Limkilde Svendsen, Ole Baltazar Andersen, and Allan Aasbjerg Nielsen</td>
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<td>Elodie Vintrou</td>
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**CL3.1/NP5.5 – Decadal, seasonal and monthly forecasts (co-organized) – Orals**

Convener: Francisco J. Doblas-Reyes | Co-Conveners: Geert Jan van Oldenborgh, Mark Liniger, Stéphane Vannitsem
Room: 17
Chairperson: Dominik Renggli, Francisco Doblas-Reyes
08:30–08:45  EGU2011-1251  
**Patricia Okely**, Debra Hudson, Oscar Alves, and Yonghong Yin  
Towards coupled data assimilation in an intraseasonal-seasonal ensemble forecast system

08:45–09:00  EGU2011-10030  
**Johanna Baehr**, Wolfgang Müller, Michael Botzet, Robert Piontek, Luis Kornblueh, and Daniela Matei  
Towards seasonal forecasts with the coupled climate model ECHAM6/MIPO

09:00–09:15  EGU2011-6033  
**Thomas Jung**, Laura Ferranti, Gereon Gollan, Richard Greatbatch, Torben Kunz, Jean-Jacques Morcette, and Frederic Vitart  
Diagnosing the origin and predictability of extratropical circulation anomalies

09:15–09:30  EGU2011-1109  
Hui Du, Yves Soufflet, Francisco J Doblas-Reyes, **Virginie Guemas**, Javier Garcia-Serrano, and Muhammad Asif  
Spread induced by initial perturbations in decadal forecasts: Where are the major sources of uncertainties?

09:30–09:45  EGU2011-1678  
**Robert Piontek** and Johanna Baehr  
Ensemble generation for decadal scale forecasts using breeding in the ocean

09:45–10:00  EGU2011-11828  
**Bert Wouters**, Geert Jan van Oldenborgh, and Wilco Hazeleger  
Decadal predictability of the North-Atlantic region in the EC-Earth model

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**CL3.1/NP5.5 – Decadal, seasonal and monthly forecasts (co-organized) – Posters**  
Convener: Francisco J. Doblas-Reyes | Co-Conveners: Geert Jan van Oldenborgh, Mark Liniger, Stéphane Vannitsem

**Hall XL | Display Time 08:00–19:30**

**Author in Attendance: 13:30–15:00**

**Chairperson: Virginie Guémas, Mark Liniger**

- **XL81**  
  EGU2011-4258  
  **Dmitri Kondrashov**, Mickael Chekroun, Michael Ghil, and Andrew Robertson  
  MJO empirical modeling and prediction by past "noise"

- **XL82**  
  EGU2011-2724  
  **Christine Traeger-Chatterjee**, Richard W. Mueller, Joerg Trentmann, and Joerg Bendix  
  Analysis of extreme European summers and prior spring conditions

- **XL83**  
  EGU2011-2948  
  **Matthieu Chevallier** and David Salas y Melia  
  Seasonal predictability of the Arctic sea-ice in a coupled GCM: a diagnostic approach

- **XL84**  
  EGU2011-8863  
  **Tim Kruschke**, Gregor C. Leckebusch, Dominik Renggli, and Uwe Ulbrich  
  Frequency of synoptic-scale winter storms over western North America: decadal variability arising from the Pacific Decadal Oscillation

- **XL85**  
  EGU2011-3378  
  **Dominik Renggli**, Gregor C. Leckebusch, Tim Kruschke, Uwe Ulbrich, and Eberhard Faust  
  Sources of skill in forecasting North Atlantic winter storm activity in dynamical seasonal prediction models

- **XL86**  
  EGU2011-9239  
  **Judah Cohen**  
  How useful was ENSO in predicting Northern Hemisphere climate anomalies over the past two winters?

- **XL87**  
  EGU2011-4140  
  **Andrea Alessandri**, Andrea Borrelli, Antonio Navarra, Alberto Arribas, Michel Déqué, Philippe Rogel, and Antje Weisheimer  
  Evaluation of probabilistic quality and value of the ENSEMBLES multi-model seasonal forecasts: comparison with DEMETER

- **XL88**  
  EGU2011-5223  
  **Constantin Andronache**  
  Seasonal forecast of Atlantic tropical cyclones during intense ENSO events

- **XL89**  
  EGU2011-5433  
  **Yuriy Kuleshov**, Andrew Charles, Andrew Cottrill, David Jones, Harry Hendon, Eun-Pa Lim, and Roald de Wit  
  Pacific Adaptation Strategy Assistance Program: Climate prediction capacities strengthened in the National Meteorological Services

- **XL90**  
  EGU2011-5901  
  **Mimi Liu**, Bin Wang, and Yongqiang Yu  
  Pacific decadal oscillation hindcasts in the FGOALS2_g coupled climate model
XL91  EGU2011-6091
Alessio Bellucci, Silvio Gualdi, Enrico Scoccimarro, Antonio Navarra, Simona Masina, and Andrea Storto
Decadal climate predictions with the CMCC-CM coupled OAGCM initialized with ocean analyses.

XL92  EGU2011-4758
Takashi Mochizuki, Masahide Kimoto, Masayoshi Ishii, Hiroaki Tatebe, Yoshiki Komuro, and Takashi Sakamoto
Decadal Prediction in the Pacific using a High Resolution Climate Model

XL93  EGU2011-2927
Violette Zunz, Hugues Goosse, Svetlana Dubinkina, and Yoann Sallaz-Damaz
Influence of Initialization Method on the Quality of Decadal Climate Predictions

XL94  EGU2011-3605
Reidun Gangstø, Andreas Weigel, and Mark Liniger
The impact of drift correction and detrending on the skill of ENSEMBLES decadal predictions

XL95  EGU2011-14016
Geert Jan van Oldenborgh and Francisco Doblas-Reyes
An estimate of the reliability of climate model trends

HS7.5/NP6.7 – Hydroclimatic stochastics (co-organized) – Orals
Convener: Demetris Koutsoyiannis | Co-Conveners: Alin Andrei Carsteaun, Salvatore Grimaldi
Room: 33
Chairperson: Salvatore Grimaldi

15:30–16:00  EGU2011-55
Robin Thomas Clarke
A critique of some aspects of statistical usage in hydroclimate research.

16:00–16:15  EGU2011-12711
Klaus Fraedrich
A minimalist model of terminal lakes

16:15–16:30  EGU2011-12891
Susana Barbosa
Aggregation and stochastic features of high-frequency hydroclimatic time series

16:30–16:45  EGU2011-854
Fedderico Lombardo, Elena Volpi, and Demetris Koutsoyiannis
Theoretical and empirical comparison of stochastic disaggregation and downscaling approaches for rainfall time series

16:45–17:00  EGU2011-3454
Dimosthenis Tsaknias, Dimitri Bouziotas, Antonis Christofides, Andreas Efstratiadis, and Demetris Koutsoyiannis
Statistical comparison of observed temperature and rainfall extremes with climate model outputs

17:00–17:15  EGU2011-11557
Simon-Michael Papalexiou and Demetris Koutsoyiannis
A worldwide probabilistic analysis of rainfall at multiple timescales based on entropy maximization

HS7.5/NP6.7 – Hydroclimatic stochastics (co-organized) – Posters
Convener: Demetris Koutsoyiannis | Co-Conveners: Alin Andrei Carsteaun, Salvatore Grimaldi
Hall A | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Alin Carsteaun

A408  EGU2011-290
Yannis Dialynas, Stefanos Kozanis, and Demetris Koutsoyiannis
A computer system for the stochastic disaggregation of monthly into daily hydrological time series as part of a three-level multivariate scheme

A409  EGU2011-6884
Simon-Michael Papalexiou and Demetris Koutsoyiannis
Entropy maximization, p-moments and power-type distributions in nature

A410  EGU2011-739
Panayiotis Dimitriadis, Demetris Koutsoyiannis, Christian Onof, and Katerina Tzouka
Multidimensional Hurst-Kolmogorov process for modelling temperature and rainfall fields

A411  EGU2011-1489
Demetris Koutsoyiannis, Stefanos Kozanis, and Hristos Tyralis
A general Monte Carlo method for the construction of confidence intervals for a function of probability distribution parameters
A412  EGU2011-1981
Satoshi Watanabe, Taikan Oki, and Shinjiro Kanae
Evaluations of bias-correction methods for monthly temperature and precipitation data by multiple GCM outputs

A413  EGU2011-5330
Yuan-Chien Lin, Hwa-Lung Yu, Tsang-Jung Chang, and Yih-Chi Tan
Modeling of space-time typhoon tracks in the vicinity of Taiwan by generalized linear model

A414  EGU2011-5346
Po-Lin Lin, Hwa-Lung Yu, and Bellie Sivakumar
Investigating space-time patterns of rainfall in I-Lan (Taiwan) by hierarchical clustering and correlation dimension methods

A415  EGU2011-8266
Sarann Ly, Eléonore Beckers, Catherine Charles, and Aurore Degré
Effects of different spatial interpolators on the estimate of extreme precipitation

A416  EGU2011-9226
Anna Kuentz, Federico Garavaglia, Emmanuel Paquet, and Rémy Garçon
Stochastic generation of peak-to-volume ratio. Application to SCHADEX method for design flood estimation.

A417  EGU2011-10126
Ferdinand Beck and András Bárdossy
NiedSim-Klima: Generating Rainfall Time-Series of High Temporal Resolution under Future Climate Conditions

A418  EGU2011-11632
Dirk Schlaubing, Maria Magdalena Eder, Marieke Frassl, Karsten Rinke, and Andras Bardossy
A Vector-Autoregressive “co-shiftable” Weathergenerator for Hydrodynamic Modeling of Lakes

A419  EGU2011-14074
Irai A. Berdeja-Sotelo, Alin A. Carstea, Jorge J. Castro, Khalidou M. Ba, and Carlos Diaz-Delgado
Qualitative statistics of rainfall in Mexico City

OS1.2/CL2.2 – The North Atlantic and climate (co-listed) – Orals
Convener: Monika Rhein | Co-Conveners: Richard Greatbatch
Room: D
Chairperson: Rhein

08:30–08:45  EGU2011-4416
Herle Mercier, Pascale Lherminier, Claire Gourcuff, Artem Sarafanov, Anastasia Falina, Nathalie Daniault, Bruno Ferron, Thierry Huck, and Virginie Thierry
Variability of the circulation and heat transport from six occupations of the A25 Greenland-Portugal OVIDE section between 1997 and 2010

08:45–09:00  EGU2011-7199
Kjetil Våge, Robert S. Pickart, Michael A. Spall, Héðinn Valdimarsson, Steingrímur Jónsson, Daniel J. Torres, Svein Østerhus, and Tor Eldevik
Formation of Denmark Strait Overflow Water via boundary currents and transformation in the central Iceland Sea

09:00–09:15  EGU2011-11489
Bogi Hansen, Karin Margretha Larsen, Svein Østerhus, and Detlef Quadfasel
Mixing of the Faroe Bank Channel overflow by convective events

09:15–09:30  EGU2011-12484
Tor Eldevik and Jan Even Ø. Nilsen
Northern constraints on the Atlantic thermohaline circulation

09:30–09:45  EGU2011-6002
Kerstin Jochumsen and Detlef Quadfasel
Denmark Strait exchanges: structure and variability

09:45–10:00  EGU2011-2276
Achim Roessler, Monika Rhein, Christian Mertens, and Dagmar Kieke
Four year transport and pathway time series of the subpolar gyre inferred by integral methods

COFFEE BREAK

Chairperson: Kieke

10:30–10:45  EGU2011-3122
Ilaria Stendardo and Nicolas Gruber
Five decades of oxygen trends in the North Atlantic
10:45–11:00 EGU2011-3613
Michael A. Spall
On the role of eddies in the heat transport and overturning circulation in the Nordic Seas

11:00–11:15 EGU2011-4645
Anne Marie Treguier, Julie Deshayes, Raphael Dussin, and Jean-Marc Molines
Interannual variability of the subpolar Atlantic and role of eddies: contribution of numerical models at increasing spatial resolution.

11:15–11:30 EGU2011-5721
Erik Behrens, Claus W. Böning, and Arne Biastoch
Can eddies affect the freshwater distribution and the reaction of the MOC in Greenland melting scenarios?

11:30–11:45 EGU2011-7175
Geoffrey Gebbie
Tracking Glacial Ocean Waters from Surface Source to the Seafloor: An Inverse Method Applied to the Last 25,000 years

11:45–12:00 EGU2011-8680
Thomas Martin and Mojib Latif
The long-term freshwater budget and the relation to the MOC in the North Atlantic.

Chairperson: Roessler

15:30–15:45 EGU2011-3407
Dagmar Kieke, Monika Rhein, and Reiner Steinfeldt
Revealing LSW formation from a decade of tracer measurements in the subpolar North Atlantic

15:45–16:00 EGU2011-2739
Amy Bower, Dan Amrhein, and Ross Hendry
Are Labrador Sea Water eddies an important transport mechanism in the AMOC?

16:00–16:15 EGU2011-13214
Igor Yashayaev
Hydrography of the Labrador Sea in the first decade of the 21st century

16:15–16:30 EGU2011-12805
Tatiana Rykova, Fiamma Straneo, and Amy Bower

16:30–16:45 EGU2011-3856
Reiner Steinfeldt, Monika Rhein, and Dagmar Kieke
Ventilation, formation, and export rates of North Atlantic Deep Water

16:45–17:00 EGU2011-548
Erik van Sebille, Molly O. Baringer, William E. Johns, Christopher S. Meinen, Lisa M. Beal, M. Femke de Jong, and Hendrik M. van Aken
The subtropical signal of Labrador Sea Water variability and the leakiness of the Deep Western Boundary Current

SM3.1 – Seismic Imaging of the Earth’s Interior: Theoretical and Methodological Achievements in Seismic imaging (co-listed) – Orals
Convener: Edi Kissling | Co-Conveners: Jean-Xavier Dessa, Ivan Koulakov, Stefan Buske
Room: 27
Chairperson: Ivan Koulakov

08:30–08:45 EGU2011-7298
James Wookey
Direct probabilistic inversion of shear-wave data for anisotropy

08:45–09:00 EGU2011-296
Armstrong Fransiskus Sompotan, Linus Ampang Pasasa, and Rachmat Sule
Comparing Models GRM, Refraction Tomography and Neural Network

09:00–09:15 EGU2011-5209
Juan Carlos Afonso, Yingjie Yang, Javier Fullea, Sergei Lebedev, and Sergio Zlotnik
A 3D multi-observable probabilistic inversion method for the compositional and thermal structure of the lithosphere and sublithospheric upper mantle

09:15–09:30 EGU2011-5234
Hrvoje Tkalcic, Thomas Bodin, Malcolm Sambridge, Kerry Gallagher, and Pierre Arroucau
A new Paradigm for Seismic Imaging of the Earth's Crust and Upper Mantle: Transdimensional Inversion of Receiver Functions and Surface Wave Dispersion With Hierarchical Bayes Algorithm

09:30–10:00 EGU2011-2999
Guust Nolet, Christophe Zaroli, Jean Charlety, and Diego Mercerat
Seismic tomography: recent developments and new perspectives
SM3.1 – Seismic Imaging of the Earth's Interior: Theoretical and Methodological Achievements in Seismic imaging (co-listed) – Posters
Convener: Edi Kissling | Co-Conveners: Jean-Xavier Dessa, Ivan Koulakov, Stefan Buske
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Jean-Xavier Dessa

XY695 EGU2011-2436
Yury Kolesnikov and Evgeny Hooge
Application of Emission Tomography for Localization of Seismic Sources and Active Zones

XY696 EGU2011-2513
Genny Giacomuzzi, Nicola Piana Agostinetti, Claudio Chiarabba, Pasquale De Gori, and Alberto Malinverno
Local Earthquake Tomography by trans-dimensional Monte Carlo sampling

XY697 EGU2011-3164
Ludek Vecsey, Jaroslava Plomerova, Tuna Eken, and Vladislav Babuska
Role of seismic anisotropy in isotropic tomographic models of the upper mantle

XY698 EGU2011-5297
Michel Foundotos and Guust Nolet
Observability of Multiply Reflected P Waves

XY699 EGU2011-5331
Naeun Kwak, Dong-Joo Min, Youngso Kim, Ho Seuk Bae, and Ho-Yong Lee
Reverse time migration in VTI and TTI media

XY700 EGU2011-6932
Naimah Moghadasi, Mohammad Reza Gheithanchi, and Hossein Hashemi Shahdani
Reflection travel time tomography applied in Lorestan

XY701 EGU2011-6955
Maryam Sadat Mirkamali and Hamid Reza Ramazi
Detecting faults with using the seismic attributes and neural networks in an oil reservoir

XY702 EGU2011-13035
Nicola Piana Agostinetti, Alberto Malinverno, Claudio Chiarabba, Leonardo Seeber, Alessandro Amato, Genny Giacomuzzi, Pio Lucente, Irene Bianchi, Massimo Di Bona, and Pasquale De Gori
Time-evolution of subsurface elastic properties revealed by full 4D seismic tomography: an application to the 2009 L'Aquila earthquake sequence

XY703 EGU2011-13212
Mark Noble, Alexandrine Gesret, and Nidhal Belayouni
A fast and accurate 3D finite-difference Eikonal solver using a perturbation method

XY704 EGU2011-632
Diana Nuñez, Edi Kissling, Diego Cordoba, and Antonio Pazos
Consistency in CSS phase correlation: Application to CARIBE NORTE data set

XY705 EGU2011-4539
Andri Hendriyana, Rachmat Sule, Fatkhan Fatkhan, Alfian Bahar, and Alpius Guntara
An Application of CRS-Based Depth Imaging : Real Data Example

XY706 EGU2011-2984
Christian Weidle
Surface wave phase velocity maps from multiscale wave field interpolation

XY707 EGU2011-1791
Christophe Zaroli, Guust Nolet, Eric Debayle, and Malcolm Sambridge
Global multiple-frequency SH-wave tomography: refining seismic imaging of the Earth's mantle

XY708 EGU2011-3030
Benoit de Caqueray, Philippe Roux, Michel Campillo, Stefan Catheline, Julien Meunier, Thomas Bianchi, and Pierre Boué
Surface wave study at laboratory scale

XY709 EGU2011-2857
Jacek Stankiewicz, Trond Ryberg, Christian Haberland, and Michael Weber
Characteristics of ambient seismic noise used for surface wave tomography

SM3.3 – The QUEST project: progress on inverting seismic waveforms for sources and Earth’s structure using 3-D wave propagation (co-listed) – Orals
Convener: Heiner Igel | Co-Conveners: Ana MG Ferreira, Jeannot Trampert, Peter Moczo, Jean-Paul Montagner
Room: 27
Chairperson: Heiner Igel

15:30–15:45 EGU2011-5524
Peter Moczo, Jozef Kristek, Martin Galis, and Emmanuel Chaljub
Why some numerical schemes loose their accuracy with increasing P-wave to S-wave speed ratio?
SM3.3 – The QUEST project: progress on inverting seismic waveforms for sources and Earth’s structure using 3-D wave propagation (co-listed) – Posters

Convener: Heiner Igel | Co-Conveners: Ana MG Ferreira, Jeannot Trampert, Peter Moczo, Jean-Paul Montagner

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Heiner Igel

XY735 EGU2011-1282
Moritz Bernauer, Andreas Fichtner, and Heiner Igel
Measurements of translation, rotation and strain: New approaches to seismic processing and inversion

XY736 EGU2011-2689
Yang Shen and Wei Zhang
Full-wave ambient noise tomography at local and regional scales

XY737 EGU2011-2887
Takumi Hayashida, Fumiko Tajima, Junichi Nakajima, and Jim Mori
Regional Travel-time Inversion and Waveform Modeling for 3D Velocity Structure in Southwestern Japan

XY738 EGU2011-3731
Simone Cesca, Torsten Dahm, and Daniela Kühn
Determining the rupture process of the 7 May 2001 M2 4.1 Ekofisk induced earthquake using seismological and deformation data

XY739 EGU2011-4607
Davide Gei, Leo Eisner, Vladimir Grechka, Geza Seriani, and Peter Suhadolc
Feasibility of estimation of vertical transverse isotropy from microseismic data recorded by surface monitoring arrays

XY740 EGU2011-4673
Piero Poli, Michel Campillo, Helle Pedersen, and Polenet/lapnet Working Group
Emergence of body waves from cross-correlation of short period seismic noise

XY741 EGU2011-5550
Alan Schiemenz, Martin Kaeser, Hughes Dijkstra, and Heiner Igel
Modeling of Borehole-Guided Waves and Reservoir Formation Reflections with a Discontinuous Galerkin Finite Element Method

XY742 EGU2011-5682
Jozef Kristek, Peter Moczo, Emmanuel Chaljub, Pierre-Yves Bard, Fabrice Hollender, Peter Franek and the E2VP Team
Verification of the 3D numerical methods for modeling seismic motion - the case of the Mygdonian basin, Greece

XY743 EGU2011-5837
Miriam Kristekova, Martin Galis, Peter Moczo, and Jozef Kristek
A posteriori filtration of the slip-rate time histories

XY744 EGU2011-6319
Florian Schumacher and Wolfgang Friederich
Waveform Sensitivity Kernels for 3D Elastic Background Media

XY745 EGU2011-6858
Lubica Valentova, Frantisek Galovic, and Josep de la Puente
Inversion of Love wave traveltimes in Czech Republic using adjoint method
XY746  EGU2011-8552
Maria Nader, Heiner Igel, Dieter Kurrle, Ana Ferreira, Joachim Wassermann, and Ulrich Schreiber
Observations of Earth’s Free Oscillation with Long-Period Rotational Ground Motion Records.

XY747  EGU2011-8638
Piero Poli, Michel Campillo, Helle Pedersen, and Polenet/Lapnet Working Group
Emergence of body waves from cross-correlation of short period seismic noise

XY748  EGU2011-11181
Catherine Gourdin, Guust Nolet, Guy Masters, and Gaby Laske
New mode splitting estimations from recent large earthquakes

XY749  EGU2011-11227
Seyed Kasra Hosseini zad, Karin Sigloch, Simon Stähler, and Tarje Nissen-Meyer
“No Data Left Behind” - Efficient waveform processing for global finite-frequency tomography

XY750  EGU2011-12737
Nian Wang, Yann Capdeville, Gael Burgos, and Jean-Paul Montagner
Separation of intrinsic and artificial anisotropy by using homogenization method

XY751  EGU2011-12797
Tarje Nissen-Meyer and Alexandre Fournier
Fréchet kernel sensitivity

SM3.7 – Multi-dimensional electromagnetic modelling and inversion (co-listed) – Posters
Convenor: Marion Miensopust | Co-Conveners: Pilar Queralt, Colin Farquharson
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: n.n.

XY769  EGU2011-2953
Josef Pek, Fernando A. M. Santos, and Yuguo Li
Magnetotelluric Inversion for 2-D Anisotropic Conductivity

XY770  EGU2011-4834
Marion Miensopust and Alan G. Jones
Artefacts of isotropic inversion applied to anisotropic magnetotelluric data

XY771  EGU2011-14056
Anna Marti, Pilar Queralt, Juanjo Ledo, and Colin Farquharson
Electrical anisotropy: dimensionality imprints in magnetoteluric responses and effects in isotropic inversion.

XY772  EGU2011-4746
Jan-Philipp Schmoldt and Alan G. Jones
Using anisotropic approaches to realise 2D magnetotelluric inversion of a subsurface with depth-varying
geolectric strike direction - Synthetic model study and application to real data from the PICASSO Phase I
project

XY773  EGU2011-125
Kaijun Xu, Jianping Li, and Zhan Liu
Three-dimensional Complex Resistivity Modelling and Inversion with Topography

XY774  EGU2011-4368
Seyedmasoud Ansari and Colin G. Farquharson
3D Finite-element Simulation of Controlled-source EM problems Using Edge and Nodal Interpolation functions

XY775  EGU2011-6266
Ralph-Uwe Börner, Martin Afanasjew, Stefan Güttel, Oliver G. Ernst, Michael Eiermann, and Klaus Spitzer
Three-Dimensional Simulation of Time-Domain Electromagnetic Fields using Krylov Subspace Methods, Finite
Elements, and an Exact Boundary Condition

XY776  EGU2011-6270
Antje Franke-Börner, Ralph-Uwe Börner, and Klaus Spitzer
The evaluation of different formulations of the MT boundary value problem for 3D finite element simulation
Tuesday, 05 April

**GM2.5 – Simplicity and complexity in evolution of coupled geomorphologic systems: concepts, models and applications (co-listed) – Orals**

Convener: Margreth Keiler | Co-Conveners: Johnny Douvinet, Derek Karssenberg, Arnaud Temme

**Room: 21**

Chairperson: Margreth Keiler & Arnaud Temme

13:30–13:45  
**EGU2011-10287**  
Kirsten v. Elverfeldt  
After all, what does “far from equilibrium” mean?

13:45–14:00  
**EGU2011-4042**  
Thomas Euler  
Self-organisation of fluvial obstacle marks

14:00–14:15  
**EGU2011-10714**  
Eric Masson  
Toward a new system approach of catchment complexity

14:15–14:30  
**EGU2011-4371**  
Greg Hancock  
Numerically modelling landscape evolution - how good can we get the predictions?

14:30–14:45  
**EGU2011-10614**  
Liran Goren and Sean Willett  
Landscape characterization with DAC (DIVIDE AND CAPTURE), a new surface evolution model

14:45–15:00  
**EGU2011-13012**  
Sebastien Salvador-Blanes, Budiman Minasny, and Alex B. McBratney  
Modelling soil formation at the profile scale

Chairperson: Johnny Douvinet & Derek Karssenberg

15:30–15:45  
**EGU2011-2092**  
Jantiene Baartman, Wouter Van Gorp, Arnaud J.A.M. Temme, and Jeroen M. Schoorl  
Modelling sediment dynamics due to hillslope-river interactions: incorporating fluvial behaviour in landscape evolution model LAPSUS

15:45–16:00  
**EGU2011-2247**  
Lieven Claessens, Jeroen M. Schoorl, Peter H. Verburg, Lieke Geraedts, and Tom Veldkamp  
Modelling interactions and feedback mechanisms between land use change and landscape processes

16:00–16:15  
**EGU2011-4064**  
Jose Munoz-Rojas, Javier de Pedraza Gilsanz, and Rosa M Carrasco González  
Contesting the role of regional geomorphology in spatial planning through non-eucledian geometries and fuzzy clustering methodologies.

16:15–17:00  
**Discussion and Poster Introduction**

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**GM2.5 – Simplicity and complexity in evolution of coupled geomorphologic systems: concepts, models and applications (co-listed) – Posters**

Convener: Margreth Keiler | Co-Conveners: Johnny Douvinet, Derek Karssenberg, Arnaud Temme

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Derek Karssenberg & Margreth Keiler

- **A106**  
  **EGU2011-3034**  
  Mike Kirkby  
  Langbein and Schumm revisited

- **A107**  
  **EGU2011-4019**  
  David Dunkerley  
  Widespread Hortonian overland flow in deserts: is the classical argument applicable in the drylands of western New South Wales, Australia?

- **A108**  
  **EGU2011-1611**  
  Diethard Sanders  
  Hitherto undescribed pattern of rock cliff/talus development: The 'breach concept'.

- **A109**  
  **EGU2011-12023**  
  Margreth Keiler and Kirsten von Elverfeldt  
  Can we predict and control complex, self-organized systems?
A110  EGU2011-8181  
Dave Favis-Mortlock  
Early warning of emergent connectivity on an eroding hillslope

A111  EGU2011-12231  
Derek Karssenberg  
Early-warning signals in ecgeomorphology: the example of a hillslope system

A112  EGU2011-7139  
Julia Eisl and Christian Scheidl  
Flow process identification in torrent catchments by geomorphological parameters in the Austrian Alps

A113  EGU2011-10442  
Victor Clamote, Jose Nobre, and Ana Gomes  
Classification and study of geomorphologic forms present in Serra das Mesas (Sabugal, Portugal). A first approach to identify the processes associated.

A114  EGU2011-141  
Inga Voropaeva  
The structure and specific features of formation of floodplain wetlands in Amur Region

A115  EGU2011-7683  
Johnny Douvinet, Cyril Fleurant, Daniel Delahaye, Sebastien Caillaudt, and Vincent Viel  
Cellular Automata and Agent-Based Models in response to different environmental problems: a review of French research over the last ten years

A116  EGU2011-8936  
Luca Ziliani, Nicola Surian, and Tom Coulthard  
Cellular automata modelling of future channel changes in a large gravel-beb river

A117  EGU2011-10282  
Arnaud Temme  
Form-process relations versus multi-process landscape evolution models

A118  EGU2011-10271  
Arnaud Temme, Jeroen Schoorl, and Lieven Claessens  
Strategies for the set-up of a multi-process landscape evolution model.

A119  EGU2011-3277  
Christopher Hackney, Prof. Stephen Darby, and Dr. Julian Leyland  
Modelling the effects of climate change and sea-level rise on the evolution of incised coastal gullies.

A120  EGU2011-2100  
Domenico Capolongo, Alberto Refice, and Emanuele Giachetta  
Investigating valley spacing dynamics in linear mountain fronts through terrain numerical modeling

A121  EGU2011-880  
Tom Coulthard, Greg Hancock, and John Lowry  
Using a downscaled landscape evolution model to model plot scale soil erosion

A122  EGU2011-12499  
Niladri Gupta, Peter M. Atkinson, and Paul A. Carling  
A spatially distributed probabilistic model for forecasting river planform change of an alluvial mega-river

A123  EGU2011-9598  
Garry Willgoose and Greg Hancock  
Unique Challenges in Modelling Post-mining Landforms Using Landform Evolution Models

A124  EGU2011-1304  
Jan Nyssen, Dominiek Vermeersch, Stijn Diepandaele, Jo Palms, Matthias Vanmaercke, and Jean Poesen  
Geomorphic processes on coal tips in Belgium

A125  EGU2011-10467  
Yulia Blinova and Andrey Bredikhin  
Assessment of geomorphic risks and attractiveness for recreational purposes

NP1.1 – Advances and Challenges in Nonlinear Geosciences (including Lewis Fry Richardson Medal Lecture & Outstanding Young Scientist Lecture) – Orals
Convener: Henk A. Dijkstra | Co-Conveners: Jose M. Redondo, Vincent Rey, Jost von Hardenberg, Jingqiao Duan, Shaun Lovejoy, Stefano Pierini, Olivier Talagrand
Room: 18
Chairperson: n.n.

13:30–13:35  Presentation of the Award
13:35–13:50  EGU2011-14055  
Reik Donner  
Towards a new paradigm for analysing nonlinear geoscientific time series

13:50–14:00  BB Mandelbrot: a Fractal Trail in Science and Society by Daniel Schertzer
14:00–14:30  EGU2011-9733

Andrea Rinaldo

Scaling in ecosystems: linkage of macroecological laws, spatial effects on species persistence, implications for biodiversity

14:30–15:00  EGU2011-8511

Shaun Lovejoy and Daniel Schertzer

Multifractal cascades and the emergence of atmospheric dynamics

Chairperson: n.n.

15:30–16:00  EGU2011-14104

Michael Ghil

Fractal Objects in Geoscience Models

16:00–16:30  EGU2011-14122

Bernard Sapoval and Andrea Baldassarri

Retro-action model for the formation of irregular or fractal rocky coasts. Are irregular breakwaters more efficient?

16:30–17:00  EGU2011-14105

Catherine Nicolis

Atmospheric and climatic variability: some generic dynamical and probabilistic features (Lewis Fry Richardson Medal Lecture)

NP1.2 – Open session on Nonlinear Inversion in Geophysics – Posters

Convener: Sid-Ali OUADFEUL | Co-Conveners: Leila ALIOUANE

Halls X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Sid-Ali OUADFEUL

XY657  EGU2011-4529

Bjorn Heincke, Max Moorkamp, Marion Jegen, and Richard W. Hobbs

Joint inversion scheme with an adaptive coupling strategy - applications on synthetic and real data sets

XY658  EGU2011-5485

Eko Januari Wahyudi, Wawan Gunawan A Kadir, and Hendra Grandis

2 Bit Inversion of 4D Gravity Data Using Genetic Algorithm to Characterize Injection and Production Zone in Permeable Layer

XY659  EGU2011-3665

Florent Szitkar, Jérôme Dyment, Yves Fouquet, Eva Hoisé, and Yujin Choi

Near seafloor magnetic anomalies on oceanic hydrothermal sites: data reduction

XY660  EGU2011-2332

Nobuhiro Isezaki, Jun Matsuo, Keizo Sayanagi, and Makoto Harada

An analysis error on scalar magnetic anomalies: The case study in the exploration of deep seabed resource project

XY661  EGU2011-1042

Nouredine djarfour, Jala farahtia, Kamel baddari, and Sid-Ali ouadfeul

Application of Artificial Neural Networks to Seismic Tomography

XY662  EGU2011-150

Ahmed Khalil

Geophysical Study of the Subsurface Electrical Conductivity at Sahl El Qaa area, Southern Sinai Peninsula, Egypt

XY663  EGU2011-531

Leila aliouane and Amar boudella

Reservoir fluid delineating from well-logs data using neural network

XY664  EGU2011-1043

Lok baral

Development of Smart Tunnel Transportation System Operated by Gravitational Potential Energy for Protecting the Global Environment.

XY665  EGU2011-1073

lok baral

Study of the Technology Development of Harvesting Gravitational Potential Energy for Transportation by Using CASWAT-G

XY666  EGU2011-13715

Said Eladj and Sid Ali Ouadfeul

Prediction of hydrocarbon accumulations using the Nonlinear inversion of Seismic data

NP3.3 – Fractal and multifractal analysis and their applications in solid earth geoscience – Posters
NP8.1 – Stochastic Approaches for Multiscale Modelling in Geosciences – Orals
Convener: Balasubramanya Nadiga | Co-Conveners: Daniel Schertzer, Jinqiao Duan, Christian Franzke, Ilya Timofeyev
Room: 13
Chairperson: Christian Franzke and Balasubramanya Nadiga

10:30–10:45 EGU2011-12332
Marianne Corvellec, Freddy Bouchet, and Eric Simonnet
Continuousness and discontinuousness of stochastically induced transitions in geophysical turbulence

10:45–11:00 EGU2011-483
Daniel Peavoy
Data assimilation for the construction of low dimensional stochastic models of the atmosphere

11:00–11:15 EGU2011-5643
Daan Crommelin
A stochastic, data-driven approach to subgrid scale modeling

11:15–11:30 EGU2011-8230
Stamen Dolaptchiev, Ilya Timofeyev, and Ulrich Achatz
Subgrid scale closure for the Burgers equation based on stochastic mode reduction

11:30–11:45 EGU2011-13269
Nikolaos Bakas and Petros Ioannou
Stochastic structural stability of a barotropic flow

11:45–12:00 EGU2011-8537
Kristoffer Rypdal and Martin Rypdal
Memory in stochastic component and multi-decadal trends of solar activity

NP8.1 – Stochastic Approaches for Multiscale Modelling in Geosciences – Posters
Convener: Balasubramanya Nadiga | Co-Conveners: Daniel Schertzer, Jinqiao Duan, Christian Franzke, Ilya Timofeyev
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Balasubramanya Nadiga and Christian Franzke

XY673 EGU2011-9617
Rafail Abramov
Low Frequency Climate Response of Quasigeostrophic Wind-Driven Ocean Circulation

XY674 EGU2011-3132
Christian Franzke, Tim Graves, Nicholas W. Watkins, Robert B. Gramacy, and Cecilia Hughes
Self-Similarity, Long-Range Dependence and Paradigmatic Models for Natural Time Series

XY675 EGU2011-12091
Nicholas Watkins
Exploiting the parallels between nonlinear systems: geospace complexity vs. atmospheric complexity.
XY676  EGU2011-13089
Balasubramanya Nadiga
A parameterization of model error and its use in ocean data assimilation

CL4.1/NP8.2 – Stochasticity and Statistical Physics in Climate Dynamics (co-organized) – Orals
Convener: Michael Ghil | Co-Conveners: Mickael David Chekroun, Valerio Lucarini
Room: 13
Chairperson: Ghil, Lucarini, Chekroun

08:30–08:45  EGU2011-14167
Catherine Nicolis
Stochastic resonance in multistable systems

08:45–09:00  EGU2011-3757
Grant Branstator
Using the fluctuation-dissipation theorem to examine the atmospheric response to moving tropical heat sources

09:00–09:15  EGU2011-12296
Henk Dijkstra, Taylan Sengul, and Shouhong Wang
Dynamic Transitions and Hexagonal Patterns in Surface Tension Driven Convection

09:15–09:30  EGU2011-9930
Georg Gottwald and David Lewis
Stochastic model reduction on manifolds

09:30–09:45  EGU2011-12459
Paul Williams
Stochastic parameterizations in comprehensive climate models (solicited)

09:45–10:00  EGU2011-12182
Freddy Bouchet, Marianne Corvrellec, and Eric Simonnet
Non-equilibrium statistical mechanics of geophysical flows

XY330  EGU2011-803
Salvatore Pascale, Jonathan M. Gregory, Maarten Ambaum, and Remi Tailleux
MEP climate, horizontal and vertical material entropy production in a simple two-dimensional model

XY331  EGU2011-951
Dmitry Mukhin, Andrew Gavrilov, Evgeny Loskutov, and Alexander Feigin
Reconstruction of a dynamical system underlying an observed time series by optimal stochastic models

XY332  EGU2011-1473
Valerie N. Livina, Timothy M. Lenton, Vasiliis Dakos, Egbert H. van Nes, and Marten Scheffer
Early warning of climate tipping points: comparing methods to limit false alarms

XY333  EGU2011-1768
Stefano Pierini
On the low-order character of coherence resonance in the midlatitude wind-driven ocean circulation

XY334  EGU2011-4055
Alexander Feigin, Dmitry Mukhin, Andrey Gavrilov, and Eugeny Loskutov
Stochastic modeling of ENSO phenomena: low-dimensional prognostic model from time series

XY335  EGU2011-4115
Mojib Latif and Wonsun Park
Atlantic Meridional Overturning Circulation response to idealized solar forcing

XY336  EGU2011-4798
Christina Karamperidou, Francesco Cioffi, and Upmanu Lall
Surface Temperature Gradients and their relation to Mid-latitude Circulation Dynamics and inter-annual Precipitation variability: Trends and links to ENSO in Observations and Low-order Climate models.

XY337  EGU2011-5825
William I. Newman, Bruce D. Malamud, and Donald L. Turcotte
Statistical properties of record-breaking temperatures

XY338  EGU2011-6326
Sebastian Bathiany, Martin Claussen, and Klaus Fraedrich
On the mechanism of the vegetation collapse in the Sahara/Sahel at the end of the African Humid Period
Valerio Lucarini, Klaus Fraedrich, and Francesco Ragone
Thermodynamical properties of planetary fluid envelopes

Hannah Arnold, Tim Palmer, and Irene Moroz
Stochastic Parametrization and Model Uncertainty in the Lorenz ’96 System

Salvatore Pascale, Valerio Lucarini, and Robert Boschi
Snowball Earth hysteresis experiment with the FAMOUS coupled atmospheric-ocean general circulation model: thermodynamic and climatological analysis

Valerio Lucarini and Stefania Sarno
A Statistical Mechanical Approach for the Computation of the Climatic Response to General Forcings

Valerio Lucarini and Francesco Ragone
Energetics of climate models: Net energy balance and meridional enthalpy transport

Francesco Ragone, Hartmut Borth, and Klaus Fraedrich
Stochastic parameterization of atmospheric convection in a GCM (Planet Simulator)

Florian Sévellec and Alexey Fedorov
On the stability asymmetry of the glacial-interglacial cycle

Themistoklis P. Sapsis, Pierre P.F.J. Lermusiaux, and Mattheus P. Ueckermann
Stochastic Analysis of Double Gyre and Thermohaline Flows

Robert Niven and Hisashi Ozawa
Conditional Derivation of the Maximum Entropy Production Principle and its Application to Planetary Climate Systems

Sergey Gulev, Mojib Latif, and Noel Keenlyside
Role of air-sea fluxes in the North Atlantic climate variability on interdecadal and interannual time scales

Sydney Levitus
Multidecadal variability of the subpolar gyre of the North Atlantic

Katja Lohmann, Johann Jungclaus, Michael Botzet, Helmuth Haak, Stephan Lorenz, and Daniela Matei
Response of the (multi)decadal variability of the Atlantic meridional overturning circulation to suppressed variability in subpolar deep water formation (and overflows)

Shane Elipot, Chris Hughes, Eleanor Frajka-Williams, and Miguel Angel Morales Maqueda
Observed latitudinal coherence of the North Atlantic Meridional Overturning Circulation

Paul Halloran, Ian Totterdell, Matthew Mennary, Ben Booth, and Nick Dunstone
The Rise and Fall of the North Atlantic CO2 Sink

Daniela Matei, Johanna Baehr, Johann Jungclaus, Helmuth Haak, Wolfgang Müller, and Jochem Marotzke
Interannual predictions of the Atlantic Meridional Overturning Circulation at 26.5ºN

OS1.2/CL2.2 – The North Atlantic and climate (co-listed) – Orals
Convener: Monika Rhein | Co-Conveners: Richard Greatbatch
Room: D
Chairperson: Rhein

OS1.2/CL2.2 – The North Atlantic and climate (co-listed) – Posters
Convener: Monika Rhein | Co-Conveners: Richard Greatbatch
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Steinfeldt
Dmitry Sein, Uwe Mikolajewicz, Ernst Maier-Reimer, and Matthias Groeger
Downscaling of climate change A1B scenario projection on North Atlantic - European shelves ocean - atmosphere system

Dorotea Iovino, Christophe Herbaut, and Marie-Noelle Houssais
High-resolution modelling of sea-ice and ocean dynamics in the Nordic Seas

George Vanyushin, Anatoly Troshkov, Michail Kruzhalov, and Tatiana Bulatova
The Norwegian and Barents Seas: current temperature conditions (based on satellite data).

Steingrimur Jonsson and Hedinn Valdimarsson
Variability of volume and heat transport of water masses on the north Icelandic shelf

Eric de Boisseson, Virginie Thierry, Herle Mercier, and Guy Caniaux
Origin, formation and variability of the Subpolar Mode Water observed over the Reykjanes Ridge

John 'Paul' Spence, Oleg Saenko, Willem Sijp, and Mathew England
The role of bottom pressure torques on the interior pathways of North Atlantic Deep Water

Monika Rhein, Dagmar Kieke, and Reiner Steinfeldt
The Deep Western Boundary Current and its role for the propagation of newly formed deep water in the North Atlantic

Claudia Denker, Dagmar Kieke, Birgit Klein, Holger Klein, and Monika Rhein
Transport over the Mid-Atlantic-Ridge through the Faraday Fracture Zone

Damien Desbruyeres, Virginie Thierry, and Herlé Mercier
Long-term variability of the North Atlantic Current system in a realistic simulation

Linn Schneider, Dagmar Kieke, Monika Rhein, and Birgit Klein
Mixed layer evolution in the subpolar North Atlantic measured by Argo floats

Christian Uhe, Achim Roessler, and Monika Rhein
Transport variability in the North Atlantic Current inferred from satellite altimetry

Sandrine Mulet, Stéphanie Guinehut, Marie-Hélène Rio, Anne-Lise Dhomps, Laurent Bessieres, Gaël Nicolas, and Gilles Larnicol
Combination of in-situ and satellite observations to monitor the Ocean State: Application to the North Atlantic Ocean

Vassil Roussenov, Richard G. Williams, M. Susan Lozier, and Doug M. Smith
The effect of gyre-scale property changes on the North Atlantic overturning over the last 50 years

David Brayshaw, Brian Hoskins, and Michael Blackburn
North Atlantic sea surface temperatures and the structure of the atmospheric storm track

Mingming Li, Christian Mertens, Maren Walter, and Monika Rhein
Estimate of Diapycnal Mixing from eight Hydrographic Surveys in the Subpolar North Atlantic

Christopher Piecuch and Rui Ponte
Attributing Climate-Scale Variability in Atlantic Ocean Heat Storage

Matthias Koeller
Decadal Subpolar Gyre variability and relation to heat exchange in the Nordic Seas

Francisco Alvarez-Garcia, Maria J. OrtizBevia, and William CabosNarvaez
North Atlantic decadal variability: deconstructing the SST tripole

ben booth, paul halloran, and nick dunstone
Role of external drivers in historical Atlantic Temperature changes

Rita Lecci, Simona Masina, Annalisa Cherchi, and Marcelo Barreiro
Sensitivity of the Atlantic Thermohaline Circulation to extreme CO2 forcing
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<td>First glance on simulated fresh water releases around Greenland's coast and its impacts on the ocean circulation</td>
<td>Christian Rodehacke, Steffen Olsen, Gao Yongqi, Didier Swingedouw, Matthew Menary, Erik Behrens, Arne Biastoch, and Uwe Mikolajewicz</td>
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<td>Shoshibo Minobe, Masato Miyashita, Akira Kuwano-Yoshida, Hiroki Tokinaga, and Shang-Ping Xie</td>
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<td>Holocene Evolution of the Irminger Current: a Perspective from the Southwest Iceland Shelf</td>
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<td>Mi-Kyung Sung, Yoo-Geun Ham, Soon-Il An, and Jong-Seong Kug</td>
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<td>Constraining the MOC influence on the 20th century global temperature trends</td>
<td>Jacek Piskozub and Dorota Gutowska</td>
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<td>XY713</td>
<td>Coastal and Oceanic SST variability along the western Iberian Peninsula.</td>
<td>Harald Bartenstein, Ben Marzeion, and Helen Johnson</td>
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<td>XY714</td>
<td>Stratification-dependent Mixing in Box Model of a Wind-Driven Atlantic Overturning under Thermohaline Forcing</td>
<td>Anastase Alexandre Charantonis, Sylvie Thiria, Cyril Moulin, and Julien Brajard</td>
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Kristin Richter and Sönke Maus
Interannual variability in the hydrography of the Norwegian Atlantic Current: local forcing versus advection

XY717  EGU2011-8691
Sarah Taws, Robert Marsh, and Neil Wells
Decadal Changes in the Re-emergence of Sea Surface Temperature Anomalies in the Northeast Atlantic

XY718  EGU2011-8900
Yves Tanguy, Sylvie Thiria, and Sabine Arnault
Inversion of temperature profiles from satellite data in the tropical Atlantic based on Self Organizing Map

XY719  EGU2011-9215
Laure Zanna
Variability and Predictability of observed Atlantic sea surface temperatures

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Christopher W. Hughes, Shane Ellipot, Miguel Angel Morales Maqueda, and Rory Bingham
A window on the deep ocean: Demonstration that the steep western Atlantic continental slope acts to filter out mesoscale noise and provides a quiet window into the deep circulation.

XY721  EGU2011-9490
Paulo Oliveira and Álvaro Peliz
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XY722  EGU2011-9574
Maureen Conte and John C Weber
Seasonal, interannual and decadal patterns in deep ocean particle flux in the Sargasso Sea and linkage with upper ocean physics and biology

XY723  EGU2011-10610
Ilker Fer, Elin Darelius, and Detlef Quadfasel
Mesoscale variability of the Faroe Bank Channel Overflow

XY724  EGU2011-13059
Bente Tiedje, Armin Köhl, and Johanna Baehr
Potential predictability of the North Atlantic heat transport based on an oceanic state estimate
Wednesday, 06 April

**EOS04 – Contemporary Education in a Changing World (co-listed) – Orals**
Convener: Ana Maria Tarquis | Co-Conveners: Edith Perrier, Ruth Falconer, Rosa Benito, Encarnación Taguas, Anne Gobin, Rosa María González-Tirados, EVA VIDAL VÁZQUEZ, Mauro Messerotti, Jose Carlos Gonzalez-Hidalgo
**Room: 29**
Chairperson: Jose Manuel Antón

13:30–13:45 EGU2011-5131
*Rosa Maria González-Tirados* and Silvia Medina
Experimental Learning Styles: Results in Engineering and Architecture

13:45–14:00 EGU2011-10281
*John Isaacs*, Ruth Falconer, Daniel Gilmour, and David Blackwood
Visualisation & Modelling for Stakeholder Education in Sustainable Water Treatment

14:00–14:15 EGU2011-5079
*Leonor Rodríguez-Sinobas* and Raul Sanchez Calvo
Encouraging the learning of hydraulic engineering subjects: methodological proposals and evaluation of preliminary results

14:15–14:30 EGU2011-13764
*Janos Mika* and Ilona Pajtők-Tari
Ideas and practices for education of and by climate change

14:30–14:45 EGU2011-6911
*Rosa M. Benito*, Juan C. Losada, Francisco J. Arranz, and Luis Seidel
Interactive methodology based in e-learning to help the engineering students to understand concepts and practices

14:45–15:00 EGU2011-2615
*Martine Rutten*
A POGIL-based approach to teaching engineering Hydrology
Chairperson: Encarnación Taguas

15:30–15:45 EGU2011-2878
*Michael Mayer*
Improvement of sustainability in learning using a forum-based blended learning competition approach

15:45–16:00 EGU2011-11447
*Jose Maria Del Alamo*, Felix Cuadrado, Pedro Malagón, José Ignacio Fernandez Malagón, Rubén Trapero Burgos, and Rosa M. González-Tirados
Tutors of Final Project Degree Profile Analysis in Telecommunications

16:00–16:15 EGU2011-13206
*Mauro Messerotti*, Anna Gregorio, Alessandro Cuttin, Mario Fragiacomo, Sergio Carrato, and The AtmoCube Development Team
AtmoCube: a nanosatellite project as an effective educational framework

16:15–16:30 EGU2011-9250
*Jorge Paz-Ferreiro* and Eva Vidal Vázquez
Geostatistics in Soil Sciences, Agronomy and Environmental Sciences

16:30–16:45 EGU2011-12129
*Jenny Gilford*, Ruth Falconer, Rebecca Wade, and Kenneth Scott-Brown
Promoting Interest in Soil Sustainability Issues Using Interactive Virtual Environments

16:45–17:00 EGU2011-13240
*Cristina Aguilar*, Encarnación Taguas, and María José Polo
Integration of ICT tools in an Engineering Postgraduate Master Program

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**EOS04 – Contemporary Education in a Changing World (co-listed) – Posters**
Convener: Ana Maria Tarquis | Co-Conveners: Edith Perrier, Ruth Falconer, Rosa Benito, Encarnación Taguas, Anne Gobin, Rosa María González-Tirados, EVA VIDAL VÁZQUEZ, Mauro Messerotti, Jose Carlos Gonzalez-Hidalgo
**Hall XL | Display Time 08:00–19:30**
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Chairperson: Rosa Maria Gonzalez-Tirados

XL1 EGU2011-1626
*Kakha Nadiradze* and Nana Phirosmnashvili
Climate Change, Agriculture and Food Crisis and correlations
**XL2** EGU2011-9320  
**Heather Short**  
Positive feedbacks: using simple systems diagrams, the Himalayas, and ice core oxygen isotope data to introduce first-year college students to the complexities of Earth's climate system

**XL3** EGU2011-13412  
**hossien sharifan**  
Investigation of Equations for Actual ET in Salinity Conditions(wet Climate)

**XL4** EGU2011-9832  
Maria Angeles Mendiola and **Pedro Luis Aguado**  
Implementation of one course in the Open Course Ware from of Polithecnic University of Madrid, Spain. (OCW-UPM)

**XL5** EGU2011-13306  
M Dolores Redel Macías, Ramón Lara Raya, and **Encarnación Taguas**  
Collaborative learning in electronic engineering

**XL6** EGU2011-13234  
**Gabriel Gasco**, José Manuel Fidalgo, and Ana Méndez  
Advances in the organic waste management: Links between research, society and education

**XL7** EGU2011-13325  
**hossien sharifan**  
Teaching Actual Evaluation of Tomato by Epan In Wet Climate

**XL8** EGU2011-13198  
**hossien sharifan**  
Evaluation of Salinity effect on Water Temperature In Wet Climate

**XL9** EGU2011-11509  
**Augusto Arce**, Ana Maria Tarquis, Javier Caniego, Jesus Vazquez, Augusto Serrano, and Maria Carmen Cartagena  

**XL10** EGU2011-13763  
**Janos Mika**, Ildiko Dobi, and Anett Iadvy  
Circulation conditions of strong heat island in Budapest, with applications in weather forecasting and climate impact studies

**XL11** EGU2011-12077  
**Jose M Anton**, Juan B Grau, Ana M Tarquis, Rubén Moratiel, Silvia Medina, Fabregat Joaquin, Sánchez Elena, and Andina Diego  
Survey and brain storming studies about machines, constructions, human and environmental risk consideration in the careers of the Universidad Politécnica of Madrid

**XL12** EGU2011-4651  
Emilio Camacho, Sergio Castro, Alfonso García-Ferrer, Rosa Gallardo, Blanca Pizarro, and **Encarnación V. Taguas**  
Inter-generational experiences for encouraging the students of the first course of Agronomist and Forestry Engineering degrees

**XL13** EGU2011-6090  
Eva Vidal Vázquez and **Jorge Paz-Ferreiro**  
The role of soil classification in basic soil science disciplines

**XL14** EGU2011-11931  
Eva Vidal Vázquez, **Rafael Montanari**, and Jorge Paz-Ferreiro  
Darwin's contribution to Soil Biology

**XL15** EGU2011-13612  
**María José Polo**, Marta Egüen, and Cristina Aguilar  
Content structure and program development in "Transport and mixing in fluid flow"

**XL16** EGU2011-13815  
**Emilio Camacho**, Sergio Castro, Alfonso García-Ferrer, Rosa Gallardo, Blanca Pizarro, and Encarnación Taguas  
Exploring the *employability expectations*

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**GMPV12/NH2.4 – Measuring and modelling of volcano eruption dynamics (including 2011 Robert Wilhelm Bunsen Medal Lecture) (co-listed) – Orals**  
Convener: Tim Druitt | Co-Conveners: Olgeir Sigmarsson, Donald B. Dingwell, Augusto Neri, Ulrich Kueppers, Fred Witham  
**Room: 20**  
Chairperson: F. Witham

08:30–08:45 EGU2011-2782  
**Hiroshi Shinohara**  
Volcanic degassing by conduit magma convection: Links and gaps to magmatic volatiles
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| 08:45–09:00| EGU2011-4022  
**Frances Beckett**, Mike Burton, Heidy Mader, Jeremy Phillips, Margherita Polacci, Alison Rust, and Fred Witham  
Exchange flow experiments and implications for degassing processes at basaltic volcanoes |
| 09:00–09:15| EGU2011-12680  
**Fred Witham**, Jeremy Phillips, and Heidy Mader  
Modelling Volcanic Melt Inclusions and Gas Compositions and Periodicities from Fluid Mechanical and Petrological Experiments |
| 09:15–09:30| EGU2011-12727  
**Zachary Atlas**, Jeffrey Ryan, and Jacqueline Dixon  
Multi-stage degassing and volatile flux at Masaya Volcano, Nicaragua |
| 09:30–09:45| EGU2011-5904  
**Elisabetta Del Bello**, Edward W. Llewellyn, Jacopo Taddeucci, Piergiorgio Scarlato, and Steve J. Lane  
Magma drainage around rising gas slugs and burst overpressure in Strombolian eruptions |
| 09:45–10:00| EGU2011-8309  
**Mark Thomas** and Jurgen Neuberg  
Explaining multiple active seismic sources in ascending magma |
|            | COFFEE BREAK                                                                                   |
|            | Chairperson: T. Druitt  
10:30–11:30 | EGU2011-14176  
**Michael Manga** and Josef Dufek  
Interactions between small scale processes and large scale dynamics in pyroclastic density currents  
(Robert Wilhelm Bunsen Medal Lecture) |
| 11:30–11:45| EGU2011-9651  
**Alexander Belousov**, Marina Belousova, Herman Patia, and Richard Hoblitt  
Deposits and dynamics of the 1951 pyroclastic density current of Mount Lamington, Papua New Guinea |
| 11:45–12:00| EGU2011-2035  
**Bruno Cagnoli** and Giovanni Paolo Romano  
Mobility of Pyroclastic Flows |
|            | LUNCH BREAK  
Chairperson: A. Neri  
13:30–13:45 | EGU2011-11353  
**Chuck Connor**, Koji Kiyosugi, Laura Connor, Sarah Kruse, Kaz Mannen, and Leah Courtland  
Correcting Bias in Tephra Fallout Hazard Estimates Using Numerical Simulations |
| 13:45–14:00| EGU2011-13388  
**Freystein Sig mundsson**, Magnús Tumi Gudmundsson, Thor Thordarson, Sigrún Hreinsdóttir, Sigurlaug Hjaltadóttir, Kristín Vogfjörð, Olgeir Sigmarsson, Póra Árnadóttir, Andy Hooper, and Pórdur Arason  
Pulsating activity during the 2010 summit eruption of Eyjafjallajökull: Correlation of eruptive style, plume height, deformation, seismicity, earthquake tremor and chemical evolution of eruptive products |
| 14:00–14:15| EGU2011-12403  
**Claudia Spinetti**, Sara Barsotti, M. Fabrizia Buongiorno, Luca Nannipieri, and Augusto Neri  
Simulating and observing Icelandic ash cloud movements toward Italy |
| 14:15–14:30| EGU2011-3069  
**Matthew Scase**, Peter Holland, and Jeremy Phillips  
Modelling unsteady volcanic eruption columns and Vulcanian eruption columns |
| 14:30–14:45| EGU2011-5050  
**Fidel Costa**  
How to integrate petrology and magma process time scales with geophysical and geochemical volcano monitoring data? |
| 14:45–15:00| EGU2011-12622  
**Olgeir Sigmarsson** and **Michel Condomines**  
Time scales of magma mingling during the 2010 eruption of Eyjafjallajökull, Iceland  
Chairperson: U. Kueppers |
15:30–15:45 EGU2011-13980
Bruce F Houghton, Lauren A Swavely, Don A Swanson, and Rebecca J Carey
Volcanic ash from Halema'uma'u Kilauea in 2008: sensitive indicators of near surface process

15:45–16:00 EGU2011-5990
Jacopo Taddeucci, Piergiorgio Scarlato, Cristian Montanaro, Corrado Cimarelli, Elisabetta Del Bello, Carmela Freda, Daniele Andronico, Magnus Tumi Gudmundsson, and Donald Bruce Dingwell
Aggregation control on ash sedimentation from the Eyjafjallajökull volcanic cloud: insights from field and laboratory high-speed imaging

16:00–16:15 EGU2011-12157
Kai-Uwe Hess, Ulrich Kueppers, Corrado Cimarelli, Donald Bruce Dingwell, David S Rickerby, and Paul Madden
Volcanic Ash versus Turbine Ingestion Test Sands: Thermal Stability Experiments

16:15–16:30 EGU2011-9376
Orkun Ersoy, Erdal ?en, Gökhan At?c?, Erkan Aydar, ?ikan Tatar, and H.Hamdi Çelik
Changing morphology of accretionary lapilli further from the source (Zelve eruption, Cappadocia-Central Anatolia, Turkey)

16:30–16:45 EGU2011-13395
Thorvaldur Thordarson, Tanya Jude-Eton, Björn Oddsson, and Magnús Guðmundsson
Whole deposit grain size for the tephra of the 2004 Grímsvötn eruption, Iceland.

16:45–17:00 EGU2011-3634
David Jessop, Karim Kelfoun, Philippe Labazuy, Olivier Roche, and Anne Mangeney
LiDAR derived morphology of the 1993 Lascar pyroclastic flow deposits: implications for flow dynamics and rheology

GMPV12/NH2.4 – Measuring and modelling of volcano eruption dynamics (including 2011 Robert Wilhelm Bunsen Medal Lecture) (co-listed) – Posters
Convener: Tim Druitt | Co-Conveners: Olgeir Sigmarsson, Donald B. Dingwell, Augusto Neri, Ulrich Kueppers, Fred Witham
Hall A | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: T. Druitt

A156 EGU2011-2783
Hiroshi Shinohara and Hiroyuki Tanaka
Conduit magma convection of a rhyolitic magma: Constraints from cosmic-ray muon radiography of Satsuma-Iwojima, Japan

A157 EGU2011-3964
Nadezhda Ivanova and Melnik Oleg
Magnetic convection in a volcanic conduit.

A158 EGU2011-13315
Jeremy Phillips and Julius Baghdadi
Permeability Development in Volcanic Conduits during Persistent Degassing

A159 EGU2011-13428
Jeremy Phillips and Fred Witham
Magma Evolution due to Degassing and Circulation in Persistently-Active Volcanic Systems

A160 EGU2011-4253
Benoit Cordonnier, Michael Manga, and Boris Kauss
Dissection of crystal bearing melts rheology

A161 EGU2011-4268
Alejandra Arciniega-Ceballos, Miguel Alatorre-Ibargüengoitia, Bettina Scheu, Donald B Dingwell, and Hugo Delgado-Granados
Source parameters of eruptions generated by rapid decompression of volcanic rocks

A162 EGU2011-6225
Jacopo Taddeucci, Piergiorgio Scarlato, Miguel Alatorre-Ibargüengoitia and the GVS Team

A163 EGU2011-6985
Elisabetta Del Bello, Jacopo Taddeucci, Piergiorgio Scarlato, Daniele Andronico, Corrado Cimarelli, and Carmela Freda
High speed imaging of geysers as an analogue to Strombolian eruptions

A164 EGU2011-10296
Rosanna Smith, Bettina Scheu, Yan Lavallee, Philip Benson, Sandra Karl, and Donald Dingwell
Laboratory Studies of Volcanic Explosion Earthquakes

A165 EGU2011-8574
Andrea Rizzo, Mauro Martelli, Alberto Renzulli, Filippo Ridolfi, and Alberto Rosciglione
Noble gases signature of mantle beneath Stromboli (Aeolian Islands, Italy), as inferred from fluid inclusions investigation in mafic phenocrysts from HP-LP products and from ultramafic xenoliths
A166  EGU2011-8586
Antonio Paonita, Antonio Caracausi, Mauro Martelli, and Andrea Rizzo
Complex degassing processes at Mt Etna as inferred by the geochemistry of peripheral and crateric gas discharges

A167  EGU2011-9028
Fred Witham, Jonathan Blundy, Priscille Lesne, Simon Kohn, Jacqueline Dixon, Sergey Churakov, Roman Botcharnikov, and Harald Behrens
SoIEx: A Model for COHSCI Fluid Solubilities and Exsolved Gases in Basalts

A168  EGU2011-10220
Pietro Armienti, Cristina Perinelli, and Keith D. Putirka
An empirical hygrometer for trachybasaltic melts: applications to the kinetics of magma ascent at Mt. Etna.

A169  EGU2011-9085
Muriel Gerbault and Frederic Cappa
Internal overpressure and bedrock fluid-pore pressure conditions for failure around an inflating magmatic chamber: insight from hydromechanical elasto-plastic models

A170  EGU2011-1973
Guilhem Amin Douillet, Ulrich Kueppers, Daniel Alejandro Pacheco, Ève Tsang Hin Sun, Jean Letort, Tullio Ricci, and Donald Bruce Dingwell
Comparison of pyroclastic dune bedforms from Tungurahua, Laacher See, Ubehebe, and Stromboli volcanoes.

A171  EGU2011-7705
Daniele Andronico, Piergiorgio Scarlato, Corrado Cimarelli, Elisabetta Del Bello, Carmela Freda, Valeria Misiti, and Jacopo Taddeucci
Textural and compositional features of ash erupted between 18 and 22 May 2010 from Eyjafjallajökull

A172  EGU2011-661
Emma Gatti, Hema Achyuthan, Adam J. Durant, Vishwas S. Kale, Saidin Mokhtar, and Clive Oppenheimer
Insights into the Toba Super-Eruption using SEM Analysis of Ash Deposits.

A173  EGU2011-9440
Eruption and emplacement dynamics of a cinder cone named Karniyarik Tepe in Cappadocia region (Turkey).

A174  EGU2011-9785
Pierre Delmelle, Paul Ayris, Sam Shutkever, and Don Dingwell
SO2 and HCl scavenging by ash at high temperature in volcanic eruption plumes: insights from laboratory experiments

A175  EGU2011-12230
Fabien Albino, Virginie Pinel, Hélène Massol, and Marielle Collombet
Conditions for detection of ground deformation induced by conduit flow

A176  EGU2011-11999
Ulrich Kueppers, Bernhard Auer, Corrado Cimarelli, Teresa Scolamacchia, and Donald Bruce Dingwell
Experimentally constraining the boundary conditions for volcanic ash aggregation

A177  EGU2011-6365
Tim Druitt, Etienne Deloule, Fidel Costa, Mike Dungan, and Bruno Scaillet
Reservoir growth through mixing of different silicic magma batches prior to the Minoan eruption of Santorini

NP2.1 – ENSO: Dynamics, Predictability and Modelling – Orals
Convener: Eric Guilyardi | Co-Conveners: Andrew Wittenberg, A. Fedorov, Pascale Braconnot
Room: 18
Chairperson: Eric Guilyardi, Alexey Fedorov

08:30–08:45  EGU2011-4359
Michael McPhaden
The Changing Face of El Niño

08:45–09:00  EGU2011-2429
Tom Russon, Alexander Tudhope, Gabriele Hegerl, Mat Collins, and David Battisti
Towards evaluating natural forced and unforced variability in ENSO: strategies for model / paleo-proxy data inter-comparison

09:00–09:15  EGU2011-2362
Soon-Il An, Ji-Won Kim, Jae-Heung Park, and Seul-Hee Lim
Warming Trends of Tropical Pacific Warm Pool and Cold Tongue SSTs

09:15–09:30  EGU2011-2740
Benjamin Giese, Howard Seidel, and Sulagna Ray
Using SODA Ensemble Reanalyses to Describe ENSO 1871-2008
09:30–09:45  EGU2011-5104
James Lloyd, Eric Guilyardi, and Hilary Weller
The Role of Atmosphere Feedbacks During ENSO in AMIP CMIP3 Simulations

09:45–10:00  EGU2011-7236
Yukiko Imada, Jin Fei-Fei, Masahide Kimoto, and Masahiro Watanabe
ENSO amplitude change in doubled CO2 experiments evaluated by the temperature variance equation

10:00–10:15  EGU2011-6529
Wilco Hazeleger, Geert Jan van Oldenborgh, Karin van der Wiel, Xueli Wang, and Bert Wouters
Changes in ENSO characteristics in EC-Earth

NP2.1 – ENSO: Dynamics, Predictability and Modelling – Posters
Conveners: Eric Guilyardi | Co-Conveners: Andrew Wittenberg, A. Fedorov, Pascale Braconnot
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 13:30–15:00
Chairperson: Eric Guilyardi, Alexey Fedorov

XY417  EGU2011-4117
Sang-Wook Yeh, Jong-Yeon Park, Jong-Seong Kug, and Jinhee Yoon
Favorable conditions for Seasonal Footprinting Mechanism on ENSO

XY418  EGU2011-1350
Jorgen Frederiksen, Carsten Frederiksen, and Stacey Osbrough
Ensemble Predictions of Seasonal Variability with a Coupled Ocean-Atmosphere Model

XY419  EGU2011-1997
Michael Friedel
El Niño-Southern Oscillation (ENSO) phenomenon - event reconstruction and analysis over the past 2000 years

XY420  EGU2011-2408
Renaud Barbero and Vincent Moron
Modoki vs classical ENSO impacts in New Caledonia (166°E, 22°S) and South West Pacific

XY421  EGU2011-4092
Noel Keenlyside, Hui Ding, and Mojib Latif
Potential of equatorial Atlantic variability to enhance El Niño prediction

XY422  EGU2011-4726
Alexey Fedorov, Jaci Brown, and Eric Guilyardi
How well do coupled models replicate ocean energetics relevant to ENSO?

XY423  EGU2011-5041
Sukumaran Sandeep and Frode Stordal
Influence of ENSO on Extreme Precipitation

XY424  EGU2011-5200
Dietmar Dommenget
The Slab Ocean El Nino

XY425  EGU2011-5204
Mari Firpo and Clovis Sansigolo
Review of the relationships between ENSO and PDO

XY426  EGU2011-5311
Jong-Seong Kug and Yoo-Geun Ham
How well do climate models simulate two-types of El Nino?

XY427  EGU2011-5446
Yeon-Soo Jang, Jong-Seong Kug, Young-Ho Kim, and Dong-Hoon Kim
Two-types of El Niño simulated in climate model, its sensitivity to a physical parameterization

XY428  EGU2011-5666
Benoit Vanniere, Eric Guilyardi, Gurvan Madec, Francesco Doblas-Reyes, and Steve Woolnough
Understanding the origin of the Pacific cold tongue bias and its impact on ENSO using seasonal hindcasts

XY429  EGU2011-5890
Martin Großhauser, Ben Marzeion, Thomas Mölg, Marlis Hofer, and Irmgard Juen
Influence of ENSO on the atmospheric circulation over the complex topography of Cordillera Blanca, Peru

XY430  EGU2011-7802
Awnessh Singh, Thierry Delcroix, and Sophie Cravatte
Contrasting ENSO Events in the Tropical Pacific Using Sea Surface Salinity Observations

XY431  EGU2011-9807
yihua luan, Pascale Braconnot, and Yongqiang Yu
Seasonal cycle and ENSO changes induced by ice-sheet and obliquity in Early Holocene

XY432  EGU2011-9847
Jens Stoll, Katja Trachte, and Jörg Bendix
Simulations of ENSO and its impact on the tropical mountain rain forest in Ecuador
XY433  EGU2011-11605
Koen Verbist, Andrew W. Robertson, Wim M. Cornelis, and Donald Gabriels
Seasonal precipitation predictability in central-northern Chile for dryland management

XY434  EGU2011-11679
Gushchina Dasha and Dewitte Boris
Intraseasonal tropical atmosphere variability associated to canonical and Modoki El Niños

NP2.3/AS4.20/CL4.6/GM2.7/HS12.9 – Modelling and Understanding Geophysical Systems as Complex Networks
(co-organized) – Orals
Convener: Reik Donner | Co-Conveners: Jürgen Kurths, Wolfgang Schwanghart, Tobias Heckmann
Room: 13
Chairperson: n.n.

13:30–14:00 EGU2011-5364
Efi Foufoula, Ilya Zaliapin, Stefano Zanardo, Michael Ghil, Mary Power, and Bill Dietrich
Dynamic River Networks (DRNs): a new conceptual framework for modeling spatially explicit and
temporally dynamic fluxes connecting channels and landscapes

14:00–14:15 EGU2011-13541
A. Surjalal Sharma, Julia Cline, Aram Vartanyan, and Samuel Wascher
The magnetosphere as a multiscale complex network

14:15–14:30 EGU2011-2459
Norbert Marwan, Jonathan F. Donges, Friedrich-Wilhelm Gerstengarbe, Peter C. Werner, and Jürgen Kurths
Graph-theoretical analysis of regional climate variability

14:30–14:45 EGU2011-12874
Cristina Masoller, Marcelo Barreiro, and Arturo Marti
Inferring long memory processes in the climate network via nonlinear time series analysis

14:45–15:00 EGU2011-9579
Milan Palus, David Hartman, Martin Vejmelka, and Dagmar Novotna
(Tele)Connectivity in climate variability at different spatial/temporal scales in relation to solar and
geomagnetic activity

NP2.3/AS4.20/CL4.6/GM2.7/HS12.9 – Modelling and Understanding Geophysical Systems as Complex Networks
(co-organized) – Posters
Convener: Reik Donner | Co-Conveners: Jürgen Kurths, Wolfgang Schwanghart, Tobias Heckmann
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: n.n.

XY435  EGU2011-12579
Tobias Heckmann and Wolfgang Schwanghart
Graph theory as a tool for the analysis of cascading systems in geomorphology

XY436  EGU2011-11986
Wolfgang Schwanghart
Assessing the potential of time-slicing in numerical models of landscape evolution

XY437  EGU2011-13884
Jobst Heitzig, Jonathan F. Donges, and Jürgen Kurths
Agglomerative clustering of climate networks by representation optimization

XY438  EGU2011-11598
Jakob Runge, Jonathan Donges, and Jürgen Kurths
Climate Networks with Conditioned Links

XY439  EGU2011-2105
Jonathan Donges, Hanna C.H. Schultz, Norbert Marwan, Yong Zou, and Jürgen Kurths
Coupled climate networks for analysing the terrestrial atmosphere's vertical dynamical structure

XY440  EGU2011-4528
Kira Rehfeld, Norbert Marwan, Jonathan F. Donges, and Jürgen Kurths
Linear and nonlinear similarity measures for networks from irregularly sampled data

XY441  EGU2011-12883
Reik Donner, Jonathan F. Donges, Martin H. Trauth, Norbert Marwan, and Jürgen Kurths
Large-scale transitions in Plio-Pleistocene African dust flux dynamics identified by recurrence network analysis

XY442  EGU2011-11852
Reik Donner, Jobst Heitzig, Jonathan F. Donges, Yong Zou, Norbert Marwan, and Jürgen Kurths
The Geometry of Chaotic Dynamics - A Complex Network Perspective
**NP3.1 – Nonlinearity, scaling and complexity in the atmosphere, ocean and the climate system – Orals**

Convener: Valerio Lucarini | Co-Conveners: Shaun Lovejoy, Juan Manuel Lopez, Stefano Pierini, Christoph C. Raible, Klaus Dethloff, Eric Simonnet, Francois Schmitt, Louis de Monteria, Andreas Langousis, Armin Bunde, Alin Andrei Carsteau, Demetris Koutsoyiannis

**Room: 18**

Chairperson: Valerio Lucarini

10:30–10:45

**Sylvie Zongo**, François Schmitt, and Pascal Morin

Scaling properties of high frequency biogeochemical data from a ferry box

10:45–11:00

**Maëva Doron**, Pierre Brasseur, Jean-Michel Brankart, and Clément Fontana

A North Atlantic 3D coupled physical-biogeochemical model: a stochastic approach to estimate biogeochemical parameters from ocean color data using a nonlinear and non-Gaussian framework

11:00–11:15

**Alain Lefebvre** and Emilie Caillault

Study of the dynamic of the Phytoplankton bloom in the eastern English Channel using an high frequency instrumented station (MAREL) and a naive clustering classification method.

11:15–11:30

**Monika Winder**, Alan Jassby, and Ralph Mac Nally

Synergies between climate anomalies and hydrological modifications facilitate estuarine biotic invasions

11:30–11:45

**Peter Dittevensen**

Threshold dynamics: The case of Dansgaard-Oeschger rapid climate shifts

11:45–12:00

**Thierry Penduff**, Mélanie Juza, Bernard Barnier, Jan Zika, William K. Dewar, Anne-Marie Treguier, Jean-Marc Molines, and Nicole Audiffren

Sea-level expression of intrinsic and forced interannual variabilities: a global OGCM study.

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**LUNCH BREAK**

Chairperson: Francois Schmitt

13:30–13:45

**Bruno Deremble**, Eric Simonnet, and Michael Ghil

Atmospheric low-frequency variability induced by an oceanic SST front in an idealized model

13:45–14:00

**Davide Faranda**, Valerio Lucarini, Sandro Vaienti, and Giorgio Turchetti

Numerical convergence of the block-maxima approach to the Generalized Extreme Value distribution through an application of Freitas’ Theorem

14:00–14:15

**Nicholas Watkins**, Dan Credgington, Sam Rosenberg, Bogdan Hnat, Sandra Chapman, Nicola Longden, and Mervyn Freeman

How well does a minimal monofractal model capture the scaling of extreme bursty fluctuations in space plasmas?

14:15–14:30

**George Fitton**, Ioulia Tchiguirinskaia, Daniel Schertzer, and Shaun Lovejoy

Multiscale analysis of wind energy fluctuations
14:30–14:45  EGU2011-2906
Shlomo Havlin, Avi Gozolchiani, and Kazuko Yamasaki
The Emergence of El-Niño as an Autonomous Component in the Climate Network

14:45–15:00  EGU2011-7844
Alvaro Corral, Albert Osso, and Josep Enric Llebot
Power Law and Scaling in the Energy of Tropical Cyclones

15:00–15:15  EGU2011-13280
Daniel Schertzer, Ioulia Tchiguirinskaia, and Shaan Lovejoy
Dragon-Kings or Dragon-Fools? Outliers or Extremes?

NP3.1 – Nonlinearity, scaling and complexity in the atmosphere, ocean and the climate system – Posters
Convener: Valerio Lucarini | Co-Conveners: Shaan Lovejoy, Juan Manuel Lopez, Stefano Pierini, Christoph C. Raible, Klaus Dethloff, Eric Simonnet, Francois Schmitt, Louis de Montera, Andreas Langousis, Armin Bunde, Alin Andrei Carsteaun, Demetris Koutsoyiannis

Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Andreas Langousis

XY447  EGU2011-1585
Alexandre Chmel and Victor Smirnov
Non-extensive energy release in fracturing sea ice

XY448  EGU2011-1763
Louis de Montera
Multi-scaling properties of remotely sensed oceanic chlorophyll maps

XY449  EGU2011-1771
Stefano Pierini
Intrinsic low-frequency variability in a low-order model of the wind-driven ocean circulation

XY450  EGU2011-2600
Eileen Dahms, Frank Lunkeit, and Klaus Fraedrich
Low-frequency variability of an Aquaplanet with a coupled atmosphere-ocean general circulation model

XY451  EGU2011-5319
Jiang-Shiou Hwang, Sami Souissi, Li-Chun Tseng, Juan Carlos Molinero, Qing-Chao Chen, and Chong Kim Wong
Effects of NE monsoon on the distribution and abundance of Calanus sinicus in the waters of Taiwan, western North Pacific Ocean

XY452  EGU2011-5795
Alexander Glushkov, Eduard Serga, Denis Sukharev, and Elena Solyanikova
Fractal Features of the Large-scaled Low Frequency Atmospheric Processes and Structures: Energy and Angle Moment Balance Approach

XY453  EGU2011-5949
Manolis Grillakis, Ioannis Tsanis, and Aristeidis Koutoulis
 Parsimony in hydrological flash flood modeling

XY454  EGU2011-6020
Andrea Cimatoribus, Sybren Drijfhout, and Gerard van der Schrier
Dansgaard-Oeschger events: bifurcations in the climate system

XY455  EGU2011-6876
Pascal Morin, Thierry Cariou, Eric Macé, Stefan Raimund, Yann Bozec, Sylvie Brizard Zongo, and François Schmitt
Long term physico-chemical time series in the southern part of the Western English Channel (1985-2010): Comparison between low frequency and recent high frequency measurements obtained from in situ sensors.

XY456  EGU2011-7215
Sebastien Verrier, Laurent Barthès, and Cécile Mallet
Multifractality of a high-resolution rainfall time series and assessment of the zero rain rate effect from standard and weighted analysis procedures

XY458  EGU2011-7521
Nathaniel Brunsell, Lee Miller, and Axel Kleidon
Influence of dissipation on the spatial structure of the atmospheric boundary layer

XY459  EGU2011-7753
Anna Deluca, Ole Peters, Alvaro Corral, J. David Neelin, and Christopher E. Holloway
Universality of rain event size distributions

XY460  EGU2011-8355
Ulrike Keeß, Stamen Dolaptchiev, and Ulrich Achatz
A reduced semiempirical model for the barotropic dynamics of the atmosphere
NP3.2 – Geocomplexity: Patterns and Processes in the Geosciences – Orals

Convener: Cristian Suteanu | Co-Conveners: Jörn H. Kruhl, Richard Gioaguen, Olga Hachay, Jost von Hardenberg, Ulrike Feudel, Nadia Ursino

Room: 18
Chairperson: Jörn H. Kruhl

XY461 EGU2011-8530
Christoph Hauer, Gerald Krapesch, and Helmut Habersack
Extremes in river morphodynamics on various scales: Basics for hazard analysis and river restoration

XY462 EGU2011-8984
Giovanni Sgubin, Stefano Pierini, and Henk A. Dijkstra
Mechanisms of intrinsic variability and teleconnection in the Antarctic Circumpolar Current

XY463 EGU2011-9021
Rudy Caliò and François G. Schmitt
Multifractal analysis of wind velocity and output power from a wind farm, for high and low frequencies.

XY464 EGU2011-9397
Brian Watson and Shaun Lovejoy
Radiance Field Statistics in Two-Dimensional Multifractal Clouds

XY465 EGU2011-9694
Klaus Dethloff, Henning Kurzke, Michael Kurgansky, Dörthe Handorf, Dirk Olbers, Carsten Eden, and Mario Sempf
Southern Hemisphere extra-tropical climate variability in an idealized coupled atmosphere-ocean model

XY466 EGU2011-9956
Lene Østvand, Kristoffer Rypdal, and Martin Rypdal
Universal Hurst exponent of local and global Earth temperature records?

XY467 EGU2011-10866
Laurent Drapeau, Sylvain Mangiarotti, and Raphael Coudret
Generic tools for a deterministic modelling of partially observed and poorly known dynamical systems

XY468 EGU2011-11074
Joel Hirschi, Adam Blaker, Bablu Sinha, Steven Alderson, Andrew Coward, Beverly de Cuevas, and Gurvan Madec
Chaotic and deterministic variability of the meridional overturning circulation on subannual to interannual timescales

XY469 EGU2011-11460
Benjamin Quiroz-Martinez, François G. Schmitt, Jean-Claude Dauvin, and Jean-Marie Dewarumez
Temporal and spatial scaling properties in polychaete populations from the North Atlantic European continental shelf

XY470 EGU2011-11930
Konstantin Korotenko, Alexei Sentichev, and Nicolais Jouanneau
High-resolution numerical model for predicting the transport and dispersal of chemicals resulting from accidental blowouts in the eastern English Channel

XY471 EGU2011-12924
Ana Margarida Ricardo, Mário J. Franca, and Rui Ferreira
Anisotropic turbulent flow in flows within emergent rigid vegetation

XY472 EGU2011-13009
Tatjana Zivkovic
The predictability analysis of the annual temperature reconstructions

XY473 EGU2011-13434
François Schmitt and Sylvie B Zongo
Power-law intermittent ratio distributions in marine ecology

XY474 EGU2011-13823
Kailasam Muni Krishna
Biological (Chlorophyll-a) changes due to the stir of cyclone JAl near Myanmar coast in the Bay of Bengal

XY475 EGU2011-13825
Ravichadran Ramanibai and Jordi Shanthi
Seasonal profiles of copepod abundance and diversity in relation to water masses in the coastal ecosystem of Chennai, bay of Bengal, India

XY476 EGU2011-487
Avi Gozolchiani, Kazuko Yamasaki, and Shlomo Havlin
Does the Eastern Pacific Act Like an Autonomous Component?

XY477 EGU2011-8683
Shaun Lovejoy, Julien Pinel, and Daniel Schertzer
The Global space-time Cascade structure of precipitation: satellites, gauges and reanalyses
15:30–15:45 EGU2011-4483  
Arkady Pikovsky and Arthur Straube  
Mixing-induced pattern formation in an open active flow

15:45–16:00 EGU2011-10386  
Samir Suweis, Enrico Bertuzzo, Lorenzo Mari, Amos Maritan, Ignacio Rodríguez-Iturbe, and Andrea Rinaldo  
Scaling and Universality of Species Lifetimes

16:00–16:15 EGU2011-8950  
Steve Meacham  
The Dynamics of Biological Fronts

16:15–16:30 EGU2011-12245  
Ulrike Feudel, Jens C. Zahnow, Rafael Vilela, and Tamas Tel  
Aggregation and fragmentation of inertial particles in chaotic advection and random flows

16:30–16:45 EGU2011-8786  
Jörn H. Kruhl, Mark Peternell, and Axel Gerik  
Quantification of anisotropy and inhomogeneity of complex fabrics by modified fractal geometry methods

16:45–17:00 EGU2011-894  
Peter Horne, Cristian Suteanu, Danika van Proosdij, and Greg Baker  
Elevation-dependent multi-scale analysis of a complex inter-tidal zone

17:00–17:15 EGU2011-1528  
Olga Hachay, Andrey Khachay, and Oleg Khachay  
Construction of a state evolution dynamical model of a rock massive, which is in a regime of energetic pumping

NP3.2 – Geocomplexity: Patterns and Processes in the Geosciences – Posters  
Convener: Cristian Suteanu | Co-Conveners: Jörn H. Kruhl, Richard Gloaguen, Olga Hachay, Jost von Hardenberg, Ulrike Feudel, Nadia Ursino

Halls X/Y | Display Time 08:00–19:30  
Author in Attendance: 17:30–19:00  
Chairperson: Jost von Hardenberg

XY478 EGU2011-12376  
Faisal Shahzad and Richard Gloaguen  
Geometrical properties of evolving drainage systems in active orogens

XY479 EGU2011-1889  
Wolfgang Keller and Jitka Hajkova  
Representation of planar integral-transformations by 4-D wavelet decomposition

XY480 EGU2011-1343  
Athina Kattimeri, Rick J. Munro, and Matthew M. Scase  
Time-dependent plume pinch-off with reducing driving source conditions in uniform environments

XY481 EGU2011-8590  
Cristian Suteanu and Jörn H. Kruhl  
Space-time pattern change identification and quantification: applications regarding volcanic seismicity

XY482 EGU2011-7273  
Berengere Dubrul, Aurore Naso, and Pierre-Henri Chavanis  
Statistical mechanics of Fofonoff flows in an oceanic basin

XY483 EGU2011-1530  
Yurie Khachay and Olga Hachay  
Red Sea rift is a unique object of experimental research of the structure of mantle convection.

XY484 EGU2011-651  
Kseniya Vandysheva and Vladimir Phylatov  
Studying of nonlinear deforming processes of geological environment by gravimetric means

XY485 EGU2011-1115  
Olga Hachay, Magdy A. Atya, Said A. Ragab, Mamdoh M. Soliman, Gad M, El-Qady, and Oleg Yu. Hachay  
Employment of the Electromagnetic Techniques to Investigate the Near Surface Structures along Ferran to ST. KATRINA Road, South SINAI, EGYPT

XY487 EGU2011-13337  
Jost von Hardenberg and Francesco Paparella  
Large-scale cluster formation in fingering convection

HS2.21/NP3.13 – Scaling, subgrid models, downscaling and parameterization (co-organized) – Orals  
Convener: Marc Parlange | Co-Conveners: Charles Meneveau, Isabel de Lima  
Room: 36  
Chairperson: Marc Parlange
### Regularization modeling of buoyancy driven turbulent flow

**Bernard Geurts**

Regularization modeling of buoyancy driven turbulent flow

### Sensitivity of streamflow components to spatial variability of meteorological forcing in high alpine watersheds: application of a wireless sensor network

**Alessandra Marzadri, Daniele Tonina, and Alberto Bellin**

A semi-analytical three-dimensional process-based model for hyporheic dissolved oxygen and nitrogen dynamics in gravel bed rivers

### Reactive transport on multiscale networks: controls and drivers of large-scale cholera outbreaks

**Andrea Rinaldo, Enrico Bertuzzo, Lorenzo Mari, Lorenzo Righetto, Marino Gatto, Renato Casagrandi, and Ignacio Rodriguez-Iturbe**

Reactive transport on multiscale networks: controls and drivers of large-scale cholera outbreaks

### Parameterization of the stable ABL in climate models: understanding the effects of stability, model resolution, and the need for excessively high turbulent diffusivities

**Paolo D’Odorico, Yufei He, Stephan DeWekker, Scott L. Collins, William T. Pockman, Marcy Litvak, and Jose D. Fuentes**

Parameterization of the stable ABL in climate models: understanding the effects of stability, model resolution, and the need for excessively high turbulent diffusivities
A277  EGU2011-10607
Chad Higgins, Martin Froidevaux, Valentin Simeonov, Gabriel Katul, and Marc Parlange
Field Measurements of spatial and temporal turbulence statistics: testing ergodicity with a Raman Lidar.

A278  EGU2011-14058
Martin Froidevaux, Chad Higgins, Valentin Simeonov, and Marc Parlange
Simple atmospheric turbulence analysis made possible by a high resolution Raman Lidar

A279  EGU2011-13882
Nikki Vercauteren, Hendrik Huwald, Elie Bou-Zeid, John S. Selker, Ulrich Lemmin, Marc B. Parlange, and Ivan Lunati
Evolution of Superficial Lake Water Temperature Profile Under Diurnal Radiative Forcing

A280  EGU2011-9566
Elie Bou-Zeid and Stimit Shah
Large eddy simulation of statically stable atmospheric boundary layers: the effect of stability on SGS modeling

A281  EGU2011-12749
Miguel Barrios and Félix Francés
Parameterization of subgrid heterogeneities for hydrologic modelling

A282  EGU2011-13956
Isabel de Lima
Scaling analysis tools applied to high-resolution rainfall time series

A283  EGU2011-11380
Boris Orlowsky and Sonia I. Seneviratne
Estimating the spatial representativeness of stations over Europe

NP5.1 – Nonlinear instabilities and predictability – Orals
Convener: Zoltan Toth | Co-Conveners: Stéphane Vannitsem, C. Reynolds, I. Szunyogh, Mu Mu, Wansuo Duan, Ayrton Zadra, Juan Manuel Lopez, Diego Pazó, Sarah Hallerberg
Room: 13
Chairperson: Mu Mu

08:30–08:45  EGU2011-5025
Bernard Legras, Guillaume Lapeyre, and Pietro Peterlongo
Lyapunov covariant modes and predictability

08:45–09:00  EGU2011-2863
Youmin Tang
Seasonal climate predictability in multiple model ensembles

09:00–09:15  EGU2011-5176
Florian Sévellec and Alexey Fedorov
Quantifying the limits of oceanic decadal predictability

09:15–09:30  EGU2011-5455
Jianping Li and Ruiqiang Ding
Relationship between the predictability limit and initial error in chaotic systems

09:30–09:45  EGU2011-4977
Leonid Ivanov, Robin T. Tokmakian, Curtis A. Collins, and Tetyana Margolina
Nonlinear sensitivity analysis for small model ensembles

09:45–10:00  EGU2011-5415
Stéphane Vannitsem and Aimé Fournier
Dynamics of the error and Lyapunov instability of a moist low-order climate model

COFFEE BREAK

Chairperson: Juan M Lopez

10:30–10:45  EGU2011-5787
Uwe Harlander, Torsten Seelig, and Robin Faulwetter
Singular vector growth in different flow regimes of the differentially heated rotating annulus

10:45–11:00  EGU2011-4717
Bin Wang and Juanjuan Liu
Dimension-reduced projection 4DVar based on an orthogonal expansion of filtering function

11:00–11:15  EGU2011-14068
José Gutiérrez, Miguel A. Rodríguez, Sixto Herrera, and Jesús Fernández
The MVL Diagram for Fingerprinting GCMs and Ensemble Prediction Systems
Chiara Marsigli, Andrea Montani, and Tiziana Paccagnella
Development of an ensemble forecasting system for the short-range following different perturbation approaches.

Isidora Jankov
Convective Initiation using Diabatic Local Analysis and Prediction System and Weather Research Forecasting Model

Jan Keller, Andreas Hense, and Andreas Rhodin
A regional ensemble prediction system based on Ensemble Transform Bred Vectors (ETBV)

The "spring predictability barrier" for ENSO predictions and its possible mechanism: results from a fully coupled model

Maximizing the statistical diversity of an ensemble of bred vectors by using the geometric norm

Does model parameter error in the Zebiak-Cane model cause a significant spring predictability barrier in its El Niño prediction?

Dynamics of nonlinear error growth and season-dependent predictability of El Nino events in the Zebiak-Cane model

Rescaled Bred Vectors: 'À la carte' ensemble diversity

Application of conditional nonlinear optimal perturbations method to transitions of Kuroshio path south of Japan

Algorithms for the integration of variational equations of multidimensional Hamiltonian systems

Response of the grassland ecosystem equilibrium state to climate change within a theoretical model

Exploring seasonal variation characters on the net primary production by conditional nonlinear optimal perturbation in China

Parallel Ensemble-based Approach for the Computation of Conditional Nonlinear Optimal Perturbation

Assimilation of asymmetric dropsonde data and a bogus vortex using a 4DVar system

Faming Wang
Predictability of stochastic climate models with red noise

Alberto Carrassi and Stephane Vannitsem
Treatment of the error due to unresolved scales in sequential data assimilation

Shigehisa Nakamura
Inclination stability of the planet rotation axis in the solar system

Bert Van Schaeybroeck and Stéphane Vannitsem
The use of tendencies for post-processing. Analysis of the YOTC forecast data.

Emmanuel Roulin and Stéphane Vannitsem
Post-processing of ensemble precipitation predictions with extended logistic regression based on hindcasts

Jochen Broecker
Forecast sufficiency and scoring rules

Daniel Gombos and Ross Hoffman
Ensemble regression exigent analysis applied to a case of Florida citrus damage

Elizabeth Gorbunenko and Galyna Sokol
DEVELOPMENT of OSCILLATIONS THEORY by PROFESSORS of S.N. KOZHEVNIKOV And I.K. KOSKO.

Xiaodong Luo and Ibrahim Hoteit
Robust ensemble filtering in handling uncertainties in data assimilation

Sabrina Bentzien and Petra Friederichs
Probabilistic precipitation forecasts based on the COSMO-DE time-lagged ensemble

Isidora Jankov
Sensitivity of Weather Forecasts over North America to Cycling of Initial Conditions

xiaogu zheng and xiao liang
Maximum Likelihood Estimation of Inflation Factors of Error Covariance Matrices for Ensemble Kalman Filter Assimilation

Carmen J. Nappo
The Influence of Wave-Like Disturbances on Turbulence in the Very Stable Planetary Boundary Layer

Felipe Costa and Otávio Acevedo
Implications of using stability functions in modeling the nocturnal stable boundary layer

Francesco Tampieri, Samuel Viana, and Carlos Yagüe
Studying the height of atmospheric stable boundary layer from turbulence moments at different heights

Ann-Sofi Smedman and Erik Nilsson
Structure of turbulence in ‘the eddy surface layer’

Christophe Brun, Sébastien Blein, and Jean-Pierre Chollet
Role of Görtler vortices on the turbulent mixing in a katabatic flow along a curved slope for stably stratified atmospheric boundary layer. Application to real mountain slopes in the Alps.
NP7.1/OS5.3 – Nonlinear waves, wind-wave-current interactions, internal waves in stratified media and ocean mixing and coastal hydromorphology (co-organized) – Posters
Convener: Vincent Rey | Co-Conveners: Lev Ostrovsky, M. Stive, Philippe Fraunie, Vincent Rey, Margarita Diez, Pascale Bouruet-Aubertot
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 10:30–12:00
Chairperson: Pascale Bouruet-Aubertot

XY514  EGU2011-1035  
Philippe Fraunie, Jose M Redondo, and Anna Matulka
Detection of waves and vortices in North Western Mediterranean

XY515  EGU2011-2582  
Roham Bakhtyar, Alessandro Brovelli, and David Andrew Barry
Effects of wave characteristics and beach groundwater table on the nearshore morphology and aquifer dynamics

XY516  EGU2011-4864  
Yiling Yang, Ren-Chieh Lien, Ming-Huei Chang, and Tseen Yung Tang
Pressure perturbations induced by mode-1 depression internal solitary waves

XY517  EGU2011-4363  
Ekaterina Ruvinskaya, Oxana Kurkina, Andrey Kurkin, Alexey Kuzin, and Michail Barenboim
Nonlinear dynamics of intensive internal waves in bounded stratified basins

XY518  EGU2011-7296  
Qiang Wang, Tao Xing, and Weidong Zhou
Topographic-Rossby Wave on the shelf of the northern South China Sea investigated by the numerical model

XY519  EGU2011-7698  
Mostafa Bakhtoday Paskyabi, Ilker Fer, and Alastair D. Jenkins
Wind-wave and current interactions in the upper ocean

XY520  EGU2011-10111  
Sagar Bora, Segey Danilov, and Gerrit Lohmann
Wave sensitivity to grid resolution, frequency, and pathways

XY521  EGU2011-2978  
Maria Obregon, Ramon Fernandez-Feria, and Yury Stepanyants
Stationary solutions of the extended reduced Ostrovsky equation

XY522  EGU2011-1406  
B. Edward McDonald
Bidirectional and unidirectional waves in Hertzian chains

XY523  EGU2011-7043  
Julien Touboul and Vincent Rey
Bottom pressure distribution due to wave reflection at a submerged obstacle

NH5.3/NP7.3/OS2.5 – Nonlinear Dynamics of the Coastal Zone (co-organized) – Orals
Convener: Ira Didenkulova | Co-Conveners: Efim Pelinovsky
Room: 4
Chairperson: n.n.

13:30–13:45  EGU2011-3048  
Geir Pedersen
Stationary runup patterns on a sloping beach

13:45–14:00  EGU2011-5389  
Valery Liapidevskii
Shallow water equations for breaking surface waves

14:00–14:15  EGU2011-103  
Ira Didenkulova and Efim Pelinovsky
Nonlinear wave evolution and runup in inclined channels

14:15–14:30  EGU2011-8891  
Alec Torres-Freyermuth, Jack A. Puleo, Duvaraba Pokrajac, and Paulo Salles
RANS Modelling of Swash Zone Hydrodynamics
14:30–14:45  EGU2011-3200
Deepak Vatvani, Niels Zweers, Hans de Vries, Vladimir Makin, and Maarten van Ormondt
Storm surge and wave simulations in the Gulf of Mexico using a consistent drag relation for atmospheric
and storm surge models

14:45–15:00  EGU2011-1692
Eugene Morozov, Alexey Marchenko, and Sergey Muzylev
Supercooling and water structure near the fjord glacier

Chairperson: n.n.

15:30–15:45  EGU2011-13867
Chiang C. Mei, I-Chi Chan, Philip L.-F. Liu, Zhenhua Huang, and Weiguo Zhang
Long waves through emergent coastal vegetation

15:45–16:00  EGU2011-1935
Roger Grimshaw and Evans Osaisai
A simple model of the effect of bottom sediment transport on wave set-up

16:00–16:15  EGU2011-12030
Tatyana Lyubimova, Yanina Parshakova, Natalya Shumilova, Shengping Luo, and Bernard Roux
Modeling of the near-field distribution of pollutants from a multi-port coastal outfall

16:15–16:30  EGU2011-4680
Boris Katsnelson, Mohsen Badiey, and James Lynch
Observation of nonlinear internal waves in the Shallow Water 2006 experiment and interference of
low-frequency sound waves in the long-range propagation

16:30–16:45  EGU2011-11369
Yannis Cuypers, Pascale Bouret Aubertot, Pascal Lazure, Antonio Lourenço, Michel Lunven, Marc
Sourrceau, and Lourdes Velo-Suarez
Non-linear internal tides, turbulent mixing and their impact on phytoplankton distribution in the continental
shelf of South Brittany

16:45–17:00  EGU2011-3551
Tim Boyd, Mark Inall, Dumont Estelle, and Griffiths Colin
AUV observations of mixing in the tidal outflow from a Scottish sea loch

NH5.3/NP7.3/OS2.5 – Nonlinear Dynamics of the Coastal Zone (co-organized) – Posters
Convener: Ira Didenkulova | Co-Conveners: Efim Pelinovsky
Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 17:30–19:00
Chairperson: Ira Didenkulova, Efim Pelinovsky

XY342  EGU2011-44
Ekaterina Shurgalina and Efim Pelinovsky
Formation of an abnormal wave in case of interaction with a vertical barrier

XY343  EGU2011-4628
My Ha Dao, Eng Soon Chan, and Pavel Tkach
Fine-scale processes of plunging wave in deep water

XY344  EGU2011-8505
Erick Javier Lopez Sanchez and Gerardo Ruiz Chavarria
Numerical study of particle transport due to periodic movement of water in a system of two oceanic basins
connected by a channel

XY345  EGU2011-4279
Olga Shishkina
Linear and non-linear mechanisms of formation of edge internal waves in the shelf zone

XY346  EGU2011-4865
Alexander Yankovsky, Legna Torres-Garcia, and Raymond Torres
Interaction of tides, river discharge and bathymetric forms in the Santee River, SC, USA

XY347  EGU2011-12323
Anatoliy Filonov and Iryna Tereshchenko
The high amplitude internal waves generated at San Esteban sill in the Gulf of California

XY348  EGU2011-62
Artem Rodin and Efim Pelinovsky
Large-amplitude simple and shock waves in shallow water

XY349  EGU2011-5069
Onno Bokhove, Elena Gagarina, Anthony Thornton, Jaap van der Vegt, and Wout Zweers
Bore Soliton Splash

XY350  EGU2011-830
Adrien Poupardin, Nicolas Bourneton, Grégory Pinon, Elie Rivoalen, Jérôme Brossard, and Gaëlle Perret
Vortex dynamics around an immersed structure
XY351  EGU2011-105
   Ira Didenkulova and Efim Pelinovsky
   Long wave interaction with the sea wall in a basin of variable depth

XY352  EGU2011-109
   Irina Nikolkina, Ira Didenkulova, Efim Pelinovsky, and Narcisse Zahibo
   Runup of landslide-generated waves

XY353  EGU2011-5111
   Petr Denissenko, Ira Didenkulova, Jonathan Pearson, and Efim Pelinovsky
   Statistical characteristics of the non-linear run-up measured in a wave flume

XY354  EGU2011-4484
   Byung Ho Choi, Victor Kaistrenko, Efim Pelinovsky, Kyeong Ok Kim, and Byung Il Min
   Combination of 2D numerical simulations of long waves in a basin of variable depth with 1D analytical runup formulae

XY355  EGU2011-104
   Ira Didenkulova, Efim Pelinovsky, Tarmo Soomere, Kevin Parnell, and Maija Viška
   Beach response on the interplay of two wave systems: ship wakes and winds waves

XY356  EGU2011-7894
   claude Vella, francisco Demory, victor Canut, philippe Dussouillez, and Thomas Jules Fleury
   First evidence of accumulation of mega boulders on the Mediterranean rocky coast of Provence (southern France).
Thursday, 07 April

**NP3.7 – Geophysical Downscaling Methods – Orals**
Convener: Tobias Sauter | Co-Conveners: Victor Venema, Douglas Maraun, Erika Coppola

**Room: 13**
Chairperson: Douglas Maraun

13:30–13:45 EGU2011-3764
Xavier Beuchat, Bettina Schaeffli, André Mermoud, and Marc Soutter
Toward a robust method for sub-daily rainfall downscaling from daily data

13:45–14:00 EGU2011-8826
Matthieu Lafaysse, Benoît Hingray, Joël Gailhard, and Abdelkader Mezghani
Evaluating the temporal transferability of statistical downscaling models for climate change impact studies.

14:00–14:15 EGU2011-11395
Abdelkader Mezghani and Benoît Hingray
Statistical downscaling of precipitation: interest of moisture variables

14:15–14:30 EGU2011-7963
Tobias Sauter and Victor Venema
Natural three-dimensional predictor domains for statistical precipitation downscaling

14:30–14:45 EGU2011-6410
Simona Barbarino, Daniele Cane, and Christian Ronchi
Regional climate model downscaling with Multimodel SuperEnsemble in the Alpine area and wildfire potential evaluation in the scenario

14:45–15:00 EGU2011-1139
Amadou Idrissa BOKOYE
Assessment of the influence of the global climate model (GCM) generation on Empirical Statistical Downscaling outputs: A case study from Canadian GCMs

08:30–08:45 EGU2011-871
Agathe Giangola-Murzyn, Ioulia Tchiguirinskaia, Daniel Schertzer, and Shaun Lovejoy
Scale and complexity of urban hydrology

08:45–09:00 EGU2011-1305
Demetris Koutsoyiannis and Simon-Michael Papalexiou
Scaling as enhanced uncertainty

09:00–09:15 EGU2011-4119
Armin Bunde and Mikhail Bogachev
Universal Scaling Features in Precipitation and River Flows

09:15–09:30 EGU2011-5447
Alexis Berne, Joel Jaffrain, and Marc Schleiss
Small-scale variability of the raindrop size distribution

09:30–09:45 EGU2011-1358
Lucia Mancini, Francesco Brun, Diego Dreossi, Georgios Kourousias, Margherita Polacci, Marco Volotini, and Giuliana Tromba
The Pore3D software library applied to the quantitative morphological and textural analysis of three-dimensional images in geosciences

09:45–10:00 EGU2011-1596
Francisco Jose Jimenez-Hornero, Eduardo Gutierrez de Rave, Juan V. Giraldez, and Jorge E. Jimenez-Hornero
Application of lattice Boltzmann simulations and multifractal analysis to describe the simulated flow velocity in idealised porous media
COFFEE BREAK

Chairperson: F.J. Jimenez-Hornero

10:30–10:45 EGU2011-1747
Carsten Schilli, Gunnar Lischeid, and Joerg Rinklebe
Identification of prevailing processes in soils using nonlinear statistics

10:45–11:00 EGU2011-7895
Konstantin Stolpovsky, Mehdi G. Gharasoo, and Martin Thullner
Spatio-temporal variations of microbial metabolic activity caused by pore scale heterogeneity of porous media

11:00–11:15 EGU2011-2320
Jorge Paz-Ferreiro, Jose Garcia Vivas Miranda, Laura F.S. da Silva, Edson Eiji Matsura, and Mara de Andrade Marinho
A preliminary study of multifractality from microprofiles of soil penetration resistance

11:15–11:30 EGU2011-8656
Marko Samec, Antonio Santiago, Juan Pablo Cardenas, Rosa Maria Benito, Ana Maria Tarquis, Sacha Jon Mooney, and Dean Korošak
Quantifying soil complexity using network models of soil porous structure

11:30–11:45 EGU2011-10436
Samuel Roberson and Gert-Jan Weltje
A numerical toolbox for the homogenization of particle-size data

11:45–12:00 EGU2011-13507
Ruth E Falconer, Alasdair N Houston, Wilfred Otten, and Philippe Baveye
Emergent properties of the fungal-soil complex

NP3.8/SSS5.7 – Scaling, Nonlinearity, and Complexity in soils and surface hydrology (co-organized) – Posters

Halls X/Y | Display Time 08:00–19:30
Author in Attendance: 15:30–17:00
Chairperson: Ruth Falconer

XY550 EGU2011-682
Vera Rocheta, Jorge Isidoro, and João de Lima
Small scale infiltration in Portuguese cobblestone paving: field measurements with a double ring infiltrometer.

XY551 EGU2011-3857
Orlando Zúñiga Escobar, Juan Carlos Osorio Saravia, Ramiro Cuero Guépendo, Julian Andres Peña Espina, and Luis Fernando Gomez
Toward a complex system of soil: a synthetic and analytic complementary approach

XY552 EGU2011-4919
Juan Matos, Ana Maria Tarquis, and Humberto Millán
Soil fragmentation study applying different tillage systems

XY553 EGU2011-5720
Pedro Luis Aguado, Juan Pablo del Monte, and Ana Maria Tarquis
Structure function and Multifractal spectrum applied to Digital Elevation Model

XY554 EGU2011-7642
Athanasios Paschalis, Peter Molnar, and Paolo Burlando
Quantification of the effects of measurement precision on precipitation scaling estimators

XY555 EGU2011-9634
Daniel Hirmas and Nathaniel Brunsell
Application of wavelet and fractal techniques to the analysis to soil structure and color

XY556 EGU2011-10238
Christina Bogner, Baltasar Trancón y Widemann, and Michael Hauhs
Simulation of flow patterns in soils

XY557 EGU2011-11117
Silvia Carvalho, Isabel de Lima, and João de Lima
Drop-size distribution of rainfall events in Coimbra, Portugal

XY558 EGU2011-13207
Gabriel Gascó, Ana Tarquis, Sandra Barriga, Antonio Saa, and Ana Méndez
Application of images analysis to the quantification of surface properties of adsorbent materials prepared from paper industry waste materials
XY559 EGU2011-13458
Leonor Rodriguez-Sinobas, Javier Benitez Buelga, Maria Gil Rodriguez, Raúl Sánchez Calvo, Guillermo Castañón Lion, Luis Juana Sirgado, and Francisco Laguna Viñuelas
Optimization of the irrigation time and irrigation frequency by using Hydrus-2D and a capacitance FDR sensor.

XY560 EGU2011-14155
Alexandra N. Kravchenko, Wei Wang, Andrew Worth, Alvin J. M. Smucker, and Mark L. Rivers
Fractal characterization of the intra-aggregate pore heterogeneity in macro-aggregates from contrasting land use and management treatments.

XY561 EGU2011-13229
Cong Tuan Hoang, Louila Tchiguirinskaia, Daniel Schertzer, and Shaun Lovejoy
Multifractal parameters and extreme behaviour of high resolution rainfall time series.

XY562 EGU2011-8968
Basudev Biswal and Marco Marani
A Geomorphological Interpretation of the Power Law Relations Connected with Recession Curves.

XY563 EGU2011-1267
Carmine Fallico, Aldo Pedro Ferrante, Maria Chiara Vita, and Samuele De Bartolo
Direct and indirect measurements of porosity on a real heterogeneous confined aquifer.

XY564 EGU2011-11829
Joel Quintanilla-Dominguez, Maria Guadalupe Cortina-Januchs, Benjamin Ojeda-Magaña, Antonio Vega-Corona, Ana Maria Tarquis, and Diego Andina
Image sub-segmentation by PFCM and Artificial Neural Networks to detect pore space in 2D and 3D CT soil images.

XY565 EGU2011-13371
Pilar López González-Nieto, Ana Maria Tarquis, and Jose Manuel Redondo
Fractal Behaviour and Irregularity of Wetting Fronts in Heterogeneous Porous Media.

XY566 EGU2011-13410
Ana Maria Tarquis, Antonio Saa-Requejo, Jesús Rodríguez-Gonzalez, Jose Alfonso Gómez, and Pablo Zarco-Tejada
Spatial variability of Soil Surface Roughness.

XY567 EGU2011-13817
Ana Maria Tarquis, Jose Luis Valencia, Antonio Paz-González, and Antonio Saa-Requejo
Thresholding Soil Surface Images.

XY568 EGU2011-7578
Athanasios Paschalis, Peter Molnar, and Paolo Burlando
Dependence structure in the weights of a multiplicative random cascade model for rainfall.

XY569 EGU2011-8238
Mário J Franca, Rui M. L. Ferreira, and Ulrich Lemmin
Cross-correlation between time scales in open-channel river flows.

XY570 EGU2011-7458
Eva Vidal Vázquez, Sidney R. Vieira, José G.V. Miranda, Otavio A. Camargo, João R.F. Menk, and Jorge Paz-Ferreiro
Joint multifractal analysis of soil general properties measured along a transect.

XY571 EGU2011-8442
Eva Vidal Vázquez, Rosario García Moreno, and Jorge Paz-Ferreiro
Exploring the heterogeneity of the soil pore system using multifractal analysis from Mercury injection and Nitrogen sorption.

XY572 EGU2011-9281
Jorge Paz-Ferreiro and Marcelo G. Wilson
Suitability of multifractal parameters to describe the effect of intensification of rice production on soil structure decay.

XY573 EGU2011-12036
Daniel Gimenez and Sung Won Yoon

XY574 EGU2011-13000
Antonio Paz-González, Roger Manuel Mestas Valero, Rômulo Guimaraes Giácomo, and Elza da Silva Militão
Characterizing scale-dependent soil moisture series under Eucalyptus globulus using multifractal techniques.

XY575 EGU2011-13621
Simona Hapca, Zi Xiang Wang, Clare Wilson, Phillippe Baveye, Murray Lark, and Wilfred Otten
Predictive modelling of the 3D chemical composition of soil using kriging based methods.

XY576 EGU2011-13661
Edith Perrier, Nigel R.A. Bird, and Tibot B. Rieutord
Percolation and filtration properties of multiscale soil models: existence of critical pore sizes.

NP5.2 – Inverse Problems and Data Assimilation in Geosciences – Orals
Convener: Olivier Talagrand | Co-Conveners: Jeannot Trampert, Peter Jan van Leeuwen
Room: 18
Chairperson: n.n.

08:30–08:45 EGU2011-2054
Pierre Del Moral
Particle Methods for nonlinear filtering and uncertainty propagation analysis

08:45–09:00 EGU2011-13157
Robert Miller, Ethan Atkins, Alexandre Chorin, Matthias Morzfeld, Yvette Spitz, and Brad Weir
Implementation of the Implicit Particle Filter for a Model of Nearshore Circulation

09:00–09:15 EGU2011-542
Matthias Morzfeld, Ethan Atkins, and Alexandre Chorin
Geomagnetic data assimilation with an implicit particle filter into a one-dimensional sparsely observed MHD system

09:15–09:30 EGU2011-3310
Melanie Ades and Peter Jan van Leeuwen
Efficient Particle Smoothers for large-dimensional problems

09:30–09:45 EGU2011-2383
Marc Bocquet
Ensemble Kalman filtering without the intrinsic need for inflation

09:45–10:00 EGU2011-1594
Victor Shutyaev, Igor Gejadze, and Francois-Xavier Le Dimet
Optimal solution error covariances in nonlinear problems of variational data assimilation

COFFEE BREAK

Chairperson: n.n.

10:30–10:45 EGU2011-7349
Cristina Prates, Stefano Migliorini, Stephen English, and Ed Pavelin
Remote sounding of temperature and humidity in the presence of clouds

10:45–11:00 EGU2011-8394
Anna Teruzzi, Gianpiero Cossarini, Cosimo Solidoro, and Srdjan Dobrlic
A 3Dvar Assimilation Scheme Of Satellite Chlorophyll In A Complex Biogeochemical Model Of The Mediterranean Sea

11:00–11:15 EGU2011-2474
Kuan Li, Andrew Jackson, and Philip Livermore
Progress towards the adjoint dynamo problem

11:15–11:30 EGU2011-12776
Muhammad Umer Altaf, Arnold W. Heemink, Martin Verlaan, and Ibrahim hoteit
Parameter estimation in a large scale Dutch Continental Shelf Model by Proper Orthogonal Decomposition

11:30–11:45 EGU2011-12185
Adriana Coman, Gilles Foret, Matthias Beekmann, Maxim Eremenko, Gaelle Dufour, Benjamin Gaubert, Anthony Ung, Gilles Bergametti, and Jean-Marie Fland
Assimilation of tropospheric ozone from the IASI instrument using an Ensemble Kalman Filter coupled with the regional Chemical Transport Model (rCTM) CHIMERE

11:45–12:00 EGU2011-11048
Heikki Järvinen, Petri Räisänen, Marko Laine, Johanna Tamminen, Pirkka Ollinaho, Alexander Ilin, Erkki Oja, Antti Solonen, and Heikki Haario
Advanced uncertainty evaluation of climate models and their future climate projections

LUNCH BREAK

Chairperson: n.n.

13:30–13:45 EGU2011-9155
Andrew Curtis
Fast, nonlinear, probabilistic inversion of large Geophysical problems

13:45–14:00 EGU2011-2570
Emmanuel Cosme, Jacques Verron, Pierre Brasseur, Jacques Blum, and Didier Auroux
Smoothing problems in a Bayesian framework and their linear Gaussian solutions
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00–14:15</td>
<td>EGU2011-2501, Alberto Carrassi and Stephane Vannitsem, Treatment of model error in sequential data assimilation</td>
</tr>
<tr>
<td>14:15–14:30</td>
<td>EGU2011-7700, Mohamed Jardak and Olivier Talagrand, Ensemble Variational Assimilation as an ensemble estimator</td>
</tr>
<tr>
<td>14:30–14:45</td>
<td>EGU2011-11237, Jochen Broecker, Sensitivity and out-of-sample error in data assimilation</td>
</tr>
</tbody>
</table>

**NP6.3/AS4.11 – Turbulence in the Atmosphere (co-organized) – Posters**

**Convener:** Carlos Yagüe | **Co-Conveners:** Francesco Tampieri, Joan Cuxart

**Halls X/Y | Display Time 08:00–19:30**

**Author in Attendance:** 13:30–15:00

**Chairperson:** Francesco Tampieri

| XY577 | EGU2011-772, Panayiotis Dimitriadis, Panos Papanicolaou, and Demetris Koutsoyiannis, Hurst-Kolmogorov dynamics applied to temperature fields for small turbulence scales |
| XY579 | EGU2011-3775, Wojciech Grabowski, Lian-Ping Wang, Andrzej Wyszogrodzki, and Orlando Ayala, Toward the assessment of the role of cloud turbulence in warm-rain development |
| XY580 | EGU2011-4044, Markus Vennebusch, Steffen Schön, and Axel Nothnagel, Characterisation of Atmospheric Turbulence with Space-Geodetic Observation Techniques |
| XY581 | EGU2011-5265, Jinkyu Hong, Kyeonghee Seol, Young-Hwa Byun, Chun-Ho Cho, and Joon Kim, Uncertainty analysis of carbon exchange modeling in a forest due to kB-1 parameterizations |
| XY582 | EGU2011-7108, Mireia Udina, Maria Rosa Soler, Pau Casso, Samuel Viana, and Carlos Yagüe, High resolution WRF model simulation of gravity waves induced by topographical features |
| XY583 | EGU2011-9265, Carlos Román-Cascón, Francisco Salamanca, Carlos Yagüe, Gregorio Maqueda, and Samuel Viana, Study of the interaction between fog and turbulence |
| XY584 | EGU2011-9522, Juan Carlos Sánchez-Perrino, Jorge Navarro, Carlos Yagüe, Pedro A. Jiménez, Elena García-Bustamante, Ángela Hidalgo, and Jesús Fidel González-Rouco, WRF simulations of the Atmospheric Boundary Layer over homogeneous terrain: representation of nocturnal processes |
| XY585 | EGU2011-9290, James Wanliss and Miguel Larsen, Turbulent development at 80 km altitude |
| XY586 | EGU2011-9978, Giovanni Bonafé, Francesco Tampieri, Luca Caporaso, and Francesca Di Giuseppe, Optimizing the height of the stable boundary layer using surface turbulence measurements and soundings |
| XY587 | EGU2011-11221, Alexandre Paci, Gert-Jan Steeneveld, Dan Dobrovolschi, Bernard Beaudoin, Anne Belleudy, Jean-Christophe Canonici, Frederic Murguet, Herve Schaffner, Bert Holtslag and the IMFT/OTE Team, CNRM-GAME stratified water flume: sensing the atmospheric boundary layer in a large water channel |
| XY588 | EGU2011-12831, Julien Pinel, Shaun Lovejoy, and Daniel Schertzer, Atmospheric Waves as a high Reynold's number, scaling phenomena |

**NP6.5 – Turbulence, Vortices and Waves in Stratified and Rotating Fluids – Posters**

**Convener:** Yuli D. Chashechkin | **Co-Conveners:** Konrad Bajer
XY589  EGU2011-6833
Philppe Fraunie, Alioune Sambe, Frederic Golay, Damien Sous, and Marcer Richard
3D numerical simulation od breaking waves

XY590  EGU2011-4803
Nikolaos Bakas and Petros Ioannou
Stability of a shear flow with a free surface

XY591  EGU2011-10846
Alexey Y. Vasiliiev and Yuli D. Chashechkin
Exact Theory of 3D Infinitesimal Periodic Internal Gravity Wave Generation by Compact Sources: Extension of
Classical Stokes Solution and Laboratory Experiment

XY592  EGU2011-10888
Roman N. Bardakov and Yuli D. Chashechkin
Transport of Solvable and Insolvable Admixtures in Drying Drops

XY593  EGU2011-10923
Vasily G. Baydulov and Yuli D. Chashechkin
Comparison of Infinitesimal Symmetries of Different Theoretical Models of Environmental Flows

XY594  EGU2011-11003
Nikita A. Barinov, Andrey Y. Ilinykh, and Maria V. Trofimova
Transport of Matter from Free Falling Drops on the Surface of Quiescent and Rotating Fluids

XY595  EGU2011-11218
Victor Prokhorov
Hydrodynamics and Acoustics of a Drop Impact: Sensitive High Frequency Measurements

XY596  EGU2011-8319
Sebastian Remmier and Stefan Hickel
Direct and Large Eddy Simulation of Stratified Turbulence

XY597  EGU2011-8371
Maria V. Trofimova, Eugenia V. Stepanova, and Tatiana O. Chaplina
Structure Stability of Flow Pattern for Subsequent Compact Sources of Dye in Compound Vortex

XY598  EGU2011-10819
Yuli D. Chashechkin
Stratification, Rotation and Dissipation Effects on Transport of Solvable and Insolvable Admixture in Periodic
Flows

XY599  EGU2011-11025
Andrey Y. Ilinykh and Nikita A. Barinov
Fine Transport of Matter in Drop Splashes

XY600  EGU2011-10784
Tatiana O. Chaplina and Eugenia V. Stepanova
Laboratory Modeling of Spiral Arms in Oil Spills

NP7.1/OS5.3 – Non linear waves, wind-wave-current interactions, internal waves in stratified media and ocean mixing
and coastal hydromorphology (co-organized) – Orals
Convener: Vincent Rey | Co-Conveners: Lev Ostrovsky, M. Stive, Philippe Fraunie, Vincent Rey, Margarita Diez,
Pascale Bouruet-Aubertot
Room: 17
Chairperson: Vincent Rey

15:30–15:45  EGU2011-8220
Vladimir V. Mitkin and Yuli D. Chashechkin
Visualization of Stratified Flows past 2D Bluff Obstacles

15:45–16:00  EGU2011-11275
Pascale Bouruet-Aubertot, Hans van Haren, and Pascale Lelong
Stratified inertial subrange as inferred from in situ measurements in the bottom boundary layer of Rockall
Channel

16:00–16:15  EGU2011-896
Victor Bakhanov, Nikolai Bogatov, Aleksei Ermoshkin, Vadim Lobanov, Olga Kemarskaya, Irina Repina, and
Victor Titov
The full-scale investigations of the action of internal waves and inhomogeneous flows on the wind waves
in the White Sea

16:15–16:30  EGU2011-12826
Nataly Zaytseva, Konstantin A. Gorshkov, and Irina Anatolievna Soustova
Compound solitons of Gardner equation with variable coefficients of cubic nonliarity
16:30–16:45  EGU2011-11681
Aleksei Ermoshkin, Irina Soustova, Konstantin Gorshkov, Vyacheslav Dubina, Yulia Troitskaya, and Natalia Zaitseva
Analysis of intense internal wave evolution in the Seas of Japan and Okhotsk using satellite data from synthetic aperture radar and radiometers

16:45–17:00  EGU2011-12106
Vladimir A. Kalinichenko and Yuli D. Chashechkin
Structuring and Restructuring of Suspensions in Standing Waves in Tank with and without Topography

OS4.4 – Physical and biogeochemical ocean modelling: development, assessment, and applications (co-listed) – Orals
Convener: David Ham | Co-Conveners: Thierry Penduff, Sergey Danilov, Stephen M. Griffies, Marina Levy
Room: 6
Chairperson: David Ham

10:30–10:45  EGU2011-2699
Sergey Danilov, Qiang Wang, Dmitry Sidorenko, and Jens Schroeter
Large-scale ocean modeling on unstructured meshes: current status and perspectives

10:45–11:00  EGU2011-259
Colin Cotter
The Holy Grail for unstructured grid ocean modelling: a finite element pair on triangles without spurious modes

11:00–11:15  EGU2011-385
Sean Vitousek and Oliver Fringer
Physical vs. Numerical Dispersion in Nonhydrostatic Ocean Modeling

11:15–11:30  EGU2011-7786
Julien Le Sommer, Francesco d’Ovidio, and Gurvan Madec
Parameterization of subgrid stirring in eddy resolving ocean models.

11:30–11:45  EGU2011-9223
Matthieu Leclair and Gurvan Madec
Êœz-coordinate, an Arbitrary Lagrangian-Eulerian coordinate separating high and low frequency motions

11:45–12:00  EGU2011-1517
Jarle Berntsen
A perfectly balanced method for estimating the internal pressure gradients in sigma-coordinate ocean models

LUNCH BREAK

Chairperson: Thierry Penduff

13:30–13:45  EGU2011-849
Flora MacTavish, Colin Cotter, and Matthew Piggott
An idealised model of the restratification after open ocean deep using an unstructured mesh

13:45–14:00  EGU2011-955
Hannah Hiester, Matthew Piggott, and Peter Allison
The use of adaptive meshes in ocean modelling: considerations from simulations of the lock-exchange flow

14:00–14:15  EGU2011-3396
Marion Meinvielle, Pierre Brasseur, Jean-Michel Brankart, Bernard Barnier, Thierry Penduff, and Jean-Marc Molines
Optimal adjustment of atmospheric forcing parameters for long term simulations of the global ocean circulation

14:15–14:30  EGU2011-3499
Chuanyu Liu, Armin Koehl, and Detlef Stammer
Estimating Eddy Induced Tracer Mixing Parameters through Global Ocean Data Assimilation Synthesis

14:30–14:45  EGU2011-12242
Matthias Hofmann and Miguel Angel Morales Maqueda
Changing mid-latitude westerlies and their impact to Southern Ocean eddies in a coarse resolution ocean model.
14:45–15:00  EGU2011-3957  
Hiroaki Tatebe, Masao Kurogi, Tatsuo Suzuki, Yukio Tanaka, Hiroyasu Hasumi, Masayoshi Ishii, and Masahide Kimoto  
Long-term modulations of mesoscale eddy activities in the Kuroshio-Oyashio confluence zone represented in a high-resolution coupled model, and further model development toward better predictions  
Chairperson: Marina Lévy

15:30–15:45  EGU2011-8451  
Gennady Chepurin, James Carton, Scott C. Doney, and Ivan Lima  
Impact of Improved Ocean Physical State Estimates on Simulated Interannual Air-Sea CO2 Flux Variations

15:45–16:00  EGU2011-4782  
Diego Santaren and Nicolas Gruber  
The relative benefit of different observations for constraining parameters of a marine biogeochemistry/ecological model

16:00–16:15  EGU2011-12283  
Wolfgang Koeve and Heiner Dietze  
Evaluating coupled ecosystem ocean circulation models: can we trust the concept of preformed nutrients?

16:15–16:30  EGU2011-9451  
Olaf Duteil, Iris Kriest, Samar Khatiwala, and Andreas Oschlies  
Coupling of a complex biogeochemical model with the Transport Matrix Method: quantification of the impact of margin iron input on the ecosystem.

16:30–16:45  EGU2011-9317  
Michael Lange, Tony Field, Cheng-Chien Liu, Jon Hill, and Gerard Gorman  
Fast and accurate multi-spectral optics in an ocean model

16:45–17:00  EGU2011-13525  
Mattheus P. Ueckermann and Pierre F.J. Lermusiaux  
High Order Schemes for Biogeochemical Ocean Dynamics

OS5.2 – Surface Waves and Wave-Coupled Effects in Lower Atmosphere and Upper Ocean (co-listed) – Orals
Convener: Alexander Babanin | Co-Conveners: Miguel Onorato, Fangli Qiao
Room: 11
Chairperson: n.n.

08:30–08:45  EGU2011-4955  
Fabrice Ardhuin and Aron Roland  
Validation of numerical waves models in strong currents, a tribute to Owen Phillips.

08:45–09:00  EGU2011-13650  
Aron Roland, Tai-Wen Hsu, Jian-Ming Liau, Yaron Toledo, and Shan-Hwei Ou  
On the extension of the Wave Action Equation for higher order depth and current effects

09:00–09:15  EGU2011-4644  
Victor Shrira and Sergei Annenkov  
Evolution of random wind wave fields under rapidly changing wind

09:15–09:30  EGU2011-9313  
Alexander Soloviev, Silvia Matt, and Atsushi Fujimura  
Air-sea interface in hurricane conditions

09:30–09:45  EGU2011-4892  
Yuliya Troitskaya, Daniil Sergeev, Oleg Druzhinin, Alexander Kandaurov, and Olga Ermakova  
Laboratory investigation and direct numerical simulation of wind effect on steep surface waves

09:45–10:00  EGU2011-9201  
Paul Liu  
Contemplating Ocean Wave Measurements

COFFEE BREAK

Chairperson: n.n.

10:30–10:45  EGU2011-2418  
Dmitry Chalikov and Alexander Babanin  
Numerical investigation of breaking waves in spectral environment

Programme Group Programme NP 55
10:45–11:00  EGU2011-2889
Alessandro Iafrati
Energy dissipation mechanisms in spilling and in highly aerated plunging breaking events

11:00–11:15  EGU2011-10306
Guillermette Caulliez
Dissipation regimes for short wind waves

11:15–11:30  EGU2011-809
Francisco J. Ocampo-Torres
Non-linear interactions of wind-sea and opposing swell determined through bispectral analysis

11:30–11:45  EGU2011-2042
Sergei I. Badulin and Vladimir E. Zakharov
Scales of nonlinear relaxation and balance of wind-driven seas

11:45–12:00  EGU2011-2266
Leonid Lopatoukhin, Alexander Boukhinovsky, and Ekaterina Chernysheva
New generation of Wind and Wave climate handbooks

LUNCH BREAK

Chairperson: n.n.

13:30–13:45  EGU2011-3519
Peter Janssen
Ocean Wave effects on the daily cycle in SST

13:45–14:00  EGU2011-3930
Johannes Gemmrich and Svein Vagle
Observations of wave-induced mixing

14:00–14:15  EGU2011-4324
Yeli Yuan and Ming Lu
A unified theory of waves in a general ocean

14:15–14:30  EGU2011-1932
Anna Rutgersson, Björn Carlsson, Rajesh Kumar, Alvaro Semedo, Øyvind Sætra, and Øyvind Breivik
Impact of surface waves on the atmosphere in a coupled wave-atmosphere regional climate model

14:30–14:45  EGU2011-1080
Lev Shemer and Andrey Zavadsky
On Reynolds stresses over wind waves

14:45–15:00  EGU2011-3906
Paul Hwang
Ocean Surface Roughness and Remote Sensing
**Friday, 08 April**

**SSS1.2/HS12.13/NP3.11 – Wind-driven rain and aeolian sediment transport in environmental studies (co-organized) – Orals**

Convener: Charles Bielders | Co-Conveners: Jean Louis Rajot, Geert Sterk, João de Lima, Don Gabriels, Gunay Erpul  
*Room: 9*  
Chairperson: n.n.

15:30–15:45  
**EGU2011-9922**  
*Carsten Hoffmann,* Roger Funk, and Michael Sommer  
Assessment of extreme wind erosion from a cropping field in Inner Mongolia

15:45–16:00  
**EGU2011-14090**  
*Feras Youssef*, Saskia Visser, Derek Karssenberg, Günay Erpul, and Feras Ziadat  
Strategies for Measuring Wind Erosion at the Regional Scale, Observation of Wind Erosion in Khanasser Valley Region, Syria

16:00–16:15  
**EGU2011-10974**  
*Tidjani Adamou Didier,* Bielders Charles, Ambouta Karimou, and Tychon Bernard  
Dune rehabilitation using a mechanical fixation technique: effect on sediment fluxes and on the quantitative and qualitative recovery of the herbaceous groundcover.

16:15–16:30  
**EGU2011-4913**  
*Gunay Erpul,* Donald Gabriels, Darrell Norton, Dennis Flanagan, Chihua Huang, and Saskia Visser  
Interactions between raindrop impact and shallow interrill flow under wind-driven rain (WDR)

16:30–16:45  
**EGU2011-2853**  
*Peeyush Khare,* Tushar Agarwal, and Sat Ghosh  
A novel rain simulator for hydrological and agricultural applications in wind driven monsoonal conditions with a particular reference to India.

16:45–17:00  
**EGU2011-1793**  
*Hilal Samray,* Gunay Erpul, and Donald Gabriels  
Raindrop impacted shallow overland flow transport under different fall trajectories of wind-driven rain (WDR)

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**SSS1.2/HS12.13/NP3.11 – Wind-driven rain and aeolian sediment transport in environmental studies (co-organized) – Posters**

Convener: Charles Bielders | Co-Conveners: Jean Louis Rajot, Geert Sterk, João de Lima, Don Gabriels, Gunay Erpul  
*Hall Z | Display Time 08:00–17:00*  
Author in Attendance: 08:30–10:00  
Chairperson: João de Lima

**Z49**  
**EGU2011-680**  
*Jorge Isidoro* and João de Lima  
Evaluation in the laboratory of the influence of storm movement on the hydrologic response of small areas.

**Z50**  
**EGU2011-4634**  
*João de Lima,* Jorge Isidoro, Vijay Singh, and M. Isabel de Lima  
The effect of moving storm acceleration on runoff hydrographs

**Z51**  
**EGU2011-8093**  
*Maria Cristina Rulli,* Francesco Meneguzzo, and Renzo Rosso  
Wind Control of Storm Triggered Shallow Landslides

**Z52**  
**EGU2011-4960**  
*Mustafa Basaran,* Gunay Erpul, and Oguzhan Uzun  
Evaluation of field performances of BEST sediment catchers in sandy loam soils of arid zone of Turkey

**Z53**  
**EGU2011-9400**  
*Thomas Iserloh,* Wolfgang Fister, Miriam Marzen, Manuel Seeger, and Johannes B. Ries  
The influence of wind-driven rain on soil detachment rates on homogenous sandy substrate

**Z54**  
**EGU2011-965**  
*Majid Mahmoodabadi,* Fatemeh Dehghani, and Hamidreza Azimzadeh  
Random and oriented roughness influence on soil erosion rate using wind tunnel experiment

**Z55**  
**EGU2011-2939**  
*Charles Bielders,* Adamou Didier Tidjani, and Karimou Ambouta  
Seasonal dynamics of the parameters determining wind erosion on rangeland in Eastern Niger

**Z56**  
**EGU2011-5001**  
*Jean Louis Rajot,* Amadou Abdourhamane Touré, Zibo Garba, Béatrice Marticorena, Christophe Petit, and David Sebag  
Impact of very low crop residuescover on wind erosion in the Sahel
On-site and off-site impacts of wind erosion in Europe: an overview

NP5.2 – Inverse Problems and Data Assimilation in Geosciences – Posters
Convener: Olivier Talagrand | Co-Conveners: Jeannot Trampert, Peter Jan van Leeuwen
Halis X/Y | Display Time 08:00–17:00
Author in Attendance: 10:30–12:00
Chairperson: n.n.

XY335 EGU2011-541
Ethan Atkins, Matthias Morzfeld, and Alexandre Chorin
Implicit Particle Filters: a Numerical Case Study Using the Lorenz Attractor

XY336 EGU2011-874
Brad Weir, Robert Miller, and Yvette Spitz
Novel particle filter approaches to parameter estimation for ecological models

XY337 EGU2011-1563
Valery Agoshkov
Method of “fictitious controls” and solution of inverse problems of the geophysical hydrodynamics using variational data assimilation

XY338 EGU2011-3429
Lin Wu, Marc Bocquet, and Frédéric Chevallier
Bayesian design of control space in inverse modelling: Application to mesoscale carbon dioxide inversion

XY339 EGU2011-7939
Helaine Furtado, Haroldo Fraga de Campos Velho, and Elbert E N Macau
Data assimilation by variational method in partial differential equations

XY340 EGU2011-676
Claire Chauvin, François-Xavier Le Dimet, Maelle Nodet, Innocent Souopgui, Olivier Titaud, and Arthur Vidard
Assimilation of Lagrangian Data in a Variational framework

XY341 EGU2011-8078
Aimei Shao and Chongjian Qiu
Comparative experiments on the effect of several forms of background error covariance on 3DVar

XY342 EGU2011-3422
Mohamed Berrada, Julien Brajard, Charles Delteil, Michel Crépon, Fouad Badran, and Sylvie Thiria
Variational data assimilation in NEMO using YAO.

XY343 EGU2011-10424
Houda Yahi, Sylvie Thiria, Michel Crepon, Alain Weill, and Richard Santer
Atmospheric particulate matter (PM10) estimation from optical ground measurements

XY344 EGU2011-909
Dominik Jacques and Isztar Zawadzki
Efficient implementation of inverse variance-covariance matrices in variational data assimilation systems

XY345 EGU2011-3404
Emmanuel Kpemlie, Emmanuelf Cosme, Nicolas Freychet, Jean-Michel Brankart, and Pierre Brasseur
Adaptive parameterisation of error statistics in ensemble or reduced order square root filters

XY346 EGU2011-1039
Georg Gottwald, Lewis Mitchell, and Sebastian Reich
A variance limiting Kalman filter: Controlling overestimation of error covariance in ensemble Kalman filters with sparse observations

XY347 EGU2011-4278
Dmitri Kondrashov, Yuri Shprits, and Michael Ghil
Split-Operator Kalman Filter as an efficient data assimilation method for the radiation belts

XY348 EGU2011-9719
Genta Ueno
An iterative algorithm for estimating the observation error covariance matrix for ensemble-based filters

XY349 EGU2011-3880
Juan Ruiz and Manuel Pulido
GCM Parameter estimation based on LETKF

XY350 EGU2011-6803
Tijana Janjic, Lars Nerger, Alberta Albertella, Jens Schroeter, and Sergey Skachko
Domain localization in ensemble based Kalman filter algorithms

XY351 EGU2011-3338
Lars Nerger, Tijana Janjic, Jens Schroeter, and Wolfgang Hiller
On the relation of the SEIK and ETKF filter methods
NP6.1 – Mixing, Diffusion and Lagrangian transport in Geophysical Flows. – Orals
Convener: Pilar López González-Nieto | Co-Conveners: Jose M. Redondo, Joe LaCasce, Kristofer Döös, Maria Josefa Olascoaga, Gyorgy Karolyi, Arthur Mariano
Room: 13
Chairperson: Jose M. Redondo
08:30–08:45  EGU2011-212
Claudia Cherubini
Modeling approaches for fluid flow and pollutant propagation in a fractured and karst limestone

08:45–09:00  EGU2011-5562
Birgit Futterer, Florian Zaussinger, Christoph Egbers, and Nicoleta Scurtu
Variation of viscosity contrast for convection experiments in spherical shells as part of geophysical flow simulation experiment ‘GeoFlow II’

09:00–09:15  EGU2011-1376
Andrew Jackson, Barbara Turnbull, and Richard Munro
Scaling Laws for Lobe and Cleft Patterns at the Front of Particle-Laden Gravity Currents

09:15–09:30  EGU2011-7774
Mariestella Berta, Annalisa Griffa, Angelique C. Haza, and Laura Ursella
Surface transport in coastal and open-sea areas of the Adriatic Sea from Finite-Scale Lyapunov Exponents

09:30–09:45  EGU2011-3778
Francesco Nencioli, Francesco d’Ovidio, Andrea M. Doglioli, and Anne A. Petrenko
Real-time in-situ tracking of Lagrangian coherent structures in a coastal region

09:45–10:00  EGU2011-7984
Sandy Koch, Uwe Harlander, Rainer Hollerbach, and Christoph Egbers
Laboratory experiment of inertial wave-interactions in a rotating spherical shell

NP6.1 – Mixing, Diffusion and Lagrangian transport in Geophysical Flows. – Posters
Convener: Pilar López González-Nieto | Co-Conveners: Jose M. Redondo, Joe LaCasce, Kristofer Döös, Maria Josefina Olascoaga, Gyorgy Karolyi, Arthur Mariano
Halls X/Y | Display Time 08:00–17:00
Author in Attendance: 13:30–15:00
Chairperson: Ana Tarquis

XY369  EGU2011-755
Samuel Marshall and Peter Read
An Investigation into Variable Topography in a Baroclinic Annulus

XY370  EGU2011-13341
Ana Maria Tarquis, Pilar López-Gonzalez-Nieto, and Jose Manuel Redondo
Time Evolution of the Fractal Dimension in Turbulent Plumes

XY371  EGU2011-751
Aliya Tairova, Georgiy Belyakov, Nicolay Baryshnikov, and Sergey Turuntaev
Filtration and sedimentation in the channel with permeable walls

XY372  EGU2011-1708
Chih-Yu Kuo, Li-Tsung Sheng, Shang-Yu Chiu, Yih-Chin Tai, and Shu-San Hsiang
The streamwise solid volume fraction of parallel accelerating dry granular flows and the evolution of the fraction across normal granular shocks

XY373  EGU2011-2135
Valentina Lombardi, Claudia Adduce, Giampiero Scortino, and Michele La Rocca
Gravity currents moving on smooth and rough beds

XY374  EGU2011-2590
Florian Zaussinger
Semiconvection

XY375  EGU2011-11727
Sebastian Borchert, Felix Rieper, Ulrich Achatz, and Mark Fruman
A finite-volume model of the differentially heated rotating annulus with implicit sub-gridscale turbulence parameterization

XY376  EGU2011-7011
Helena I. S. Nogueira, Claudia Adduce, Elsa Alves, and Mário J. Franca
Analysis of the entrainment on lock-exchange density currents

XY377  EGU2011-8214
Andrew Thompson and Jean-Baptiste Sallee
Cross-Front Transport Near Topographically-Induced Jet Transitions

XY378  EGU2011-1885
Colin Cotter and Greg Pavliotis
Eddy parameterisations from data-driven coarse-graining of Lagrangian trajectories

XY379  EGU2011-6897
Tarmo Soomere, Oleg Andrejev, Kai Myrberg, and Alexander Sokolov
Quantification of the potential of offshore areas in terms of Lagrangian transport of danger to vulnerable regions
XY380  EGU2011-2414
Stefan Riha and Álvaro Júdice Peliz
Tracing the Mediterranean Outflow back into the Alboran Sea: A numerical modeling study

XY381  EGU2011-7931
Paul Williams, Peter Read, and Thomas Haine
Testing the limits of quasi-geostrophic theory

NP6.4/ST6.4 – Astrophysical Turbulence, Shocks and Plasmas (co-organized) – Orals
Convener: Luca Sorriso-Valvo | Co-Conveners: Jose M. Redondo
Room: 13
Chairperson: Luca Sorriso-Valvo

10:30–10:45  EGU2011-5381
Jiansen He, Chuanyi Tu, Eckart Marsch, Shuo Yao, and Hui Tian
Two-component magnetic helicity for two-component turbulent fluctuations

10:45–11:00  EGU2011-12663
Fouad Sahraoui, Melvyn L. Goldstein, Gerard Belmont, and Alessandro Retinó
Three dimensional anisotropic k-spectra of turbulence at sub-proton scales in the solar wind

11:00–11:15  EGU2011-2313
André Balogh and Silvia Perri
Variations of the residual energy parameter in the solar wind on different scales and in different types of heliospheric flows observed by Ulysses

11:15–11:30  EGU2011-3900
Xochitl Blanco-Cano, Ernesto Aguilar-Rodriguez, Primoz Kajdi?, Christopher Russell, Lan Jian, and Janet Luhmann
Interplanetary Shocks observed by STEREO

11:30–11:45  EGU2011-2254
Ersilia Leonardis, Sandra Chapman, and Claire Foullon
The spatio-temporal characteristics of magneto-hydrodynamic turbulence seen in quiescent solar prominences by HINODE/SOT

11:45–12:00  EGU2011-12156
Sergey Savin, Errmanno Amata, Vyacheslav Budaev, David Sibeck, Vassilis Angelopoulos, Volt Lutseko, Jana Safrankova, Zdenek Nemecek, Jan Bleckl, and Vladimir Krasnoselskikh
Nonlocal interactions in the Earth magnetosheath: supersonic coherent structures as drivers of anomalous dynamics and intermittent turbulence

NP6.4/ST6.4 – Astrophysical Turbulence, Shocks and Plasmas (co-organized) – Posters
Convener: Luca Sorriso-Valvo | Co-Conveners: Jose M. Redondo
Halls X/Y | Display Time 08:00–17:00
Author in Attendance: 13:30–15:00
Chairperson: Luca Sorriso-Valvo

XY382  EGU2011-5045
Khurom Kiyani, Fouad Sahraoui, Sandra Chapman, Yuri Khotaiaintsev, and Bogdan Hnat
Magnetic compressibility and Isotropic Scale-Invariant Dissipation of Solar Wind Turbulence

XY383  EGU2011-3487
Bogdan Hnat, Sandra Chapman, and Khurom Kiyani
Evidence for a single stochastic physical process for fast solar wind magnetic field magnitude fluctuations at 1AU across turbulent and 1/f temporal scales

XY384  EGU2011-8085
Olga Alexandrova, Catherine Lacombe, and Andre Mangene
Magnetic turbulence spectrum at electron scales in the solar wind

XY385  EGU2011-11765
Raffaele Marino, Luca Sorriso-Valvo, Vincenzo Carbone, Roberto Bruno, Pierluigi Veltri, and Alain Noullez
The magnetohydrodynamic turbulent cascade in polar solar wind: the role of local dynamic alignment

XY386  EGU2011-7867
Luca Sorriso-Valvo, Emiliya Yordanova, Vincenzo Carbone, and Silvia Perri
Multi-point measurement of solar wind turbulence anisotropy by Cluster

XY387  EGU2011-5619
Silvia Perri, Vincenzo Carbone, and Pierluigi Veltri
On the break of fluid-like turbulence: solar wind observations

XY388  EGU2011-8562
Andriy Koval and Adam Szabo
Magnetic field turbulence spectra observed by Wind from 1994 to 2010
XY389  EGU2011-3473

Hans-Jörg Fahr and Mark Siewert
Solar wind bulk velocity fluctuations inducing ion power law distributions

XY390  EGU2011-8599

Gaetano Zimbardo and Giuseppe Nistico
Collisionless shocks in the solar corona: a mechanism for preferential heating of heavy ions

XY391  EGU2011-3572

David Burgess and Enrico Camporeale
The dissipation of solar wind turbulent fluctuations at electron scales: Simulations

XY392  EGU2011-8727

Zoltan Voros, Manfred Leubner, Tielong Zhang, Martin Volwerk, Andrea Opitz, and Roberto Bruno
Radial versus temporal evolution of fast stream turbulence in the solar wind

XY393  EGU2011-6645

Hervé Lamy, Marius Echim, and Tom Chang
Application of Rank-Ordered Multifractal Analyses (ROMA) to intermittent magnetic fluctuations in the Earth's magnetospheric cusp and in the high-speed solar wind.

NP6.5 – Turbulence, Vortices and Waves in Stratified and Rotating Fluids – Orals
Convener: Yuli D. Chashechkin | Co-Conveners: Konrad Bajer
Room: 13
Chairperson: n.n.

13:30–13:45  EGU2011-815

Alistair McVicar, Peter Allison, Matthew Piggott, and Arnaud Czaja
Flow past topography in relation to the Antarctic Circumpolar Current

13:45–14:00  EGU2011-1514

Andrey Sukhanovsky, Peter Frick, Andrey Teymurazov, and Vladimir Batalov
Horizontal rolls in a convective flow driven by differential heating

14:00–14:15  EGU2011-2506

Iaroslav Zagumennyi, Yuli Chashechkin, and Roman Bardakov
Stratified flows past a thin plate

14:15–14:30  EGU2011-4816

Oriane Aubert, Michael Le Bars, Patrice Le Gal, and Philip S. Marcus
Universal scaling law for the aspect ratio of a pancake vortex in a rotating stratified medium

14:30–14:45  EGU2011-6914

Volker Fiekas, Lars Arneborg, Michaela Knoll, and Hartmut Prandke
Quasi-two-dimensional turbulence observations in a stratified fjord

14:45–15:00  EGU2011-10729

Eugenia V. Stepanova and Tatiana O. Chaplina
Substance Transfer into Spiral and Helical Filaments in Rotating Fluid

NP6.6/ST6.5 – Magnetic reconnection and turbulence in Space, Laboratory and Astrophysical Systems (co-organized) – Orals
Convener: Giovanni Lapenta | Co-Conveners: Alex Lazarian
Room: 13
Chairperson: Lapenta, Lazarian

15:30–15:45  EGU2011-2666

Giovanni Lapenta and Lapo Bettarini
Effects of turbulent reconnection on the evolution of dipolarisation fronts in the Earth magnetotail.

15:45–16:00  EGU2011-12381

Alexander Lazarian
Diffusion of magnetic field and plasmas enabled by magnetic reconnection

16:00–16:15  EGU2011-6418

Zoltan Voros, Martin Volwerk, Manfred Leubner, Wolfgang Baumjohann, Tielong Zhang, and Andrei Runov
Magnetic reconnection associated fluctuations in the deep magnetotail: ARTEMIS results

16:15–16:30  EGU2011-11005

Andrey Divin, Giovanni Lapenta, Stefano Markidis, David Newman, and Martin Goldman
Electron holes at magnetic reconnection separatrices: the role of streaming instabilities.
Magnetic reconnection in a turbulent space plasma: Cluster multi-spacecraft observations in the magnetosheath

Grzegorz Kowal, Alex Lazarian, Ethan Vishniac, and Katarzyna Otmianowska-Mazur
Numerical Testing of Magnetic Reconnection in the Presence of Turbulence

NP6.6/ST6.5 – Magnetic reconnection and turbulence in Space, Laboratory and Astrophysical Systems (co-organized) – Posters
Convener: Giovanni Lapenta | Co-Conveners: Alex Lazarian
Halls X/Y | Display Time 08:00–17:00
Author in Attendance: 13:30–15:00
Chairperson: Divin, Kowal

XY394 EGU2011-4460
Haoyu Lu and Jinbin Cao
Study on Switch-off Magnetic Reconnection Due to the Parallel Shear Flow

XY395 EGU2011-2676
Pierre Henri, Giovanni Lapenta, Stefano Markidis, Lapo Bettarini, Stefan Eriksson, Laila Andersson, Martin Goldman, and David Newman
Kinetic Study of Asymmetric Magnetic Reconnection

XY396 EGU2011-2673
Stefano Markidis, Martin Goldman, Giovanni Lapenta, Pierre Henry, David Newman, Laila Andersson, Maria Elena Innocenti, and Andrey Divin
Role of Instabilities in Kinetic Magnetic Reconnection

XY397 EGU2011-10232
Yuri Khotyaintsev, Christopher Cully, Andris Vaivads, Mats André, and Christopher J. Owen
Whistler-mode Waves and Non-Adiabatic Electrons in Plasma Jet Braking

XY398 EGU2011-12500
Konrad Bajer and Krzysztof Mizerski
Enhancement of turbulence by elliptical instability with background rotation

XY399 EGU2011-13226
Andrey Beresnyak
Basic Properties of MHD Turbulence

NH5.2/NP7.4/OS5.5 – Extreme Sea Waves (co-organized) – Orals
Convener: Efim Pelinovsky | Co-Conveners: Christian Kharif, Alexey Slunyaev
Room: 4
Chairperson: n.n.

08:30–08:45 EGU2011-3927
Elzbieta Bitner-Gregersen and Alessandro Toffoli
Probability of occurrence of rogue waves

08:45–09:00 EGU2011-102
Ira Didenkulova
Freak waves in the coastal zone of the Baltic Sea

09:00–09:15 EGU2011-1804
Georg Lindgren and Finn Lindgren
Stochastic 3D Lagrange waves, asymmetry properties and consequences for marine safety

09:15–09:30 EGU2011-1551
Leonid Lopatoukhin, Alexander Boukhanovsky, and Ekaterina Chernysheva
Climatic wave spectra of extreme wind waves

09:30–09:45 EGU2011-6052
Miguel Onorato and Alessandro Toffoli
The role of the modulational instability in the interaction of waves and currents

09:45–10:00 EGU2011-4810
Odin Gramstad, Jean-Michel Lefevre, and Karsten Trulsen
Model and case study for freak waves in crossing swell and wind sea

COFFEE BREAK
10:30–10:45  EGU2011-9094
Gerassimos Athanassoulis and Konstantinos Belibassakis
Fully nonlinear water waves of high amplitude, propagating in finite depth

10:45–11:00  EGU2011-13724
Alexander Dyachenko and Vladimir Zakharov
On canonical equation for water waves

11:00–11:15  EGU2011-3943
Walter Craig
Nonlinear water wave interactions

11:15–11:30  EGU2011-2013
Nail Akhmediev, Adrian Ankiewicz, Jose-Maria Soto-Crespo, and John M. Dudley
Rogue Waves: Early Warning vs Forecast

11:30–11:45  EGU2011-1933
Roger Grimshaw and Sergei Annenkov
Water wave packets propagating over variable depth

11:45–12:00  EGU2011-1977
Sergei Annenkov and Victor Shrira
Self-similar evolution of wind wave statistical momenta

LUNCH BREAK

13:30–13:45  EGU2011-137
Anna Sergeeva, Lev Shemer, and Alexey Slunyaev
Effects of occasional wave breaking on extreme wave statistics in stochastic modeling

13:45–14:00  EGU2011-1253
Yang-Yih Chen and Hung-Chu Hsu
Theoretical and Experimental study of Nonlinear water waves on uniform current

14:00–14:15  EGU2011-4226
Victor Shrira and Alexey Slunyaev
Rogue waves on jet currents caused by nonlinear evolution of trapped modes

14:15–14:30  EGU2011-1036
Sergey Dobrokhotov, Vladimir Nazaikinskiy, and Brunello Tirozzi
Explicit Asymptotics for Waves and Vortices with Small Amplitudes on the Shallow Water Created by Localized Sources and their Applications

14:30–14:45  EGU2011-288
Karima Khusnutdinova
The effect of an internal wave on breaking surface waves and the oceanic subsurface bubble layer

14:45–15:00  EGU2011-1975
Tatiana Talipova and Oxana Kurkina
Modulation instability and hazardous internal waves in South China and Baltic Seas

NH5.2/NP7.4/OS5.5 – Extreme Sea Waves (co-organized) – Posters
Convener: Efim Pelinovsky | Co-Conveners: Christian Kharif, Alexey Slunyaev
Halls X/Y | Display Time 08:00–17:00
Author in Attendance: 15:30–17:00
Chairperson: Christian Kharif and Efim Pelinovsky

XY263  EGU2011-2128
Roman Shamin
Numerical Simulation of FreakWaves: Detection, Predict and Breaking

XY264  EGU2011-7735
Shiqiang Yan and Qingwei Ma
Fully Non-linear Investigation of Freak Waves and their Interaction with Winds and Currents

XY265  EGU2011-115
Alexey Slunyaev, Anna Sergeeva, and Efim Pelinovsky
Rogue wave modeling: Approximate vs fully nonlinear wave simulations

XY266  EGU2011-342
Arnida L. Latifah and E. van Groesen
Investigations of coherence in extreme water waves
XY267  EGU2011-37
Efim Pelinovsky and Ira Didenkulova
Freak waves in the field of the nonlinear non-dispersive shallow-water waves

XY268  EGU2011-13924
Efim Pelinovsky and Dong-Jiing Doong
Freak wave observations in Taiwanese and Russian waters

XY269  EGU2011-807
Andrey Zaytsev, Efim Pelinovsky, Ahmet Yalciner, Ceren Ozer, and Irina Kostenko
Studies of Freak Waves in southern Part of Okhotsk Sea

XY270  EGU2011-108
Ira Didenkulova and Irina Nikolkina
Freak waves in 2006-2010

XY271  EGU2011-2382
Amin Chabchoub and Norbert Hoffmann
The Peregrine Breather Solution in a water wave tank

XY272  EGU2011-42
Ekaterina Shurgalina and Efim Pelinovsky
Life-time of freak waves of different shapes: dispersive focusing framework

XY273  EGU2011-7716
Huiming Zeng and Karsten Trulsen
Variation of kurtosis over non-uniform bathymetry

XY274  EGU2011-1019
Hubert Branger, Laurent Grare, Christian Kharif, Pierre Lubin, Stephane Glockner, Pauline Robin, and Olivier Kimmoun
Wind effects on waves propagating to the shore: experimental and numerical investigations

XY275  EGU2011-1435
Roland Thomas and Christian Kharif
Stability of a Stokes' wave train in the presence of uniform vorticity

XY276  EGU2011-1050
Antonio Lechuga
Large amplitude edge waves on a beach

XY277  EGU2011-4559
Oxana Kurkina, Tatiana Talipova, Efim Pelinovsky, Tarso Soomere, and Ayrat Giniyatullin
Prognostic characteristics of internal waves for the Baltic Sea

XY278  EGU2011-5286
Nikolay Makarenko, Janna Maltsева, and Alexei Kazakov
Extreme internal waves in a weakly stratified shear flows

XY279  EGU2011-13256
Andrey Serebryany and Cho-Teng Liu
Observations of large-amplitude internal wave of the second mode in Luzon Strait

XY280  EGU2011-4549
Dmitry Arkhipov, Georgy Khabakhpashev, Anatoly Litvinenko, and Nurziya Safarova
Combined approach to a simulation of the interaction of nonlinear spatial waves in seas with gently sloping bottom

XY281  EGU2011-508
Elena Alekseenko, Bernard Roux, Alexander Sukhinov, and Christian Kharif
Influence of currents and wave propagation on the seagrass meadows development in shallow water systems (near shoreline)

XY282  EGU2011-1573
Ekaterina Batcyna, Nikolay Petrukhin, and Efim Pelinovsky
Strong wave amplification in the atmosphere with large temperature gradients

XY283  EGU2011-536
Shalva Gagoshidze
To the Calculation of Periodic Longitudinal Waves in Trapezoidal Channels and Their Action on Bank Slopes

XY284  EGU2011-1685
Vasily Maximov, Gayaz Khakimzayanov, Igor Nudner, Efim Pelinovsky, and Konstantin Semenov
The Solitary Wave Interaction with a Partially Submerged Stationary Structure

XY285  EGU2011-1686
Vasily Maximov, Igor Nudner, Yuri Mayorov, Dmitry Babchik, and Konstantin Semenov
Extreme Waves Interaction with Lattice Structures

XY286  EGU2011-3981
Natalia Chaykovskaya and Artem Rodin
Psychological characteristics of human behaviour at a roque-wave event

XY287  EGU2011-6781
Jean-François Dorville, Hugues Berthelot, and Narcisse Zahibo
Effect of Extremes Wave on a mitigate type of the French West Indies coast, with a low cost modeling
XY288 EGU2011-6022
Narcisse Zahibo, Irina Nikolkina, Efim Pelinovsky, and Jean-François Dorville
Extreme Sea Waves on Guadeloupe, French West Indies

XY289 EGU2011-4456
Mikhail Lavrentiev, Andrey Marchuk, and Konstantin Simonov
Identification of tsunami wave parameters at source

OS4.4 – Physical and biogeochemical ocean modelling: development, assessment, and applications (co-listed) – Posters
Convener: David Ham | Co-Conveners: Thierry Penduff, Sergey Danilov, Stephen M. Griffies, Marina Levy
Halls X/Y | Display Time 08:00–17:00
Author in Attendance: 10:30–12:00
Chairperson: Sergey Danilov

XY424 EGU2011-11577
David Ham
Automated adjoints: towards a robust method for generating adjoint ocean models

XY425 EGU2011-5139
Ricardo Matano and Elbio Palma
The upstream spreading of bottom-trapped plumes

XY426 EGU2011-954
Simon Funke, Chris Pain, Stephan Kramer, and Matthew Piggott
A wetting and drying algorithm for non-hydrostatic models with combined pressure/free-surface

XY427 EGU2011-11728
Dmitry Sidorenko, Qiang Wang, Sergey Danilov, and Jens Schröter
FESOM under Coordinated Ocean-ice Reference Experiment forcing

XY428 EGU2011-13465
Qiang Wang, Dmitry Sidorenko, Xuezhu Wang, Claudia Wekerle, Sergey Danilov, and Jens Schröter
Global FESOM simulations under the framework of interannual Coordinated Ocean-ice Reference Experiments (CORE-II)

XY429 EGU2011-3432
Raphael Dussin, Mélanie Juza, Bernard Barnier, Jean-Marc Molines, Thierry Penduff, and Gilles Garric
Impact of vertical resolution in an eddy-permitting Ocean Global Circulation Model forced with ERA-Interim

XY430 EGU2011-3586
Karen Guihou, Yann Ourmieres, and Bruno Zakardjian
Assessment of a NEMO-based downscaling experiment for the North-Western Mediterranean region: impacts on the Northern Current and comparison with ADCP data and altimetry products.

XY431 EGU2011-931
Xi Lu
Numerical study of the water exchange in the Western Baltic Sea

XY432 EGU2011-1383
Moritz Mathis and Thomas Pohlmann
A Projected Forecast of Hydrodynamic Conditions in the North Sea Using Bias Corrected Atmospheric Forcing Data

XY433 EGU2011-2575
Yangchun Li and Yongfu Xu
Sensitivity of the uptake of bomb 14C to the air-sea exchange scheme in the Pacific Ocean model

XY434 EGU2011-4059
Yongfu Xu and Qi Ba
Tritium uptake in the ocean general circulation model of the Pacific Ocean

XY435 EGU2011-4519
Young-Gyu Park
North Pacific Intermediate Water from two NOAA/GFDL coupled models, CM2G and CM2M

XY436 EGU2011-13554
Robin Matthews
Observational Datasets for Ocean Acidification Modelling

XY437 EGU2011-6851
Ana Cordeiro Pires, Rita Nolasco, Jesus Dubert, and Alfredo Rocha
Assessing future climate change in the Iberian Upwelling System using a multi-model mean ensemble

XY438 EGU2011-2234
Igor Shulman, Mark Moline, Bradley Penta, Stephanie Anderson, Matthew Oliver, and Steven Haddock
Modeling and observations of coupled bio-optical, bioluminescent and physical properties.

XY439 EGU2011-10376
Jon Hill, Ekaterina Popova, David Ham, Matthew Piggott, and Meric Srokosz
Ocean ecosystem modelling in an adaptive mesh model: a performance evaluation
SURROGATE-BASED OPTIMIZATION OF PARAMETERS IN A MARINE ECOSYSTEM MODEL

3D COUPLED PHYSICAL AND BIOGEOCHEMICAL MODELING APPROACH: LIMITATION ON BIOLOGICAL PRODUCTIONS BY THE DIFFERENT NUTRIENTS IN MARSEILLES COASTAL AREA.

SIMULATING THE TROPICAL ATLANTIC AIR-SEA CO2 EXCHANGE WITH A REGIONAL HIGH RESOLUTION OCEAN MODELING SYSTEM

MODELING BIOGEOCHEMICAL CYCLES IN THE SOUTHWESTERN TROPICAL ATLANTIC

MODELING THE SEASONAL AND INTER-ANNUAL VARIABILITY OF PHYSICAL AND ECOSYSTEM CHARACTERISTICS IN THE UPPER LAYER OF THE CENTRAL-EASTERN NORTH ATLANTIC

THREE-DIMENSIONAL MODELING OF PHYTOPLANKTON AND ZOOPLANKTON SEASONAL DISTRIBUTION IN THE IBERIAN UPWELLING SYSTEM

PREDICTING COASTAL CIRCULATION AND HARMFUL ALGAL BLOOMS IN THE GULF OF MAINE: FROM ENSEMBLE SEASONAL FORECASTING TO DATA ASSIMILATIVE HINDCASTING

MODELING NUTRIENT DISTRIBUTIONS IN A LARGE-SCALE RIVER PLUME

NUMERICAL INVESTIGATION OF TURBULENCE GENERATION IN NON-BREAKING POTENTIAL WAVES

WIND WAVE CLIMATE ALONG BRAZILIAN COAST USING A SPECTRAL PARTITIONING ALGORITHM

AN EXPERIMENT ON THE NON-BREAKING SURFACE-WAVE-INDUCED VERTICAL MIXING

INFLUENCE OF WIND FORCING ON EVOLUTION AND BREAKING OF NONLINEAR WAVE GROUPS.

A FIELD STUDY OF 2D-WAVENUMBER SPECTRA OF SHORT WIND WAVES

INFLUENCE OF WIND FORCING ON EVOLUTION AND BREAKING OF NONLINEAR WAVE GROUPS.

SPECTRAL WAVE DISSIPATION, OPERATIONAL WAVE MODELS AND OBSERVATIONS: IS THERE A WAY OF IMPROVING WAVE FORECASTS?

STATISTICAL PROPERTIES OF SHORT WIND WAVES: A HIGH RESOLUTION LABORATORY STUDY
XY457  EGU2011-2837
Mark Hemer, Kathleen Mclnnes, and Roshanka Ranasinghe
Projected future wave climate along Australia's eastern margin

XY458  EGU2011-12478
Rajesh Kumar, Anna Rutgersson, and Prasad Kumar
Impact of rain in modifying wave height in a coupled wave - climate model

XY459  EGU2011-10268
Alexey Mironov
Projected future wave climate along Australia's eastern margin

XY460  EGU2011-10250
Alexey Mironov, Charles-Antoine Guerin, Danièle Hauser, Maria Kosnik, and Vladimir Dulov
Statistical properties of short wind-waves obtained from photo-stereo observations of sea surface.

XY461  EGU2011-6352
Miguel Onorato and Francesco Zonta
Theoretical description of breaking crests distributions measured in field conditions

XY462  EGU2011-5158
Ruslan Puscasu, Alexander Babanin, and Michael Stiassnie
Numerical investigation of a novel wave-action transfer model for near-resonant water waves

XY463  EGU2011-4145
Fangli Qiao, Zhenya Song, Changshui Xia, and Dejun Dai
The improvement of ocean and climate models through surface wave: From mean state to long-term variations

XY464  EGU2011-12871
Ivan Savelyev and Robert Handler
Infrared imaging of near-surface eddies generated by steep and by breaking surface waves.

XY465  EGU2011-6275
Mathieu Dutour Sikiri?, Aron Roland, Ivica Janekovi?, Igor Tomaži?, and Milivoj Kuzmi?
Two-way coupling of ROMS and WWM models

XY466  EGU2011-4629
Chia-Huan Ting, Alexander Babanin, and Dmitry Chalikov
Dependence of Drag Coefficient on the Directional Spreading of Ocean Waves

XY467  EGU2011-5399
Alexandros Toffoli, Alexander Babanin, and Jason McConochie
Field observations of the mixed layer depth in the Indian Ocean: effect of wave-induced turbulence

XY468  EGU2011-8695
Oleg Druzhinin and Yuliya Troitskaya
Investigation of statistical parameters of turbulent air flow over waved water surface by direct numerical simulation

XY470  EGU2011-4501
Wu-ting Tsai and Li-ping Hung
Characteristics of interfacial transport in a wind-driven gravity-capillary surface wave

XY471  EGU2011-12295
Kimmo K Kahma, Laura Tuomi, and Heidi Pettersson
Wave statistics in seasonally ice-covered seas

XY472  EGU2011-2794
Anatoli Vakhgueul and Alexander Babanin
Influence of water droplet size variations on propagation of the pressure wave above water surface

XY473  EGU2011-5966
Soeren H. Ahmerkamp, Jörg-Olaf Wolff, and Stephen G. Monismith
On wave motions at the steep slope of a coral reef

XY474  EGU2011-6958
Changshui Xia and Fangli Qiao
The Establishment of the Wave-circulation Coupled Model and Its Application