

**EGU General Assembly 2012**  
**Programme Group Programme**  
**GM – Geomorphology**

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Monday, 23 April

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**ESS11.6 – Laser Scanning: 3D Spatial Data, Analysis, and Infrastructures in Geosciences (co-listed) – Orals**

Convener: B. Höfle | Co-Conveners: N. Pfeifer, B. Székely, A. Zopf

**Room: 32**

Chairperson: Bernhard Höfle

- 08:30–09:00 EGU2012-13998  
**C. Baru**, R. Arrowsmith, C. Crosby, V. Nandigam, M. Phan, and C. Cowart  
OpenTopography
- 09:00–09:15 EGU2012-6324  
**B. Höfle**, M. Forbriger, C. Siart, and E. Nowaczinski  
Fusion of terrestrial LiDAR and tomographic mapping data for 3D karst landform investigation
- 09:15–09:30 EGU2012-5081  
**M. A. Brovelli**, L. Biagi, and G. Zamboni  
DTMs: discussion of a new multi-resolution function based model
- 09:30–09:45 EGU2012-6665  
**M. Milenkovi?**, B. Székely, G. Mandlbürger, and N. Pfeifer  
Characterization of artificial and natural roughness present in DTMs derived from Airborne Laser Scanning data
- 09:45–10:00 EGU2012-4372  
**T. Dewez** and J. Costeraste  
Global dynamic topography: geoscience communities requirements
- 10:00–10:05 **Wrap Up**

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**COFFEE BREAK**

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Chairperson: Balazs Szekely

- 10:30–11:00 EGU2012-8378  
**G. Mandlbürger**, M. Pfennigbauer, F. Steinbacher, and N. Pfeifer  
Potential of a novel airborne hydrographic laser scanner for capturing shallow water bodies
- 11:00–11:15 EGU2012-8299  
**F. Bretar**, P. Mériaux, and C. Fauchard  
How integrating 3D LiDAR data in the dike surveillance protocol: The French case
- 11:15–11:30 EGU2012-6411  
**K. Koenig** and B. Höfle  
Laser Scanning for 3D Object Characterization: Infrastructure for Exploration and Analysis of Vegetation Signatures
- 11:30–11:45 EGU2012-5316  
**I. Davenport**, K Fieber, R Gurney, J Ferryman, J Hacker, and J Walker  
Extracting vertical foliage profiles of individual Eucalypt trees using last significant return airborne laser altimetry and on-site photography
- 11:45–12:00 EGU2012-11539  
**A. Ziłszky**, W. Mücke, H. Lehner, C. Briese, and N. Pfeifer  
Vegetation mapping from medium-density discrete echo Airborne Laser Scanning data: a case study of the Lake Balaton wetlands

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**CL5.1/GM2.5 – Advances in Quaternary Geochronology (co-organized) – Orals**

Convener: T. Kiefer | Co-Conveners: G. Duller, I. Hajdas, A. Lang, F. Parrenin, EW Wolff

**Room: 15**

Chairperson: n.n.

- 08:30–08:45 EGU2012-12790  
**S. Ivy-Ochs**, H. Kerschner, and C. Schlüchter  
Timing of deglaciation in the northern Alps based on cosmogenic nuclide data
- 08:45–09:00 EGU2012-12634  
**F. von Blanckenburg**, J. Bouchez, H. Wittmann, and N. Dannhaus  
The Beryllium-10(meteoric)/ Beryllium-9 ratio as a new tracer of weathering and erosion rates
- 09:00–09:15 EGU2012-4854  
**P. J. Applegate** and N. Kirchner  
Using cosmogenic exposure dates to evaluate modeled Greenland Ice Sheet behavior

- 09:15–09:30 EGU2012-3821  
**R. Pickering**  
 Re-arranging the family tree: the new role of U-Pb dating flowstones
- 09:30–09:45 EGU2012-10671  
**J. Wallinga**, J. Den Ouden, A.C. Cunningham, P. Copini, A.J. Versendaal, U.G.W. Sass-Klaassen, G. Bos, A.M.A.J. Beerens, and M.J.P.M. Riksen  
 Bootstrap-Bayesian OSL approach for poorly-bleached sediment sequences tested with dendrochronological age constraints
- 09:45–10:00 EGU2012-3732  
**RC Chiverrell**  
 Bayesian modelling of geomorphic time series: collapse of the marine portion of the Irish Sea Ice Stream

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**COFFEE BREAK**

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Chairperson: n.n.

- 10:30–10:45 EGU2012-13984  
**S. P. Lund**  
 Paleomagnetic Secular Variation as a Regional- to Global-Scale Chronostratigraphic Tool for Paleoclimate Studies
- 10:45–11:00 EGU2012-11956  
**S. Ólafsdóttir**, Á. Geirsdóttir, G.H. Miller, and J.S. Stoner  
 Improved Land-Sea Correlations in Iceland Based on Paleomagnetic Secular Variations
- 11:00–11:15 EGU2012-7054  
**S. Wastegård**, E.R. Gudmundsdóttir, E.M. Lind, and J. Olsen  
 Towards a complete Holocene tephrochronology for the Faroe Islands
- 11:15–11:30 EGU2012-9293  
**D. Fleitmann**, A. Borsato, S. Frisia, S. Badertscher, H. Cheng, R.L. Edwards, and O Tüysüz  
 Speleothems as sensitive recorders of volcanic eruptions - the Bronze Age Minoan eruption recorded in a stalagmite from Turkey
- 11:30–11:45 EGU2012-13085  
**J. Stern** and L. Lisiecki  
 Timing of deglacial changes in regional Atlantic benthic  $\delta^{18}O$
- 11:45–12:00 EGU2012-11829  
**R. De Pol-Holz**, M. Mohtadi, and J. Southon  
 Intermediate water radiocarbon off west Sumatra during the last 45,000 years

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**LUNCH BREAK**

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Chairperson: n.n.

- 13:30–13:45 EGU2012-13849  
**F. Parrenin**, D. Veres, A. Landais, L. Bazin, B. Lemieux-Dudon, H. Toyé Mahamadou Kele, E. Wolff, and P. Martinerie  
 A common and optimized age scale for Antarctic ice cores
- 13:45–14:00 EGU2012-7570  
**H. Toyé Mahamadou Kele**, B. Lemieux-Dudon, and E. Blayo  
 Toward unified ice core chronologies with the DatIce tool
- 14:00–14:15 EGU2012-7646  
**L. Bazin**, A. Landais, B. Lemieux-Dudon, H. Toyé Mahamadou Kele, T. Blunier, E. Capron, J. Chappellaz, H. Fischer, M. Leuenberger, V. Lipenkov, M.-F. Loutre, P. Martinerie, F. Parrenin, F. Prié, D. Raynaud, D. Veres, and E. Wolff  
 Toward an integrated ice core chronology using relative and orbital tie-points
- 14:15–14:30 EGU2012-8309  
**K. Kawamura**, S. Aoki, T. Nakazawa, K. Suzuki, and F. Parrenin  
 Accurate age scale of the Dome Fuji ice core, Antarctica from O<sub>2</sub>/N<sub>2</sub> ratio of trapped air
- 14:30–14:45 EGU2012-10293  
**J. Freitag**, S. Kipfstuhl, M. Hörhold, A. Wegner, F. Wilhelms, and M. Bigler  
 Impurity controlled firn densification: a new model approach

14:45–15:00 EGU2012-3633

**T.J. Fudge**, K. Taylor, K. McGwire, E. Brook, T. Sowers, E. Steig, J. White, B. Vaughn, R. Bay, J. McConnell, E. Waddington, H. Conway, G. Clow, K. Cuffey, J. Cole-Dai, D. Ferris, and J. Severinghaus  
A 62 ka record from the WAIS Divide ice core with annual resolution to 30 ka (so far)

**CL5.1/GM2.5 – Advances in Quaternary Geochronology (co-organized) – Posters**

Convener: T. Kiefer | Co-Conveners: G. Duller, I. Hajdas, A. Lang, F. Parrenin, EW Wolff

**Hall Z | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: n.n.

Z85 EGU2012-1331

**S. Winkler**

Addressing geomorphologic uncertainties with terrestrial cosmogenic nuclide dating (TCND) - examples from Holocene moraines in the Southern Alps of New Zealand

Z86 EGU2012-6695

**D. Fabel**, J. McKie, J. Graham, and S. Xu

10Be production rate calibration in Scotland

Z87 EGU2012-13717

**E. J. Rhodes**, B. J. Roder, M. J. Lawson, J. F. Dolan, S. F. McGill, and L. McAuliffe

Isothermal thermoluminescence dating of K-feldspar from sediments to determine fault slip rates: development and assessment

Z88 EGU2012-1822

**S. Savi**, K. Norton, F. Schlunegger, V. Picotti, F. Brardinoni, N. Akçar, and P.W. Kubik

How does sediment mixing affect 10Be concentrations in alluvial sediments? A case study from a small catchment of the Alps, Zielbach, Alto Adige, Italy

Z89 EGU2012-7867

**A. Claude**, S. Ivy-Ochs, F. Kober, M. Antognini, and P.W. Kubik

Geomorphology and landscape evolution at the Chironico landslide (Leventina)

Z90 EGU2012-8356

**C. Wirsig**, S. Ivy-Ochs, N. Akcar, V. Alfimov, C. Kämpfer, and C. Schlüchter

COMBINING COSMOGENIC BE, C, AL AND CL - Quantifying depth of glacial erosion and timing of deglaciation

Z91 EGU2012-12360

F. Kober, **K. Hippe**, S. Ivy-Ochs, J. Zasadni, R. Wieler, L. Wacker, P.W. Kubik, and C. Schlüchter

The Lateglacial deglaciation history of the high Alpine Gotthard Pass, Switzerland, based on cosmogenic 10Be and in situ 14C

Z92 EGU2012-14022

**F. Kober**, K. Hippe, B. Salcher, S. Ivy-Ochs, P.W. Kubik, and L. Wacker

Mass wasting processes and their control on denudation rates, Matter-Valley, Switzerland

Z93 EGU2012-14023

M.W. Buechi, **F. Kober**, S. Ivy-Ochs, and P. Kubik

Influence of former glaciations on interglacial landscape evolution: A case study from the LGM nunatak Hörnli, Eastern Switzerland

Z94 EGU2012-10266

**S. E. Lowick**

A comparison of the OSL response of quartz and polymineral fine grains to alpha and beta radiation

Z95 EGU2012-7840

**K. Beerten**, N. Vandersmissen, K. Deforce, and N. Vandenberghe

Chronology of landscape evolution during the last centuries in the Campine area, Northern Belgium: integrating geomorphological, palaeobotanical, historical and pollution archives

Z96 EGU2012-14168

**B. Mauz**, M. Vacchi, and R. Nathan

Using optical dating of beachrock for sea-level reconstruction

Z97 EGU2012-14169

C.L. Mellett, B. Mauz, D.M. Hodgson, A.J. Plater, and **A. Lang**

Optical dating of late Quaternary deposits preserved beneath the eastern English Channel

Z98 EGU2012-12770

J.-P. Buylaert, C. Thiel, A.S. Murray, **M. Jain**, K.J. Thomsen, and R. Sohbati

Extending the luminescence dating age range using feldspar

Z99 EGU2012-1737

**A. Kunz**, D. Pflanz, F. Krüger, T. Weniger, and B. Urban

OSL-dating of fluvial deposits of the Middle Elbe River Flood Plains using different statistical approaches

- Z100 EGU2012-7880  
**L. Bickel**, J. Lomax, and M. Fiebig  
Fluvial terrace gravels of the "Hochterrasse" (N-Alpine Foreland, Austria): luminescence characteristics of quartz and feldspar
- Z101 EGU2012-6342  
**R. Mertz-Kraus**, W.D. Sharp, and K.R. Ludwig  
Precise and accurate measurement of U and Th isotopes via ICP-MS using a single solution
- Z102 EGU2012-7255  
**I. Hajdas**, S.F.M. Breitenbach, M. Gierga, G.H. Haug, J.F. Adkins, C. Biechele, G. Bonani, M. Maurer, and L. Wacker  
14C in a stalagmite from NE India: preliminary results of dating near the limit of radiocarbon time scale
- Z103 EGU2012-9008  
A. Birkholz, M. Gierga, **I. Hajdas**, R. Smittenberg, L. Wacker, and S.M. Bernasconi  
Compound-specific Radiocarbon dating - a tool for dating lake sediments?
- Z104 EGU2012-13135  
**B. Machalett**, E.A. Oches, H.M. Roberts, and W.D. McCoy  
Deciphering the Geochronological Framework of Serbian Loess Using Amino Acid Stratigraphy and Luminescence Dating
- Z105 EGU2012-4572  
**N. Marwan**, K. Rehfeld, B. Goswami, S. F. M. Breitenbach, and J. Kurths  
Age models and their uncertainties
- Z106 EGU2012-11229  
**M. Severi**, R. Udisti, S. Becagli, B. Stenni, and R. Traversi  
Volcanic synchronisation of the EPICA-DC and TALDICE ice cores for the last 42 kyr BP
- Z107 EGU2012-792  
**M. Winstrup**, A. Svensson, S. O. Rasmussen, O. Winther, E. Steig, and A. Axelrod  
An automated approach for annual layer counting in ice cores
- Z108 EGU2012-2866  
**D. Raynaud**, V. Lipenkov, M-F. Loutre, A. Landais, and E. Capron  
Dating the 800 ka - long EPICA DC ice core by tuning the air content and  $\delta^{18}O/\delta^{16}O$  records on local summer insolation.
- Z109 EGU2012-5223  
**F. Parrenin**, J.R. Petit, V. Masson-Delmotte, E. Wolff, I. Basile-Doelsch, J. Jouzel, V. Lipenkov, S. Rasmussen, J. Schwander, M. Severi, R. Udisti, D. Veres, and B. Vinther  
Volcanic synchronisation between the EPICA Dome C and Vostok ice cores (Antarctica) 0-145 kyr BP
- Z110 EGU2012-5265  
**F. Parrenin**, S. Barker, T. Blunier, J. Chappellaz, V. Masson-Delmotte, J. Jouzel, A. Landais, J. Schwander, and D. Veres  
On the Delta-depth along the EPICA Dome C ice core
- Z111 EGU2012-14158  
**F. Parrenin** and V. Masson-Delmotte  
An Antarctic temperature stack, 0-800 kyr BP
- Z112 EGU2012-7179  
**A. Svensson**, M. Bigler, H. Fischer, S. J. Johnsen, S. Kipfstuhl, F. Parrenin, S. O. Rasmussen, J. P. Steffensen, B. M. Vinther, and A. Wegner  
Direct linking of Greenland and Antarctic ice cores at the Toba eruption (74 ka BP)
- Z113 EGU2012-8629  
**R. C. A. Hindmarsh** and C.M. Ritz  
How deep do you need to drill through ice to measure the geothermal heat flux?
- Z114 EGU2012-10143  
**S. Weißbach**, A. Wegner, J. Freitag, and S. Kipfstuhl  
The influence of impurities on the densification of firn -a case study from North Greenland
- Z115 EGU2012-14153  
**J. R. Petit**, F. Parrenin, and B. Delmonte  
A chemical pacemaker to refine chronology for the deep East Antarctic ice cores

**GM7.6 – Sedimentary source-to-sink fluxes and sediment budgets – Orals**

Convener: A. A. Beylich | Co-Conveners: F. Brardinoni, K. Laute, S. Liermann

**Room: 21**

Chairperson: Achim A. Beylich &amp; Francesco Brardinoni

15:30–15:45 EGU2012-2753

**M. Fort** and E. Cossart

Sediment budget in a Himalayan Valley (Middle Kali Gandaki, Nepal)

- 15:45–16:00 EGU2012-8779  
**A. Forzoni**, G. de Jager, and J.E.A. Storms  
Impact of external forcing and catchment response on sediment flux
- 16:00–16:15 EGU2012-8835  
**P. Allemand**, E. Lajeunesse, O. Devauchelle, and C. Delacourt  
Erosion under extreme climatic events in tropical climates : the case of the storm Helena (1963) in the Guadeloupe island (Lesser Antilles Arc)
- 16:15–16:30 EGU2012-11542  
**D. Staley**, T. Waskiewicz, and J. Kean  
Influence of surface form on sediment transport in a recently burned watershed derived from multi-temporal terrestrial laser scanning data
- 16:30–16:45 EGU2012-11941  
**M. Fuchs**, M. Will, S. Kreutzer, M. Fischer, and R. Reverman  
The Temporal and Spatial Quantification of Holocene Sediment Dynamics in a meso-scale catchment in northern Bavaria / Germany
- 16:45–17:00 EGU2012-13710  
**J. Estrany** and C. Garcia  
An integrated suspended sediment budgeting of the agricultural Can Revull catchment (Mallorca, Spain)

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**GM7.6 – Sedimentary source-to-sink fluxes and sediment budgets – Posters**

Convener: A. A. Beylich | Co-Conveners: F. Brardinoni, K. Laute, S. Liermann

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

Author in Attendance: 17:30–19:00

Chairperson: Katja Laute &amp; Susan Liermann

- XL239 EGU2012-1494  
**A. A. Beylich**, S. F. Lamoureux, and A. Decaulne  
The SEDIBUD (Sediment Budgets in Cold Environments) Programme: Current activities and future key tasks
- XL240 EGU2012-1809  
**K. Laute** and A.A. Beylich  
Holocene hillslope processes and deposits in two U-shaped mountain valleys in western Norway
- XL241 EGU2012-1829  
**F. Brardinoni**, D. Maynard, and T. Rollerson  
Landslide Sediment Flux and Forest Management in Northeastern Vancouver Island, Coastal British Columbia
- XL242 EGU2012-2895  
**A. A. Beylich** and U. Molau  
The DYNAFLUX / DYNACOLD Network: Dynamics, Fluxes, Stability, Succession and Landscape Formation in Cold Environments
- XL243 EGU2012-4461  
**F. Métivier**, Y. Liu, J. Gaillardet, B. Ye, P. Meunier, C. Narteau, E. Lajeunesse, and T. Han  
Seasonal mass balance of sediment transport along the upper Urumqi River in Tianshan
- XL244 EGU2012-8122  
**S. Liermann**, A. A. Beylich, and L. Hansen  
Holocene to contemporary fluvial sediment fluxes and budgets of two glacier-fed valley-fjord systems in the Nordfjord area, western Norway
- XL245 EGU2012-8618  
**A. El Saiy**  
Characteristics and historical development of fluvial sediments in the UAE
- XL246 EGU2012-9278  
D. Morche, **H. Baewert**, and K.-H. Schmidt  
Towards a holistic sediment budget in a glacier forefield (Gepatschferner/Austria) - The contribution of fluvial sediment transport
- XL247 EGU2012-11280  
**G. Stauch** and F. Lehmkuhl  
Reconstruction of a sediment cascade on the north eastern Tibetan Plateau
- XL248 EGU2012-12012  
**L. Kämpf**, P. Müller, T. Swierczynski, A. Güntner, B. Plessen, P. Dulski, R. Naumann, and A. Brauer  
Floods and sediment transport into the pre-Alpine Lake Mondsee: A dual monitoring of detrital layer deposition in the lake and sediment dynamics in the catchment
- XL249 EGU2012-12696  
**M. Geilhausen**, D. Morche, J.-C. Otto, and L. Schrott  
Assessment of suspended and solute load in the proglacial Obersulzbach stream (Hohe Tauern, Austria)

- XL250 EGU2012-13205  
**T. Heckmann**, F. Haas, D. Morche, K.-H. Schmidt, J. Rohn, M. Moser, M. Leopold, M. Kuhn, C. Briese, N. Pfeifer, and M. Becht  
 Quantifying proglacial morphodynamics and sediment budgets - the PROSA approach
- XL251 EGU2012-12347  
**J. Götz**, J. Buckel, J.C. Otto, and L. Schrott  
 Sediment storage quantification and postglacial evolution of an inner-alpine sedimentary basin (Gradenmoos, Schober Mountains, Austria)
- XL252 EGU2012-13232  
**T. Heckmann**, F. Haas, L. Hilger, and M. Becht  
 Analysing sediment pathways from rockfaces to a glacier forefield - a contribution to proglacial sediment budgets
- XL253 EGU2012-14144  
 A. Decaulne, O. Eggertsson, K. Laute, and **A.A. Beylich**  
 A 20th century calendar of snow avalanche activity within the Bødalen valley, inner Nordfjord, western Norway

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**GM8.3 – Coastal zone geomorphologic interactions: natural versus human-induced driving factors – Orals**

Convener: M. Stancheva | Co-Conveners: A. Baas, G. Anfuso, H. Tönisson

**Room: 21**

Chairperson: Hannes Tönisson and Margarita Stancheva

- 08:30–08:45 EGU2012-11105  
 A. Aiello, F. Canora, R. Pellicani, and **G. Spilotro**  
 Natural and anthropogenic factors in coastal dynamic: two cases in Southern Italy
- 08:45–09:00 EGU2012-10863  
**A. Rilo**, P. Freire, R. Ceia, R.N. Mendes, J. Catalão, and R. Taborda  
 Human effects on estuarine shoreline decadal evolution
- 09:00–09:15 EGU2012-500  
**A. Anderson**  
 Aeolian Coastal Landscapes in changes (a study from Tahkuna, Estonia)
- 09:15–09:30 EGU2012-5560  
**G. Alexandrakis** and S. Poulos  
 The anticipated spatial loss of microtidal beaches in the next 100 years due to sea level rise.
- 09:30–09:45 EGU2012-5856  
**J. Curoy**, C.A. Moses, and D.A. Robinson  
 Longshore Sediment Transport on a Macrotidal Mixed Sediment Beach, Birling Gap, United Kingdom.
- 09:45–10:00 EGU2012-12815  
**M. Sedrati** and E. J. Anthony  
 Chronic erosion in Wissant Bay coast, northern France - Causes and trials of management projects

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**COFFEE BREAK**


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Chairperson: Margarita Stancheva and Andreas Baas

- 10:30–10:45 EGU2012-1652  
**D.W.T. Jackson**  
 116 years of misplaced management: Portballintrae, Northern Ireland
- 10:45–11:00 EGU2012-43  
**M. O'Shea** and Dr. J. Murphy  
 Investigating the Hydrodynamics of a Breached Barrier Beach
- 11:00–11:15 EGU2012-279  
**M.A. de Schipper**, S. de Vries, R. Ranasinghe, A.J.H.M. Reniers, and M.J.F. Stive  
 Morphological developments after a beach and shoreface nourishment at Vlugtenburg beach, the Netherlands
- 11:15–11:30 EGU2012-11272  
**L.S. Esteves**, J. Foord, and H. Draux  
 The shift from hold-the-line to management retreat and implications to coastal change: Farlington Marshes, a case of conflicts
- 11:30–11:45 EGU2012-13691  
**A.M. Carapuço**, R. Taborda, M.C. Freitas, T. Silveira, C. Andrade, C. Lira, and C. Pinto  
 The impact of coastal interventions: between the myth and the reality

11:45–12:00 EGU2012-13767  
**R. Young** and K. Peek  
 Preparing Coastal Parks for Future Sea Level Rise

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**GM8.3 – Coastal zone geomorphologic interactions: natural versus human-induced driving factors – Posters**

Convener: M. Stancheva | Co-Conveners: A. Baas, G. Anfuso, H. Tönisson

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

Author in Attendance: 17:30–19:00

Chairperson: Andreas Baas, Margarita Stancheva and Hannes Tönisson

- XL254 EGU2012-10626  
 J.V. Monnot, **J.J. Diez Gonzalez**, and S. del Saz Cordero  
 The wave criteria for coastal zoning
- XL255 EGU2012-13772  
**A. Griffith** and R. Young  
 Observations of coastal systems using low-cost, high-resolution, balloon and kite-based aerial imagery
- XL256 EGU2012-538  
**N. Kopa-Ovdienko**, N. Volobueva, and S. Ogorodov  
 The Ob Estuary (Kara Sea) Coastal Dynamics Interannual Variability Assessment
- XL257 EGU2012-2157  
**H. Tönisson**, K. Orviku, A. Kont, and Ü. Suursaar  
 Coastal geomorphic processes and their relation to hydrodynamic conditions in Osmussaar Island, Baltic Sea
- XL258 EGU2012-3039  
**A. Palazov**, R. Young, M. Stancheva, and H. Stanchev  
 Changes of Bulgarian Coastal Dune Landscape under Anthropogenic Impact
- XL259 EGU2012-3899  
**K. Al Qurashi**, N. Al Balushi, A. Roepert, M. Rupprechter, and G. Hoffmann  
 Late Quaternary delta evolution on an uplifted coastal area (Wadi Haida Sultanate of Oman, Arabian Peninsula)
- XL260 EGU2012-5472  
**A. Herman**, J. Urbański, and A. Wochna  
 Numerical modeling of storm-induced morphodynamic changes at a micro-tidal sandy coast
- XL261 EGU2012-4898  
**I. Catianis**, C. Ungureanu, and A. Stanica  
 Preliminary sediments quality assessment of the Midia Port aquatorium - Black Sea - Romania
- XL262 EGU2012-9947  
**J. Trindade** and A. Ramos-Pereira  
 Modeling extreme beach retreat and erosion volumes. A tool for susceptibility analysis.
- XL263 EGU2012-7429  
**R. Mani Murali**, P. Vethamony, and A.K. Singh  
 Shoreline and seabed level changes along the central Orissa coast, India
- XL264 EGU2012-10044  
**D. Bertoni**, P. Ciavola, E. Grottoli, and G. Sarti  
 Transport of marked pebbles in short periods of time on a coarse clastic beach (Marina di Pisa, Italy)
- XL265 EGU2012-10989  
**R. Bakhtyar**, A. Dastgheib, D. Roelvink, and D.A. Barry  
 3D modelling of nearshore coastal morphodynamics
- XL266 EGU2012-11199  
**K. Tsanakas**, K. Gaki-Papanastassiou, H. Maroukian, A. Cundy, D. Papanastassiou, and E. Koskeridou  
 Palaeogeographic evolution of Alykes lagoon, Pydna, Northern Greece during the Holocene, based on geomorphological and sedimentological data.
- XL267 EGU2012-619  
**N. Kosevich**  
 White Sea Islands: contemporary relief dynamics and history of the development.
- XL268 EGU2012-8871  
 A.-D. Spinu and **R. Mateescu**  
 Coastal Processes Surveillance - necessary actions towards erosion control
- XL269 EGU2012-10097  
**C.-H. Jen**, S.-J. Chyi, L.-L. Hsiao, M.-S. Wu, and H.-F. Lei  
 The changing of coastal landform at Chikou barrier island and lagoon coast, Tainan, Southwestern Taiwan
- XL270 EGU2012-10687  
**C.-H. Lu**, S.-J. Chyi, C.-C. Chen, L.-D. Ho, and P.-Y. Chang  
 The influence of rock resistance on shore platform morphology in Penghu Islands, Taiwan



- XL271 EGU2012-12147  
**K. Mezouar** and R. Ciortan  
 \textbf{Seasonal-scale nearshore morphological evolution of Romanian coast }
- XL272 EGU2012-3892  
**G. Hoffmann**, M. Rupprechter, A. Roepert, K. Al Quraishi, N. Al Balushi, C. Grützner, and K. Reicherter  
 Quaternary coastal evolution of Oman (Arabian Peninsula) - a quantitative approach
- XL273 EGU2012-2391  
 M. Garcin, **A. Bails**, M. Yates, G. Le Cozannet, T. Bulteau, E. Salai, and J. Sauter  
 Relative impact of sea level rise, wave climate and anthropogenic actions on the recent shoreline changes of the Pacific Islands

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**GM8.4/OS3.6/TS4.10 – Seafloor Expression of Tectonic and Geomorphic Processes (co-organized) – Orals**

Convener: S. Krastel | Co-Conveners: J. K. Hillier

**Room: 21**

Chairperson: n.n.

- 13:30–13:45 EGU2012-13865  
**A. Green**, R. Leuci, Z. Thackeray, and J.A.G. Cooper  
 An overstepped segmented lagoon complex on the KZN continental shelf, South Africa
- 13:45–14:00 EGU2012-13227  
**D. Ridente**, D. Di Bucci, F. Fogliani, E. Campiani, U. Fracassi, and F. Trincardi  
 Late Quaternary activity and lateral variability of regional deformation belts in marine foreland settings: the South-Western Adriatic margin case study
- 14:00–14:15 EGU2012-166  
**Ch.L Gong**, Y.M Wang, W.G Li, and X.Ch Peng  
 Interactions between down-slope and along-slope processes on the South China Sea Slope off southwestern Taiwan: Processes, products, and depositional models
- 14:15–14:30 EGU2012-6838  
 P. B. Flemings, **I. Song**, and D. M. Saffer  
 Laboratory investigation of coupled deformation and fluid flow in mudrock: implications for slope stability in the Ursa Basin, Gulf of Mexico
- 14:30–14:45 EGU2012-9425  
**A. Bronner**, M. Munsch, D. Sauter, J. Carlut, R. Searle, and M. Cannat  
 Deep-tow geophysical survey above large exhumed mantle domains of the eastern Southwest Indian ridge
- 14:45–15:00 EGU2012-12418  
**C. A. Stein**  
 Depth anomalies in old oceanic lithosphere

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**GM8.4/OS3.6/TS4.10 – Seafloor Expression of Tectonic and Geomorphic Processes (co-organized) – Posters**

Convener: S. Krastel | Co-Conveners: J. K. Hillier

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

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL274 EGU2012-9585  
**I.S. Patina**  
 Seismotectonography of the Maykopian clinofolds in the Middle Caspian
- XL275 EGU2012-13332  
**S. Okay**, G. Cifci, S. Ozel, O. Atgin, O. Ozel, B. Barin, M. Er, D. Dondurur, M. Kucuk, S. Gurcay, D. Choul Kim, and B. Sung-Ho  
 New discovered Izmir and Busan Mud Volcanoes and Application of Seismic Attributes and AVO Analysis in the Easternmost Black Sea.
- XL276 EGU2012-40  
**H. Saritas**, G. Cifci, L. Géli, Y. Thomas, B. Marsset, A. Rochat, G.K. Westbrook, S. Ker, O. Atgin, S.D. Akhun Ço?kun, C. Grall, P. Henr, S. Gürçay, S. Okay, S. Ço?kun, Ö. Özkan, and B. Bar?n  
 2D - 3D high resolution seismic survey on the Sea of Marmara - Western High
- XL277 EGU2012-12739  
**M. Huuse**  
 3D seismic images of tectonic, sedimentary and fluid flow processes affecting the seafloor offshore West Africa

- XL278 EGU2012-8124  
**M. Vrabec**, P. Slavec, S. Poglajen, and M. Busetti  
 Geomorphology of submerged river channels indicates Late Quaternary tectonic activity in the Gulf of Trieste, Northern Adriatic
- XL279 EGU2012-5240  
**B. Jolly**, L. Lonergan, and A. Whittaker  
 The interaction between deepwater channel systems and growing thrusts and folds, toe-thrust region of the deepwater Niger Delta
- XL280 EGU2012-6441  
**J. Schwab**, F. Gross, S. Krastel, P. Jintasaeranee, S. Bunsomboonsakul, D. Winkelmann, and W. Weinrebe  
 Morphodynamics and slope stability at Mergui Ridge, off western Thailand
- XL281 EGU2012-7652  
**L.A. Muller**, A.B. Watts, and the JC066 shipboard scientific party  
 The Morphology, Structure and Origin of Seamounts on the South-West Indian Ocean Ridge
- XL282 EGU2012-13013  
**F.K.J. Oberle**, T.J.J. Hanebuth, and T. Schwenk  
 Volumetric facies analysis of a Late Holocene mudbelt environment on the Galician shelf (NW Spain).
- XL283 EGU2012-1628  
**J.A.G. Cooper**, D.W.T. Jackson, R.J. Quinn, R. Plets, J.T. Kelley, D.F. Belknap, A.J. Long, D.A. Long, X. Montey, R. Edwards, and G.A. Milne  
 Topographic and stratigraphic expression of submerged shorelines in the Irish Sea

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#### HS9.4 – Sediment transfers and travel times in catchment systems (co-listed) – Orals

Convener: M. Van der Perk | Co-Conveners: U. Scherer, E. Petticrew, S.D. Keesstra, W.H. Blake

**Room: 34**

Chairperson: M. van der Perk

- 10:30–10:45 EGU2012-9968  
**F. Chabaux**, A. Deloche, E. Pelt, M. Granet, Th. Perrone, R. Boutin, D. Viville, S. Rihs, and P. Stille  
 U-Th-Ra disequilibria in sediments of the Dora Baltea river (Italia)
- 10:45–11:00 EGU2012-8084  
**S. Liermann** and A. A. Beylich  
 Contemporary suspended sediment fluxes and accumulation processes in the small proglacial Sætrevatnet sub-catchment, Bødalen, Western Norway
- 11:00–11:15 EGU2012-9376  
**N. J. Kuhn**  
 Assessing the movement of eroded organic carbon in small agricultural catchments
- 11:15–11:30 EGU2012-1079  
**K Moshenberg** and S Heise  
 Assessing the Impacts of Climate Change on the Fate and Transport of Sediment Sorbed HCB and Cd in the Elbe River Basin (Germany)
- 11:30–11:45 EGU2012-4281  
**O. Evrard**, J. Patin, I. Lefèvre, C. Chartin, S. Ayrault, Ph. Bonté, and Y. Onda  
 Tracing the dispersion of sediment contaminated with fallout radionuclides along the main rivers draining the contaminated plume in Fukushima Prefecture (Japan)
- 11:45–12:00 EGU2012-6982  
**A. Eder**, P. Strauss, M. Exner-Kittridge, and G. Bloeschl  
 Re-suspension of sediment in the HOAL catchment - results from a flushing experiment

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#### HS9.4 – Sediment transfers and travel times in catchment systems (co-listed) – Posters

Convener: M. Van der Perk | Co-Conveners: U. Scherer, E. Petticrew, S.D. Keesstra, W.H. Blake

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: U. Scherer & E.L. Petticrew

- A276 EGU2012-1214  
**D. Vázquez-Tarrió**, R. Menéndez-Duarte, J. Crespo, and M. Fernández  
 Bedload transport rates estimated in two gravel bed streams from NW Spain
- A277 EGU2012-9713  
**P. Theuring** and M. Rode  
 Sediment sources and its transport pathways in the Kharaa catchment, northern Mongolia

- A278 EGU2012-1782  
**A. A. Beylich**  
 Controls of sediment transfers, sedimentary budgets and relief development in cold environments: Results from four catchment systems in Iceland, Swedish Lapland and Finnish Lapland
- A279 EGU2012-2493  
**H.G. Smith** and W.H. Blake  
 An integrated approach for determining sources and residence times of fine sediment transported through a river network
- A280 EGU2012-3925  
 A.J. Koiter, D.A. Lobb, **P.N. Owens**, K.H.D. Tiessen, and S Li  
 Assessing the sources of suspended sediments in the streams of an agricultural watershed in the Canadian prairies using caesium-137 as a tracer
- A281 EGU2012-10261  
 R.E. Williams, **R.P.D. Walsh**, T.J. Coombs, K. Bidin, and W.H. Blake  
 The use of downstream sediment mini-cores to indicate changes through time in the spatial pattern and process contribution of erosion within a small, selectively logged rainforest catchment in Sabah, Malaysian Borneo
- A282 EGU2012-12466  
 R. Van den Boomen, A.J. Zweers, and **M. Van der Perk**  
 Suspended sediment dynamics in the Kromme Rijn river: indication for intense fine sediment exchange between water column and streambed
- A283 EGU2012-4508  
**T. Matys Grygar**, T. Novakova, V. Lukešová, M. van der Perk, H. Middelkoop, and M. G. Macklin  
 Pb and Zn and the onset of Anthropocene in floodplain sediments: How and why to quantify weak contamination?
- A284 EGU2012-4468  
**T. Novakova**, T. Matys Grygar, O. Bábek, M. Fam?ra, M. Mihaljevi?, and L. Strnad  
 Human impact on fluvial sediments: distinguishing regional and local sources of heavy metals contamination
- A285 EGU2012-13230  
**A. Reis**, A. Parker, and A. Alenção  
 Transport of sediment and associated contaminants in dynamic streams: a case study in the River Douro basin (North Portugal)
- A286 EGU2012-7236  
 G.E. Millward, W.H. Blake, **R. Little**, and L. Couldrick  
 Uranium and Its Decay Products in Floodplain Sediments from the River Fal,
- A287 EGU2012-7190  
**W.H. Blake**, R.P.D. Walsh, K. Bidin, and K.V. Annammala  
 Contextualising impacts of logging on tropical rainforest catchment sediment dynamics and source processes using the stratigraphic record of an in-channel bench deposit.
- A288 EGU2012-11938  
 J.A. Joe-Strack and **E.L. Petticrew**  
 Use of LH-PCR as a DNA fingerprint technique to trace sediment-associated microbial communities from various land uses
- A289 EGU2012-4275  
**G. Guzmán**, J.A. Gómez, and J.V. Giráldez  
 Use of magnetic iron oxide to determine soil losses in rainfed olive orchard plots
- A290 EGU2012-13151  
**U. Scherer**  
 Modelling sediment input in large river basins
- A291 EGU2012-12572  
 S. Loos, **M. Van der Perk**, L.P.H. Van Beek, and H. Middelkoop  
 Modification of the Revised Morgan-Morgan-Finney model for estimating sediment yield in large river basins

Tuesday, 24 April

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**CL5.11 – EuroFORUM 2012: Major achievements and perspectives in scientific ocean and continental drilling (co-listed) – Orals**

Convener: C. Escutia | Co-Conveners: U. Röhl, U. Harms, T. Wiersberg, R. Stein

**Room: 16**

Chairperson: n.n.

- 13:30–13:45 EGU2012-2847  
**J. Inwood**, S. Morgan, A. Mcgrath, S. Davies, H. Foster, and J. Lofi  
 Characterization of New Jersey Shelf Sedimentation using geochemical and physical properties: IODP Expedition 313
- 13:45–14:00 EGU2012-7352  
**T. Wiersberg**, M.-L. Doan, A. M. Schleicher, K. Horiguchi, N. Eguchi, and J. Erzinger  
 In situ gas concentrations in the Kumano forearc basin from drilling mud gas monitoring and sonic velocity data (IODP NanTroSEIZE Exp. 319 Site C0009)
- 14:00–14:15 EGU2012-9834  
**T. Litt**, F. S. Anselmetti, M. N. Cagatay, R. Kipfer, S. Krastel, H.-U. Schmincke, and M. Sturm  
 A 500,000-Year-Long Sediment Archive of Lake Van in Eastern Anatolia
- 14:15–14:30 EGU2012-9841  
 S. Goldstein, **M. Stein**, Z. Ben-Avraham, A. Agnon, D. Ariztegui, A. Brauer, G. Haug, E. Ito, H. Kitagawa, A. Torfstein, and Y. Yasuda  
 Extreme Dead Sea drying event during the last interglacial from the ICDP Dead Sea Deep Drill Core
- 14:30–14:45 EGU2012-13385  
**W. Clyde**, S. Wing, P. Gingerich and the BBCP Science Team  
 Bighorn Basin Coring Project (BBCP): High-Resolution Continental Records of Early Paleogene Hyperthermals
- 14:45–15:00 EGU2012-1824  
**R. Stein**, B. Coakley, N. Mikkelsen, M. O'Regan, and C. Ruppel  
 Future scientific drilling in the Arctic Ocean: Key objectives, areas, and strategies
- Chairperson: R. Stein, U. Harms
- 15:30–15:45 EGU2012-7682  
**T. Andrén**, A. Bitinas, S. Björck, E. Emelyanov, J. Harff, M. Houmark-Nielsen, M. Jakobsson, J.B. Jensen, B.B. Jørgensen, A. Kotilainen, K.L. Knudsen, K. Lambeck, M. Moros, V. Spiess, S. U?cinowicz, S. Veski, and V. Zelchs  
 The Baltic Sea IODP project "Paleoenvironmental evolution of the Baltic Sea Basin through the last glacial cycle"
- 15:45–16:00 EGU2012-8958  
**C. Betzler**, C. Hübscher, T. Lüdmann, J. Reijmer, G. Eberli, D. Kroon, A. Droxler, M. Tiwari, and E. Gischler  
 The Neogene monsoon and oceanic currents in the Indian Ocean: The Maldives archipelago.
- 16:00–16:15 EGU2012-5807  
**C. Juhlin**, D.G. Gee, H. Lorenz, C. Pascal, K. Pedersen, and C.-F. Tsang  
 > Exploring the Scandinavian Mountain Belt by Deep Drilling (COSC)
- 16:15–16:30 EGU2012-7104  
**C Mevel**, R. Gatliff, J Ludden, G Camoin, B Horsfield, and A. Kopf  
 Towards a distributed infrastructure for research drilling in Europe
- 16:30–16:45 EGU2012-12592  
**B. Esmael**, R. Fruhwirth, A. Arnaout, and G. Thonhauser  
 Operations Recognition at Drill-Rigs
- 16:45–17:00 EGU2012-14018  
**H.-J. Wallrabe-Adams**, M. Diepenbroek, H. Grobe, R. Huber, U. Schindler, and J. Collier  
 IODP Scientific Earth Drilling Information Service

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**CL5.11 – EuroFORUM 2012: Major achievements and perspectives in scientific ocean and continental drilling (co-listed) – Posters**

Convener: C. Escutia | Co-Conveners: U. Röhl, U. Harms, T. Wiersberg, R. Stein

**Hall Z | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: C. Escutia

- Z105 EGU2012-11635  
**T. Westerhold**, M. Lyle, H. Pälike, U. Röhl, and R. Wilkens  
Middle to Late Eocene Carbonate Accumulation Events in the Equatorial Pacific - new geochemical records from IODP Exp 320/321 and ODP Leg 199
- Z106 EGU2012-5892  
**I. Neugebauer**, A. Brauer, M.J. Schwab, U. Frank, P. Dulski, N. Waldmann, Y. Enzel, D. Ariztegui, E. Hadzhiivanova, and DSDDP Scientific Party  
The ICDP Dead Sea Deep Drilling Project: An overview and the potential for high-resolution records of floods and droughts in the Levant
- Z107 EGU2012-14264  
**J Hernandez-Molina**, D. Stow, C. Alvarez-Zarikian and the Expedition 339 Scientists Team  
Onset, evolution and effects of the Mediterranean Outflow: Preliminary Results of IODP Expedition 339 in the Gulf of Cadiz
- Z108 EGU2012-6207  
M. Schreck, J. Matthiessen, and **R. Stein**  
The Neogene of the Iceland Sea - Paleoenvironmental reconstructions using marine palynomorphs
- Z109 EGU2012-6718  
**K. Katsuki**, B.K. Khim, and B. Song  
Latest Miocene and Pliocene paleoceanographic condition in the Southern Ocean based on silicoflagellate assemblage
- Z110 EGU2012-12680  
J.J. Gonzalez, **C Escutia**, F.J. Espejo, T Williams, R.M. McKay, S. Passhier, T. van de Flierdt, L. Tauxe, H. Brinkhuis and the Carlota Escutia Team  
Records of glacial-interglacial variability during the Pliocene: IODP Expedition 318 - Site U1361
- Z111 EGU2012-12607  
M. Kobayashi, **M. Iwai** and the Expedition 318 Scientists Team  
Upper Miocene-Pliocene diatoms in the Southern Ocean: IODP Site U1361 on the continental rise off Wilkes Land, Antarctica
- Z112 EGU2012-14473  
**G.B. Dunbar**  
Mg/Cas surface temperatures during the Marine Isotope Stage 31 collapse of the Ross Ice Shelf
- Z113 EGU2012-7650  
**B.D.A. Naafs**, J Heffer, P Ferretti, R Stein, and G.H. Haug  
Sea surface temperatures did not control the first occurrence of Hudson Strait Heinrich Events during MIS 16
- Z114 EGU2012-9427  
**C Ohlendorf**, C Gebhardt, and the PASADO Science team  
A step towards the identification of eolian input in the 51 ka BP sediment record of Laguna Potrok Aike in southeastern Patagonia
- Z115 EGU2012-12857  
**A. Fehr**, R. Pechnig, J. Inwood, J. Lofi, F.P. Bosch, and C. Clauser  
Thermophysical properties derived from lab measurements and downhole logging at New Jersey Shallow Shelf (IODP Expedition 313)
- Z116 EGU2012-9581  
**M. Python**, L. France, B. Abily, N. Abe, J.C. Alt, M.M. Godard, B. Ildefonse, J.H. Koepke, M.D. Kurtz, R. Oizumi, B.D. Payot and the Exp. 335 Science Party Team  
Petrographical and geochemical characteristics of the sheeted dyke-gabbro transition zone in ODP/IODP Hole 1256D
- Z117 EGU2012-6976  
**N. T. Arndt** and the Barberton Drilling Team  
Peering into the Cradle of Life: Scientific Drilling in the Barberton Greenstone Belt, South Africa
- Z118 EGU2012-3228  
J. Trela, **E.C. Ferré**, J. Deans, R. Anma, A. Morris, and Expedition 335 Scientific Party  
Shape-preferred orientation (SPO) of oceanic gabbros at IODP Hole 1256D: Implications for magmatic processes
- Z119 EGU2012-12550  
**A. Rüggeberg**, A. Foubert, A. Vertino, D. Van Rooij, S. Spezzaferri, J.-P. Henriot, W.-C. Dullo, and COCARDE Science Community  
COCARDE: new view on old mounds - an international network of carbonate mound research
- Z120 EGU2012-9416  
**C. Gebhardt**, L. Naudts, L. De Mol, and M. De Batist  
Seismic investigation of Lake Issyk-Kul, Kyrgyzstan
- Z121 EGU2012-7644  
**H. Lorenz** and C. Juhlin  
The Swedish Deep Drilling Program - projects and status 2012

- Z122 EGU2012-6463  
**A. Kopf**, S. Hammerschmidt, E. Davis, D. Saffer, G. Wheat, A. LaBonte, R. Meldrum, M. Heesemann, H. Villinger, T. Freudenthal, V. Ratmeyer, J. Renken, M. Bergenthal, and G. Wefer  
 Simple, Affordable and Sustainable Borehole Observatories for Complex Monitoring Objectives
- Z123 EGU2012-7379  
 J.-E. Rosberg and **H. Lorenz**  
 A new scientific drilling infrastructure in Sweden
- Z124 EGU2012-12985  
**M. Rothfuss**, E. Anders, W. H. Müller, T. Rothenwänder, and D. Wunsch  
 New tools and applications for the retrieval of cores under in situ pressure
- Z125 EGU2012-12209  
**A. Arnaout**, R. Fruhwirth, M Winter, B. Esmael, and G. Thonhauser  
 Model-Based Hookload Monitoring and Prediction at Drilling Rigs using Neural Networks and Forward-Selection Algorithm
- Z126 EGU2012-1789  
**S Tavakoli**, S. Poslad, R Fruhwirth, and M. Winter  
 Using Real-time Event Tracking Sensitivity Analysis to Overcome Sensor Measurement Uncertainties of Geo-Information Management in Drilling Disasters
- Z127 EGU2012-9363  
 B. Jandl, M. Winter, R. Fruhwirth, F. Riedel, and **H. Zeiner**  
 Rig Side Online Drilling Support System for Prediction and Prevention of Upcoming Crises
- Z128 EGU2012-8501  
**K. Behrends** and R. Conze  
 Science Data Management for a CO<sub>2</sub>-Sequestration project

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**ESS11.6 – Laser Scanning: 3D Spatial Data, Analysis, and Infrastructures in Geosciences (co-listed) – Posters**

Convener: B. Höfle | Co-Conveners: N. Pfeifer, B. Székely, A. Zifp

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

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL148 EGU2012-5743  
**N. Slatcher**, M. R. James, and G. Hunter  
 Optimising terrestrial LIDAR field deployment
- XL149 EGU2012-9864  
**I. Nichersu**, I. Grigoras, A. Constantinescu, M. Mierla, and C. Tifanov  
 Processing and utilization of LiDAR data as a support for a good management of DDBR
- XL150 EGU2012-10798  
**S. Ghuffar**, B. Székely, A. Roncat, A. Pocsai, and N. Pfeifer  
 An investigation of landslide deformation using range flow motion constraint applied on LiDAR data
- XL151 EGU2012-11709  
**C. Bews**, I. Hartmeyer, M. Keuschnig, and L. Schrott  
 Semi-automatic discontinuity extraction from rock faces with LIDAR and Photogrammetry. A comparison validated by geotechnical data.
- XL152 EGU2012-12954  
**A. Vrežko**, G. Kovacs, T. Podobnikar, and B. Székely  
 The Effects of the Terrain Variation and Changed Parameters of the Moving Window on the LIDAR DEM Spectrum
- XL153 EGU2012-13722  
**P. Dorninger**, Z. Koma, and B. Székely  
 The influence of control parameter estimation on large scale geomorphological interpretation of pointclouds
- XL154 EGU2012-442  
**N. Kamp**  
 Using High-Resolution Airborne LiDAR-Data for Landslide Mapping in the Eastern Alps
- XL155 EGU2012-2578  
**Y. S. Hayakawa**  
 Morphological analysis of waterfall cliff face by terrestrial laser scanning
- XL156 EGU2012-5131  
**G. Gattolin**, M. Franceschi, A. Breda, G. Teza, and N. Preto  
 Three dimensional modeling of depositional geometries. A case study from Tofane Group (Dolomites, Italy).
- XL157 EGU2012-9200  
**T. Knudsen** and S. L. Kokkendorff  
 Updating a national scale LiDAR based height model

- XL158 EGU2012-9495  
**A. Mayr**, M. Rutzinger, M. Bremer, C. Wiegand, K. Kringer, and C. Geitner  
 Analysis of shallow landslides by morphometry parameters derived from terrestrial laser scanning point clouds
- XL159 EGU2012-9742  
**Zs. Koma**, A. Pocsai, B. Székely, P. Dorninger, A. Zámolyi, and A. Roncat  
 Analysis of multitemporal laserscanned DTMs of an active landslide (Doren, Western Austria) using a robust planefitting segmentation
- XL160 EGU2012-11485  
**M. Forbriger**, B. Höfle, C. Siart, K. Schitteck, and O. Bubenzer  
 High-resolution Terrestrial Laser Scanning (TLS) on cushion peatlands - a case study from the Peruvian Andes

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**TS4.4/G6.1/GD3.8/GM3.3 – TOPOEUROPE: Coupled deep earth - surface processes, and their role in shaping Europe's topography (co-organized) – Orals**

Convener: S. Cloetingh | Co-Conveners: S. Willett

**Room: 12**

Chairperson: Cloetingh, S., Willett, S.D.

- 08:30–08:45 EGU2012-11342  
**S.D. Willett**, M. Fox, P. Sternai, B.C. Salcher, and F. Herman  
 Late Cenozoic Exhumation of the Alps
- 08:45–09:00 EGU2012-4441  
**F. Schlunegger** and K.P. Norton  
 Headward retreat of streams in the Late Oligocene to Early Miocene Swiss Alps
- 09:00–09:15 EGU2012-400  
**G. Kovács** and T. Telbisz  
 Pleistocene alteration of drainage network and diverse surface morphology forced by basement structure in the foreland of the Eastern Alps
- 09:15–09:30 EGU2012-8524  
**Z. Erdos**, R.S. Huismans, and P. van der Beek  
 Evaluating balanced section restoration with thermochronological data in the Central Pyrenees
- 09:30–09:45 EGU2012-14391  
**C. Fillon**, R. Huismans, and P. van der Beek  
 Numerical modeling of sedimentation controls on the growth of the fold-and-thrust belts
- 09:45–10:00 EGU2012-6004  
**K.M. Stange**, R.T. van Balen, and J. Carcaillet  
 External controls on formation and preservation of fluvial terrace staircases in the Southern Pyrenees foreland

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**COFFEE BREAK**

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Chairperson: Willett, S.D., Cloetingh, S.

- 10:30–10:45 EGU2012-12616  
**L.C. Matenco**  
 On the link between orogenic shortening and back-arc extensional collapse in low topography orogens
- 10:45–11:00 EGU2012-7991  
**M. Chertova**, T. Geenen, A. P. van den Berg, and W. Spakman  
 3D subduction modelling of the Betic-Rif Alboran region.
- 11:00–11:15 EGU2012-14470  
 I. Midtkandal, R.H. Gabrielsen, J.-P. Brun, and **R. Huismans**  
 Along-strike complex geometry of subduction zones - an experimental approach
- 11:15–11:30 EGU2012-11786  
**D. Fernández-Blanco** and G. Bertotti  
 Miocene to present kinematics in Cilicia Basin, the link between the Central Anatolia Plateau and the Kyrenia Range
- 11:30–11:45 EGU2012-4545  
**M Tesauero**, M.K Kaban, and S.A.P.L Cloetingh  
 Strength and Elastic thickness of the lithosphere and implication on ductile crustal flow in Europe

11:45–12:00 EGU2012-7736

**A. Köhler**, N. Balling, J. Ebbing, R. England, A. Frassetto, S. Gradmann, B.H. Jacobsen, T. Kvarven, V. Maupin, A. Bondo Medhus, R. Mjelde, J. Ritter, J. Schweizer, W. Stratford, H. Thybo, B. Wawerzinek, and C. Weidle

Upper mantle and crustal structure of southwestern Scandinavia: Results of the TopoScandiaDeep project

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**TS4.4/G6.1/GD3.8/GM3.3 – TOPOEUROPE: Coupled deep earth - surface processes, and their role in shaping Europe's topography (co-organized) – Posters**

Convener: S. Cloetingh | Co-Conveners: S. Willett

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Cloetingh, S. and Willett, S.D.

A434 EGU2012-2441

**T. Duretz**, T. V. Gerya, B.J.P. Kaus, and T.B. Andersen

Thermomechanical modelling of slab eduction

A435 EGU2012-8247

**S. Mohammadi**, T. Geenen, A. P. van den Berg, and W. Spakman

Instantaneous mantle dynamics of the Western Mediterranean region

A436 EGU2012-1902

**P.G. Valla**, P.A. van der Beek, and J. Braun

Extracting denudation and relief histories from thermochronology data: rethinking sampling strategies?

A437 EGU2012-6315

**C. von Hagke**, O. Oncken, H. Ortner, and C. Cederbom

Post 12 Ma tectonic activity of the Subalpine Molasse resolved by combining thermochronology and critical wedge analysis

A438 EGU2012-14392

**C. Fillon**, C. Gautheron, and P. van der Beek

Quantifying the timing and extent of syn-orogenic sedimentation in the southern Pyrenean foreland using low-temperature thermochronology

A439 EGU2012-5293

**J. Campanyà**, J. Ledo, P. Queralt, A. Marcuello, M. Liesa, J.A. Muñoz, and A.G. Jones

Lithospheric-scale geoelectrical characterisation of a continental collision zone in Pyrenees: preliminary results.

A440 EGU2012-2645

**S. Jammes** and R.S. Huismans

Factors controlling the tectonic inversion of the Pyrenean mountain belt : from observations to modelling

A441 EGU2012-12632

H. Seillé, J. Pous, **D. Pedreira**, J. Gallastegui, J.A. Pulgar, J.M. González-Cortina, and E. Asensio

Geoelectrical characterization of the lithosphere beneath the Cantabrian Mountains and Duero Basin

A442 EGU2012-11992

**H. Seillé**, A. Garcia, I. Romero, J. Pous, J. Guimerà, and R. Salas

Crustal structure of the Iberian Chain inferred from magnetotelluric data

A443 EGU2012-403

**G. Kovács**

Pleistocene alterations of drainage network between the Alps and the Pannonian Basin

A444 EGU2012-10455

**T. Fuhrmann**, A. Knöpfler, F. Masson, M. Mayer, P. Ulrich, M. Westerhaus, K. Zippelt, and B. Heck

Horizontal and Vertical Surface Displacements in the Upper Rhine Graben Derived from GNSS and Precise Levelling Data

A445 EGU2012-5357

**E.M. Bartel**, F. Neubauer, B. Heberer, and J. Genser

Structural similarities and differences north and south of the Periadriatic fault with examples of the Drau Range and Friauli

A446 EGU2012-5096

**U. Stojadinovic**, L. Matenco, P. Andriessen, M. Tolji?, and J. Foeken

The balance between orogenic building and subsequent collapse during the Tertiary evolution of the NE Dinarides: Constraints from low-temperature thermochronology

A447 EGU2012-5060

**C.I. Trifan**, P.A.M. Andriessen, and L. Matenco

Detrital zircon fission track thermochronology in key stratigraphic formations of the Danube system, Romania: climatic or tectonic signals?



- A448 EGU2012-4278  
**M. K. Reiser**, B. Fügenschuh, and R. Schuster  
 Thermotectonic evolution of the Apuseni mountains (Romania) based on structural and geothermochronological data
- A449 EGU2012-12063  
**M. ?migielski**, F.M. Stuart, P. Krzywiec, C. Persano, H.D. Sinclair, K. Pisaniec, and K. Sobien  
 Neogene exhumation of the Northern Carpathians revealed by low temperature thermochronology.
- A450 EGU2012-11800  
**J. Francu**, J. Šafanda, V. Cermak, O. Krejci, and P. Andriessen  
 Subsidence, erosion and thermal history of the West Carpathian Foredeep Basin, Czech Republic
- A451 EGU2012-13197  
**I. Munteanu**, L. Matenco, C. Dinu, and S. Cloetingh  
 Effects of large sea-level variations in connected basins: the Dacian - Black Sea system of the Eastern Paratethys
- A452 EGU2012-4562  
**J. Petrovski**, B. Székely, and G. Timár  
 River Sinuosity Classification - Case study in the Pannonian Basin
- A453 EGU2012-9853  
**J. Minár**, M. Ková?, M. Bielik, J. Hók, S. Králiková, A. Smetanová, M. Šabo, and R. Vojtko  
 Neogene and Quaternary development of the Western Carpathian lithosphere: impact on georelief and geohazards
- A454 EGU2012-9409  
**A. Floroiu**, M Stoica, W. Krijgsman, and I. Vasiliev  
 Maetian / Pontian Boundary from the East Carpathian Foredeep (Dacian Basin)
- A455 EGU2012-12244  
**D. Fernández-Blanco**, G. Bertotti, and A. Çiner  
 Miocene tectonic motions in the Central Anatolia Plateau interior: a seismo-structural study in the Tuz Gölü Basin
- A456 EGU2012-12472  
**E. Miccadei**, T. Piacentini, C. Berti, and F. Daverio  
 Long term landscape evolution within central Apennines (Italy): Marsica and Peligna region morphotectonics and surface processes
- A457 EGU2012-8661  
**E. D. McGregor**, S. B. Nielsen, R. A. Stephenson, O. R. Clausen, K. D. Petersen, and D. I. M. Macdonald  
 Rift flank uplift and isostatic response to glacial erosion: Creation of a high-elevation continental margin.
- A458 EGU2012-5573  
**K. Stüwe** and S. Hergarten  
 An approximate fluvial equilibrium topography for the Alps
- A459 EGU2012-7397  
**S. Hergarten** and K. Stüwe  
 A puzzle about the Scandinavian topography
- A460 EGU2012-1626  
**A. A. Beylich**, K. Laute, and S. Liermann  
 Holocene to contemporary source-to-sink fluxes in a valley-fjord system in western Norway: Erdalen and Bødalén site project (SedyMONT - IP Norway)
- A461 EGU2012-7400  
 A.B. Medhus, **N. Balling**, B.H. Jacobsen, R.W. England, R. Kind, C. Weidle, P. Voss, and H. Thybo  
 Upper mantle P-wave velocity structure beneath southern Scandinavia
- A462 EGU2012-4322  
**C. Schiffer**, B. H. Jacobsen, N. Balling, and S. B. Nielsen  
 Geophysical investigations of the East Greenland Caledonides using receiver functions, gravity and topography data
- A463 EGU2012-4334  
**B. Hejrani**, B. H. Jacobsen, N. Balling, and R. W. England  
 A seismic tomography study of lithospheric structure under the Norwegian Caledonides
- A464 EGU2012-2813  
 B. Go??dowski, D.L. Egholm, **O.R. Clausen**, and S.B. Nielsen  
 Cenozoic erosion and flexural isostasy of Scandinavia
- A465 EGU2012-1129  
**H. M. Küçük**, D. Dondurur, and G. Çifçi  
 GAS ACCUMULATIONS and WIDE-SPREAD BSRs OBSERVED on CENTRAL BLACK SEA\*
- A466 EGU2012-1131  
**H. M. Küçük**, D. Dondurur, and G. Çifçi  
 SEDIMENTARY PROCESSES OBSERVED ON OFFSHORE of ZONGULDAK-KOZLU REGION, CENTRAL BLACK SEA\*

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**TS9.5/G3.5/GD8.6/GM3.6/GMPV6.20/SM3.5 – Crustal faulting and deformation processes observed by InSAR, GPS and modelling techniques (co-organized) – Orals**

Convener: T. R. Walter | Co-Conveners: R. Malservisi, R. Lanari, T. Dixon, F. Zucca, M. Shirzaei

**Room: 11**

Chairperson: Walter / Shirzaei

- 10:30–10:45 EGU2012-10002  
**E. Sansosti**  
 The impact of new generation SAR sensors in ground deformation studies
- 10:45–11:00 EGU2012-13821  
 R.F. Hanssen, **M. Caro Cuenca**, A. Hooper, P. Mahapatra, M. Arikan, and D. Bekaert  
 New trends in InSAR time series analysis for wide area deformation mapping
- 11:00–11:15 EGU2012-10784  
**E. Cetin**, Z. Cakir, A.M. Akoglu, S. Ergintav, U. Dogan, H. Ozener, and M. Meghraoui  
 Persistent Scatterer InSAR time series analysis of the creeping section of the North Anatolian Fault at Ismetpasa
- 11:15–11:30 EGU2012-12569  
**K. Hodgkinson**, D. Mencin, A. Borsa, O. Fox, C. Walls, and E. Van Boskirk  
 Recording Plate Boundary Deformation Processes Around The San Jacinto Fault, California
- 11:30–11:45 EGU2012-10391  
**G. Ducret**, M. P. Doin, R. Grandin, A. Socquet, C. Vigny, M. Métois, and M. Béjar-Pizarro  
 Measurement of interseismic strain accumulation in the Southern Andes (25°-35°S) using Envisat SAR data
- 11:45–12:00 EGU2012-3234  
**R. Barzaghi**, A. Borghi, and A. Kunzle  
 Statistical inference in comparing DInSAR and GPS data in fault areas

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**LUNCH BREAK**


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Chairperson: Zucca / Lanari

- 13:30–13:45 EGU2012-7144  
**S. Jónsson**  
 Probing Mechanical Properties of Rock with InSAR
- 13:45–14:00 EGU2012-3919  
**J.-C. Lee**, H. T Chu, S. H. Chang, W. J. Huang, C. H. Mu, and H. Y. Chen  
 Frictional properties of a rapid creeping mega-thrust: a case study of the Chihshang Fault in eastern Taiwan
- 14:00–14:15 EGU2012-3125  
**R.A. Bennett**, S. Ventkataramani, J.N. McElwaine, and J.M. Restrepo  
 Geodetic expressions of upper mantle dynamics?
- 14:15–14:30 EGU2012-10604  
**K.H. Spaans**, F. Sigmundsson, S. Hreinsdóttir, and B.G. Ófeigsson  
 High resolution surface deformation measurements in Iceland's Northern Volcanic Zone: Unraveling multiple deformation sources using InSAR and GPS
- 14:30–14:45 EGU2012-2331  
**P. J. González**, K. F. Tiampo, M. Palano, F. Cannavò, and J. Fernández  
 Concurrent tectonic and aquifer-compaction deformation around Lorca (SE, Spain)
- 14:45–15:00 EGU2012-9635  
**S. Rieger**, N. Adam, and A.M. Friedrich  
 Quantification of crustal deformation based on analysis of Persistent Scatterer Interferometry of W-Crete
- Chairperson: Malservisi / Dixon
- 15:30–15:45 EGU2012-7409  
**S. Metzger**, S. Jónsson, G. Danielsen, S. Hreinsdóttir, F. Jouanne, and T. Villemin  
 The accumulated seismic moment of the locked Húsavík-Flatey fault, North Iceland, derived from an interseismic model using GPS time-series 1997-2010
- 15:45–16:00 EGU2012-4404  
**P. Teatini**, A. Lovison, C. Janna, and A. Ferretti  
 Three-dimensional seasonal deformations induced by underground gas storage. Monitoring by PSI and modeling by FE

- 16:00–16:15 EGU2012-5510  
**N. Gourmelen**, A. Shepherd, D. Angus, Q. Fisher, D. Lesnic, and A. Gouldson  
 Quantifying the success of onshore carbon capture and storage from surface deformation measurement and geo-mechanical modeling
- 16:15–16:30 EGU2012-2946  
**R. Castaldo**, P. Tizzani, A. Manconi, M. Manzo, S. Pepe, A. Pepe, and R. Lanari  
 3D time dependent thermo-fluid dynamic model of ground deformation at Campi Flegrei caldera
- 16:30–16:45 EGU2012-4654  
 V. Poncos, **F. Serban**, D. Teleaga, V. Ciocan, M. Sorin, D. Caranda, F. Zamfirescu, M. Andrei, S. Copaescu, M. Radu, and V. Raduca  
 Water induced geohazards measured with spaceborne interferometry techniques
- 16:45–17:00 EGU2012-9299  
**J. Ruch**, J. Warren, F. Risacher, T.R. Walter, and R. Lanari  
 Salt lake deformation detected from space

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**TS9.5/G3.5/GD8.6/GM3.6/GMPV6.20/SM3.5 – Crustal faulting and deformation processes observed by InSAR, GPS and modelling techniques (co-organized) – Posters**

Convener: T. R. Walter | Co-Conveners: R. Malservisi, R. Lanari, T. Dixon, F. Zucca, M. Shirzaei

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: T. R. Walter , M. Shirzaei , R. Malservisi, R. Lanari , T. Dixon , F. Zucca

- A501 EGU2012-1064  
**R. Eco**, A.M.F. Lagmay, and M.G. Bato  
 Investigating ground deformation and subsidence in Northern Metro Manila, Philippines using Persistent Scatterer Interferometric Synthetic Aperture Radar (PSInSAR)
- A502 EGU2012-1395  
**S.-B. Yu**, Y.-J. Hsu, T. Bacolcol, C.-C. Yang, Y.-C. Tsai, and R. Solidum  
 Present-day Crustal Deformation along the Philippine Fault in Luzon, Philippines
- A503 EGU2012-2176  
**E. Davis** and S. Marsic  
 Use of Deformation Based Reservoir Monitoring for Early Warning Leak Detection
- A504 EGU2012-2463  
**S. Zerbini**, C. Prati, G. Cappello, M. Errico, and F. Novali  
 Observing crustal deformation and atmospheric signals from COSMO-SKYMED and GPS data
- A505 EGU2012-2483  
**C. Tolomei**, E. Trasatti, S. Atzori, J. Merryman, A. Antonioli, G. Pezzo, and S. Salvi  
 The Mw 7.2 Van Earthquake (2011): co-seismic and post-seismic deformation imaged by DInSAR data, and source modeling
- A506 EGU2012-3479  
**Y.-J. Hsu**, M. Simons, C.A. Williams, and E. Casarotti  
 3-D FEM derived elastic Green's functions for the coseismic deformation of the 2005 Mw 8.7 Nias-Simeulue, Sumatra earthquake
- A507 EGU2012-3895  
**M. Rupprechter**, A. Roepert, and G Hoffmann  
 Differential GPS measurements as a tool to quantify Late Cenozoic crustal deformation (Oman, Arabian Peninsula)
- A508 EGU2012-3992  
**Y.-A. Chen**, C.-P. Chang, and J.-Y. Yen  
 Interferometric SAR time series analysis for measuring the surface deformation caused by the 1999 Chi-Chi earthquake in Taiwan
- A509 EGU2012-4159  
**J.-Y. Yen**, C.-P. Chang, and Y.-I. Wen  
 Spatial and temporal variations of surface deformation along the Longitudinal Valley, eastern Taiwan, observed by Persistent SAR Interferometry using ERS, Envisat, and ALOS archives
- A510 EGU2012-4329  
**T. Yamasaki** and G.A. Houseman  
 The crustal viscosity gradient measured from post-seismic deformation: a case study of the 1997 Manyi (Tibet) earthquake
- A511 EGU2012-2209  
**W.-J. Huang** and K. M. Johnson  
 Strain accumulation across the Aksay segment of Altyn Tagh fault: Investigation of the influence of laterally varying lithospheric properties and a low-viscosity channel

- A512 EGU2012-5914  
**D.U. Sanli**, K. Coban, V. Akarsu, and E. Arslan  
Effect of Span of GPS Campaigns on Estimated Static Positioning Velocities
- A513 EGU2012-5940  
**M. Moreno**, D. Melnick, M. Rosenau, J. C. Baez, J. Klotz, O. Oncken, A. Tassara, J. Chen, K. Bataille, M. Bevis, A. Socquet, C. Vigny, B. Brooks, I. Ryder, B. Smalley, M. Bartsch, V. Grund, and H. Hase  
Tectonic control on the Mw 8.8 2010 Maule Chile earthquake
- A514 EGU2012-8444  
**C. Völksen** and M. Hackl  
Crustal Deformation and Seismicity in Southern Bavaria revealed by GNSS observations
- A515 EGU2012-10099  
**P. Kourkoulis**, T. Strozzi, and U. Wegmüller  
Ground-motion monitoring in the Venice Lagoon using combined DInSAR and Persistent Scatterer Interferometry
- A516 EGU2012-11035  
R. Barzaghi, **A. M. Marotta**, R. Splendore, and A. Borghi  
A new procedure to build a model covariance matrix: first results
- A517 EGU2012-11308  
**C. Bignami**, M. Chini, C. Kyriakopoulos, and S. Stramondo  
Seismic swarm detection by satellite DInSAR technique in the south-west Peloponnese, Greece
- A518 EGU2012-11474  
A. Schenk and **M. Westerhaus**  
Upgrading InSAR observations by combination with leveling data to understand small scale deformation processes
- A519 EGU2012-13947  
**J. Ha**, K.-D. Park, J. Won, and M.-B. Heo  
GPS-based Analysis of the Crustal Deformation of the Korean Peninsula due to the Tohoku-Oki Earthquake
- A520 EGU2012-12973  
**M. Mantovani** and H.-G. Scherneck  
Observation of Crustal Deformation around the Pärvie Postglacial Fault, Lapland, Sweden, using InSAR techniques
- A521 EGU2012-12176  
**A. Gualandi**, E. Serpelloni, L. Anderlini, and M.E. Belardinelli  
Space-time evolution of postseismic afterslip following the Mw 6.3, 2009 L'Aquila earthquake (central Italy) from principal component analysis inversion of GPS position time-series.
- A522 EGU2012-11428  
**C. Bignami**, C. A. Brunori, M. Chini, C. Kyriakopoulos, D. Melini, M. Moro, M. Picchiani, M. Saroli, and S. Stramondo  
DInSAR techniques for studying the October 23, 2011, Van earthquake (Turkey), and its relationship with neighboring structures
- A523 EGU2012-10733  
**K. Wiencke**, T. R. Walter, M. Manzo, A. Manconi, G. Solaro, and R. Lanari  
InSAR time series monitoring at Istanbul city shows faulting, landslides and soil compaction
- A524 EGU2012-12631  
**S. H. Jaramillo**, G. Suárez, and P. López-Quiroz  
Subsidence history of the city of Morelia, Mexico based on InSAR images processed as time series
- A525 EGU2012-1591  
**A. Caporali**, F. Neubauer, G. Stangl, and D. Zuliani  
Modeling surface velocities in the Southern and Eastern Alps by finite dislocations at crustal depths
- A526 EGU2012-4642  
**C.-C. Kang**, C.-C. Chang, L.L Siame, and J.-C. Lee  
Recent surface deformation and its geodynamic insights for the Ilan Plain: an extensional basin in northern Taiwan orogenic belt
- A527 EGU2012-5130  
**Y.-C. Chan**, K.-J. Chang, R.-J. Chen, J.-C. Lee, Y.-C. Hsieh, and K.-S. Chen  
Evidence for Active Normal Faulting in Northern Taiwan and its Seismogenic Implications
- A528 EGU2012-6802  
**G. Lin**, W-L Chang, C-Y Chiu, and C-P Chang  
Transition of Ground Uplift and Kinematic Model in Southwestern Taiwan from PSI and GPS Observations
- A529 EGU2012-9846  
**Z. Mousavi**, E. Pathier, A. Walpersdorf, C. Lassere, F. Tavakli, and H. Nankali  
InSAR Time Series Analysis of Interseismic Deformation in Eastern Iran
- A530 EGU2012-11011  
**Z. Çakir**, S. Ergintav, H. Ozener, U. Dogan, A.M. Akoglu, M. Meghraoui, and R. Reilinger  
Fault weakening and onset of aseismic creep on mature strike-slip faults

- A531 EGU2012-12517  
**S.M Razeghi**, A.A Amiri Simkoei, and M.A Sharifi  
 Realistic Noise Assessment and Strain Analysis of Iranian Permanent GPS Stations

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### GM5.1 – Aeolian Processes and Landforms – Orals

Convener: J.M. Nield | Co-Conveners: J. King

**Room: 21**

Chairperson: J.M. Nield and J. King

- 15:30–15:45 EGU2012-796  
**Z. S. Lee** and A.C.W Baas  
 Investigating boundary layer turbulence for aeolian sand transport
- 15:45–16:00 EGU2012-12842  
**F. Baart**, J. den Bieman, M. van Koningsveld, A.P. Luijendijk, E.J.R. Parteli, N.G. Plant, J.A. Roelvink, J.E.A. Storms, S. de Vries, J.S.M. van Thiel de Vries, and Q. Ye  
 An integrated coastal model for aeolian and hydrodynamic sediment transport
- 16:00–16:15 EGU2012-177  
**J. Roskin**, H. Tsoar, N. Porat, and D.G. Blumberg  
 Palaeoclimate interpretations of Late Pleistocene vegetated linear dune mobilization episodes: evidence from the northwestern Negev dunefield, Israel
- 16:15–16:30 EGU2012-6165  
 T. Barchyn and **C. Hugenholtz**  
 Predicting vegetation-stabilized dune morphology
- 16:30–16:45 EGU2012-2814  
**M. Dluzewski**  
 Barchan dunes morphology dynamics under different environmental conditions
- 16:45–17:00 EGU2012-876  
**I. Ashpole** and R. Washington  
 Interannual variability in dust emissions from the western Sahara: links to the West African Monsoon.

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### GM5.1 – Aeolian Processes and Landforms – Posters

Convener: J.M. Nield | Co-Conveners: J. King

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

Author in Attendance: 17:30–19:00

Chairperson: J. King and J.M. Nield

- XL232 EGU2012-3134  
**A.C.W. Baas**, D.W.T. Jackson, J.A.G. Cooper, K. Lynch, I. Delgado-Fernandez, and J.H.M. Beyers  
 Sand Transport under Highly Turbulent Airflow on a Beach Surface
- XL233 EGU2012-6201  
**C. Hugenholtz**, C. McKenna Neuman, B. Li, T. Barchyn, and S. Sanderson  
 What drives intermittent aeolian saltation at high-frequency?
- XL234 EGU2012-214  
**S. de Vries**, S.M. Arens, M.J.F. Stive, and R. Ranasinghe  
 A new modelling concept for aeolian sediment transport on beaches
- XL235 EGU2012-762  
**L.H. Vircavs**, J.M. Nield, J. Leyland, and S.E. Darby  
 A Comparison of Aerodynamic Roughness and Surface Roughness Measurements Derived from Terrestrial Laser Scanning Over Ice and Sandar Surfaces
- XL236 EGU2012-8317  
**J.M. Nield**, J.A. Gillies, and W.G. Nickling  
 Quantifying roughness density of vegetation and nebkha dunes in the Chihuahuan Desert, New Mexico, USA using terrestrial laser scanning
- XL237 EGU2012-5431  
**P. Vermeesch**  
 A 45-year time series of Saharan dune mobility from remote sensing
- XL238 EGU2012-13165  
**B. Liu**, T.J. Coulthard, and S.J. McLelland  
 Interaction between sand dunes and rivers, and the impact on geomorphology
- XL239 EGU2012-3546  
 D. Zhang, **C. Narteau**, O. Rozier, and S. Courrech du Pont  
 Morphodynamics of star dunes

- XL240 EGU2012-2600  
**K. Biejat**  
Possibility of star (pyramid) dune development in the area of bimodal wind regime
- XL241 EGU2012-389  
**N. Bhatt**  
100 Kyr Old Desert of Western India: Morphodynamics and Environmental Significance
- XL242 EGU2012-3969  
**Y. Ohno**, M. Kasai, and T. Marutani  
Dune development and migration to damage long established vegetation colonies in the lahar deposition zone of Ruapehu Volcano, New Zealand
- XL243 EGU2012-12424  
E. Miccadei, **T. Piacentini**, F. Mascioli, F. Daverio, and R. Di Michele  
Geomorphological features of coastal dunes along the central Adriatic coast (Abruzzo, Italy)
- XL244 EGU2012-9142  
**S. Costas**, S. Jerez, R. Trigo, R. Goble, and L. Rebelo  
Pulses of aeolian activity and westerly winds intensification in the Portuguese coast during cooling climate events
- XL245 EGU2012-8326  
**M. Brook**, M. Shepherd, R. Tinkler, and J. Williams  
Ground-penetrating radar (GPR) stratigraphy of late-Pleistocene relict foredunes on a coastal barrier: Matakana Island, New Zealand
- XL246 EGU2012-176  
**J. Roskin**, O. Rozenstein, H. Tsoar, D. G. Blumberg, and N. Porat  
Sand rubification with time? The case of the Sinai - Negev erg
- XL247 EGU2012-9779  
**J. King**, G.F.S. Wiggs, F.D. Eckardt, D.S.G. Thomas, R.G. Bryant, and R. Washington  
DO4 Models: A new generation of model dust emission schemes based on source area process data
- XL248 EGU2012-278  
**F. Youssef**, S. Visser, D. Karssenbergh, E. Slingerland, G. Erpul, F. Ziadat, and L. Stroosnijder  
Strategies for Measuring Wind Erosion for Regional Scale Modeling
- XL249 EGU2012-6586  
**S. W?owska** and B. Woronko  
Potential source regions of dust accumulated in northern Africa

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### NH3.3/GM6.3 – Rockfalls, rockslides and rock avalanches (co-organized) – Orals

Conveners: JR Moore, Krautblatter | Co-Conveners: A. Volkwein, F. Agliardi, G. Crosta, LKA Dorren

#### Room: 4

Chairperson: Krautblatter, Moore

- 08:30–08:45 EGU2012-1567  
**K. Thoeni**, A. Giacomini, C. Lambert, and S.W. Sloan  
Numerical and experimental investigation of a rockfall drapery system
- 08:45–09:00 EGU2012-11022  
**J. Glover**, A. Schweizer, M. Christen, W. Gerber, R. Leine, and P. Bartelt  
Numerical investigation of the influence of rock shape on rockfall trajectory
- 09:00–09:15 EGU2012-12728  
A. Volkwein, J. Glover, F. Bourrier, and W. Gerber  
A quality assessment of 3D video analysis for full scale rockfall experiments
- 09:15–09:30 EGU2012-9304  
**F. X. Yugsi Molina**, T. Oppikofer, L. Fischer, R. L. Hermanns, and A. Taurisano  
Rockfall hazard assessment integrating probabilistic physically based rockfall source detection (Norrdal municipality, Norway).
- 09:30–09:45 EGU2012-295  
**L.M. Vick**, T.R. Davies, M Villeneuve, and C Massey  
Two- and Three-dimensional coseismic rockfall modelling, Christchurch, New Zealand
- 09:45–10:00 EGU2012-12053  
**G.M. Stock**, B.D. Collins, S.J. Martel, and R.J. Sas  
Factors promoting rock falls along sheeting joints

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### COFFEE BREAK

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Chairperson: Moore, Krautblatter

- 10:30–10:45 EGU2012-6037  
**A. Abellán**, D. Carrea, A. Loye, M. Tonini, M. Jaboyedoff, M. Royan, and A. Pedrazzini  
Understanding precursory rockfalls along cracks
- 10:45–11:00 EGU2012-10659  
**U. Schwaderer**, M. Walter, and M. Joswig  
Seismic precursory signals from a rockfall at Rappenlochschlucht, Vorarlberg, Austria
- 11:00–11:15 EGU2012-12460  
**M. Bundschuh** and K. Thuro  
Mechanisms of rock slope failure in conglomerates with variable lithification
- 11:15–11:30 EGU2012-13223  
**B.D. Collins** and G.M. Stock  
Exfoliation-type rock fall triggering from thermally-induced cyclic deformation
- 11:30–11:45 EGU2012-1413  
**D. Bakun-Mazor** and Y.H. Hatzor  
Rockslides in Masada: thermally induced "ratchet" mechanism vs. response to seismic loading
- 11:45–12:00 EGU2012-12479  
**S. Ivy-Ochs**, S. Martin, P. Campedel, V. Alfimov, E. Andreotti, A. Viganò, G. Carugati, C. Vockenhuber, and S. Cocco  
Constructing a time series for large landslides in Trentino (Italy) with <sup>36</sup>Cl exposure dating

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### NH3.3/GM6.3 – Rockfalls, rockslides and rock avalanches (co-organized) – Posters

Conveners: JR Moore, Krautblatter | Co-Conveners: A. Volkwein, F. Agliardi, G. Crosta, LKA Dorren

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

Author in Attendance: 17:30–19:00

Chairperson: Moore, Krautblatter

- XY203 EGU2012-1108  
M. Spadari, A. Giacomini, **O. Buzzi**, and J. Hambleton  
Application of dimensional analysis to predict the performance of rockfall barrier
- XY204 EGU2012-5514  
**A.J.A.M. Temme**  
Assessing the value of information in climber's guidebooks to derive spatio-temporal rockfall patterns
- XY205 EGU2012-11251  
**X. Wang**, P. Frattini, F. Agliardi, and G.B. Crosta  
The influence of slope profile extraction techniques and DEM resolution on 2D rockfall simulation
- XY206 EGU2012-10891  
**B. Sellmeier** and K. Thuro  
Possibilities and limitations of 2D and 3D rockfall simulations - which kinds of uncertainties do we have to consider?
- XY207 EGU2012-12239  
**F Humair**, B Matasci, D Carrea, A Pedrazzini, A Loye, G Pedrozzi, P Nicolet, and M Jaboyedoff  
MONTE GENEROSO ROCKFALL FIELD TEST (SWITZERLAND): Real size experiment to constraint 2D and 3D rockfall simulations
- XY208 EGU2012-3878  
**S. Melzner**, G.M. Stock, and P. Reichenbach  
Back-analysis of rockfall events using 3D trajectory simulation models
- XY209 EGU2012-8388  
**R. Pellicani**, G. Spilotro, G. Colangelo, A. Petraglia, and V. Pizzo  
Rockfall risk assessment for a road along the coastal rocky slope of Maratea (Basilicata Region, Italy)
- XY210 EGU2012-11412  
**P. Frattini**, S. Lari, F. Agliardi, G.B. Crosta, and H. Salzmänn  
Probabilistic Rockfall Hazard Analysis in the area affect by the Christchurch Earthquakes, New Zealand
- XY211 EGU2012-13875  
**A. Schober**, C. Bannwart, and M. Keuschnig  
Rockfall modelling in high alpine terrain - Validation and limits, Kitzsteinhorn, Hohe Tauern, Austria.
- XY212 EGU2012-12348  
**T. Piacentini**, E. Miccadei, G. Boscaino, L. Del Sordo, R. Di Michele, F. Leonardis, and G. Pipponzi  
Rock falls landslides in Abruzzo (Central Italy) after recent earthquakes: morphostructural control
- XY213 EGU2012-10875  
**J.M. Reitner**, R. Schuster, and A. Geyer  
From Rock to Silt: The Auernig Sturzstrom (Eastern Alps/Carinthia/Austria)
- XY214 EGU2012-3526  
**M. Farin**, A. Mangeney, O. Roche, I.R. Ionescu, and O. Hungr  
Landslide boost from entrainment of erodible material along the slope

- XY215 EGU2012-11572  
**G. Crosta**, F. De Blasio, M. De Caro, G. Volpi, and P. Frattini  
Granular flows on erodible layers: type and evolution of flow and deposit structures
- XY216 EGU2012-5147  
**A. Dufresne**, T. R. Davies, and M. J. McSaveney  
Emplacement of rock avalanche material across saturated sediments, Southern Alp, New Zealand
- XY217 EGU2012-7512  
**P. Köpfli**, J.R. Moore, and S. Ivy-Ochs  
The Oeschinensee rock avalanche: reconstruction and dating of a prehistoric event
- XY218 EGU2012-10769  
**L. Grämiger**, J.R. Moore, and S. Ivy-Ochs  
Prehistoric rock avalanches at Rinderhorn, Switzerland
- XY219 EGU2012-2330  
**JR Moore**, V Gischig, F Amann, M Hunziker, and J Burjanek  
The 1946 Rawilhorn rock avalanche (Valais, Switzerland) - linking earthquake-induced rock mass damage to seismic amplification
- XY220 EGU2012-4603  
**M. Ostermann**, D. Sanders, S. Ivy-Ochs, V. Alfimov, M. Rockenschaub, and A. Römer  
An early Holocene rock avalanche at Obernberg (Brenner Pass Area, Tyrol)
- XY221 EGU2012-9320  
**C. Longchamp**, M. Charrière, and M. Jaboyedoff  
Analogue modelling of rock avalanches and structural analysis of the deposits
- XY222 EGU2012-1973  
**S. Hergarten**  
Topography-based modeling of large rock avalanches and application to hazard assessment
- XY223 EGU2012-8548  
D. Aringoli, B. Gentili, **M. Materazzi**, G. Pambianchi, and N. Sciarra  
Large rockslides and slope deformations in active tectonic areas of Adriatic central Italy
- XY224 EGU2012-4538  
**P. Bottelin**, D. Jongmans, L. Baillet, J. Turpin, C. Levy, T. Lebourg, D. Hantz, O. Leroux, H. Cadet, L. Lorier, and J-D. Rouiller  
Study of the dynamic response of prone-to-fall spurs using seismic noise
- XY225 EGU2012-6867  
**R. Nishii**, F. Imaizumi, W. Murakami, H. Daimaru, T. Miyamae, and Y. Ogawa  
LiDAR monitoring of retrogressive processes on the steep rockslope of a large landslide in the Japanese Alps
- XY226 EGU2012-12379  
**B. Matasci**, G.M. Stock, M. Jaboyedoff, T. Oppikofer, A. Pedrazzini, and D. Carrea  
Rock face stability analysis and potential rockfall source detection in Yosemite Valley
- XY227 EGU2012-12331  
**B. Matasci**, L. Ravanel, M. Jaboyedoff, and P Deline  
Structural analysis and stability assessment of the West face of the Drus (3733m, Mont Blanc massif)
- XY228 EGU2012-12488  
**I. Hartmeyer**, M. Keuschnig, R. Delleske, and L. Schrott  
Reconstruction of the Magnetkoeplf rockfall event - Detecting rock fall release zones using terrestrial laser scanning, Hohe Tauern, Austria
- XY229 EGU2012-10787  
**F. Gallo**, J. Lavé, G. Morin, C. France-Lanord, and A.P. Gajurel  
Hillslope erosion and landslide dynamics in the central Himalayas
- XY230 EGU2012-10495  
**M. Weber**, M. Bimböse, K.-H. Schmidt, and D. Morche  
On the contemporary morphodynamics of an alpine talus cone and the granulometry and morphometry of its surface particles

**GM9.1/CR1.70 – Cold Region Geomorphology (co-organized) – Orals**

Convener: M. Spagnolo | Co-Conveners: I. Gärtner-Roer, S. Lukas

**Room: 21**

Chairperson: Matteo Spagnolo

08:30–09:00 EGU2012-3257

**J. Shulmeister**

Effects of tectonism on glacial and paraglacial processes- a New Zealand case study

09:00–09:15 EGU2012-1539

**M. Brook** and S. Lukas

Lithological and fluvial influences on clast shape measurements in a temperate alpine environment: a case study from Fox Glacier, New Zealand



- 09:15–09:30 EGU2012-10661  
**C. Godon**, J-F. Buoncristiani, and J-L. Mugnier  
 Detrital flux in glacial and peri-glacial domain: the example of the Bossons glacier (Haute Savoie, Mont-Blanc Massif)
- 09:30–09:45 EGU2012-9900  
**K.S. Lilleøren**, I. Gärtner-Roer, and B. Etzelmüller  
 A new assessment of distribution and activity of permafrost landforms in the Tröllaskagi peninsula, northern Iceland
- 09:45–10:00 EGU2012-9573  
**A. Kellerer-Pirklbauer** and V. Kaufmann  
 On the relationship between surface flow velocity and climatic conditions at three rock glaciers in central Austria

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**COFFEE BREAK**

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Chairperson: Sven Lukas

- 10:30–11:00 EGU2012-4699  
**M. Krabbendam**  
 Bedrock properties and glacial processes and landforms - some principles and examples
- 11:00–11:15 EGU2012-173  
**C. Lloyd**, C. Clark, and D. Swift  
 Controls on the location and geometry of glacial overdeepening
- 11:15–11:30 EGU2012-446  
**A.J. Geiger**, D. Fabel, and N.F. Glasser  
 Thickness constraints of the Patagonian Ice Sheet over the last glacial cycle using surface exposure dating
- 11:30–11:45 EGU2012-11541  
**T. Hoffmann** and E.A. Johnson  
 Interglacial geomorphic dynamics during the Quaternary: Does glacial erosion dominates interglacial adjustment?
- 11:45–12:00 EGU2012-13086  
**S.-E. Lauritzen**  
 Dissolution of calcite in glacial water; evidence of inhibition and consequences for subglacial speleogenesis.

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**GM9.1/CR1.70 – Cold Region Geomorphology (co-organized) – Posters**

Convener: M. Spagnolo | Co-Conveners: I. Gärtner-Roer, S. Lukas

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

Author in Attendance: 17:30–19:00

Chairperson: Isabel Roer

- XL250 EGU2012-14345  
**MS Spagnolo**, IG-R Gärtner-Roer, and SL Lukas  
 Linking glacial, periglacial and paraglacial processes: the challenge of cold regions geomorphology
- XL251 EGU2012-712  
**I. Szuman**, M. Ewertowski, L. Kasprzak, and J.A. Piotrowski  
 Ice sheet - permafrost interactions inferred from the sedimentary record of Weichselian glaciation in Poland
- XL252 EGU2012-1751  
**A. Amantov** and M. Amantova  
 Giant glacial cirques of non-mountainous terrains
- XL253 EGU2012-11577  
**D. Pearce**, B. Rea, and D McDougall  
 Lateglacial geomorphology in the Tweedsmuir Hills, Scotland - Implications for retreat patterns, glacier reconstruction and chronology.
- XL254 EGU2012-3901  
 X. Wang, **Y. Martin**, D. Sjogren, and E. Johnson  
 Analysis of Glacial Valley Morphology and Erosion Using DEM Data: Kananaskis, Canadian Rockies, Canada
- XL255 EGU2012-14273  
**S. Lukas**  
 Processes of annual moraine formation at a temperate alpine valley glacier: glacier dynamics and climatic controls

- XL256 EGU2012-4630  
**M. Krabbendam**, T. Bradwell, and J. Everest  
Deep crescentic features caused by subglacial boulder point pressure on jointed rock; an example from Virkisjökull, SE Iceland
- XL257 EGU2012-5278  
**H. Häusler**, A. Kopecny, and D. Leber  
Are the stair case terraces in the Inylchek Valley (Central Tien Shan, Kyrgyzstan) of neotectonic or sedimentary origin?
- XL258 EGU2012-5327  
**H. Häusler**, D. Leber, and A. Kopecny  
Is Upper Lake Merzbacher (Central Tien Shan, Kyrgyzstan) the result of a fluctuating glacier?
- XL259 EGU2012-12333  
**H. Juliussen**, E.N. Støren, I. Lecomte, G. Sauvin, S. Tissot, S.-E. Hamran, D. Petrakov, I. Lavrentiev, and S. Kutuzov  
Coupling alpine lake sediments with slope deposits using a combined geophysical and sedimentological approach, Leirvatnet, Jotunheimen, southern Norway
- XL260 EGU2012-6805  
**J. Lea**, D. Mair, B. Rea, F. Nick, and E. Schofield  
Constraining millennial scale dynamics of a Greenland tidewater glacier for the verification of a calving criterion based numerical model
- XL261 EGU2012-14272  
**H. Lovell**, E. Fleming, D.I. Benn, and S. Lukas  
Debris-rich structures within a High-Arctic tidewater surging glacier: Tunabreen, Svalbard
- XL262 EGU2012-9833  
**M. Margold**, K.N. Jansson, J. Kleman, and A.P. Stroeven  
Late-glacial ice dynamics of the northeastern sector of the Cordilleran Ice Sheet reconstructed from the glacial landform record
- XL263 EGU2012-14270  
C.M. Boston and **S. Lukas**  
A Lateglacial plateau icefield in the Monadhliath Mountains, Scotland: reconstruction and palaeoclimatic implications
- XL264 EGU2012-1811  
**K. Laute** and A.A. Beylich  
Postglacial trends of hillslope development in two glacially formed mountain valleys in western Norway
- XL265 EGU2012-6803  
**S.P. Anderson**, R.S. Anderson, P.J. Kelly, G.E. Tucker, and A. Wickert  
Frost weathering: Climate control of regolith production and critical zone evolution
- XL266 EGU2012-11661  
**R. Scotti**, F. Brardinoni, S. Alberti, P. Frattini, and G.B. Crosta  
A new rock glacier inventory of the Lombardy, Central Alps, Italy
- XL267 EGU2012-213  
**R. Perrier**, E. Cossart, C. Virmoux, M. Fort, M. Chenet, and J.F. Cuenot  
Evolution of cryo-conditioned landforms since the Little Ice Age and implications on permafrost degradation: a case study from the Lac Rouge rockglacier (Clarée Valley, Southern French Alps)
- XL268 EGU2012-9674  
**S. Monnier** and C. Kinnard  
From 'true' glaciers to rock glaciers? The case of the Llanos la Liebre rock glacier, dry Andes of Chile.
- XL269 EGU2012-12173  
**E. Bollmann**, J. Abermann, K. Krainer, R. Sailer, M. Spross, and J. Stötter  
Influence of topographic and climatological characteristics on rock glacier creep rates in the Western Austrian Alps
- XL270 EGU2012-10818  
J. Saraiva, **M. Lousada**, P. Pina, L. Bandeira, and G. Vieira  
Geometric and Topologic Characterization of Periglacial Polygonal Networks in Adventdalen, Svalbard, Norway
- XL271 EGU2012-10655  
**M. Lousada**, M. Jorge, J. Saraiva, P. Pina, and G. Vieira  
Micro-relief and geometry of ice-wedge polygons in Adventdalen (Svalbard, Norway)
- XL272 EGU2012-9903  
**C. Klug**, R. Sailer, M. Schümborg, and J. Stötter  
Airborne laser scanning based quantification of dead-ice melting in recently deglaciated terrain
- XL273 EGU2012-10682  
**D.C. Tanner**, J. Igel, T. Günther, C. Brandes, and C.M. Krawczyk  
The Quaternary paleotopography in County Kerry, Ireland: Investigation using detailed 3D electrical resistivity tomography and ground-penetrating radar

- XL274 EGU2012-10025  
**N. Micheletti**, S.N. Lane, and C. Lambiel  
 Geomorphic modulation of climate impacts on soil-sediment temperature distributions in Alpine mountain basins
- XL275 EGU2012-13586  
**B. Schreiner**  
 Quantitative analysis of rock slopes in the Turtmantal (Central Swiss Alps) using HRSC data

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**GM9.2 – Glacial landforms and palaeoclimatic interpretation – Orals**

Convener: S. Winkler | Co-Conveners: T. Davies, M.P. Kirkbride, L. Iturrizaga

**Room: 21**

Chairperson: Stefan Winkler

- 13:30–13:45 EGU2012-5435  
**S. Lukas**, A. Graf, S. Coray, and C. Schlüchter  
 Genesis, stability and preservation potential of large lateral moraines of Alpine valley glaciers - towards a unifying theory
- 13:45–14:00 EGU2012-3745  
**N. Andrés** and D. Palacios  
 Interpretation of the past glacial landforms from the present processes: the hypothesis of the secondary moraine
- 14:00–14:15 EGU2012-910  
 L. Kasprzak, **M. Ewertowski**, I. Szuman, and A.M. Tomczyk  
 Depositional efficiency of the weichselian ice sheet. Central-West Poland.
- 14:15–14:30 EGU2012-10154  
**B. Mächtle**, A.S. Hein, T. Dunai, and B. Eitel  
 Geomorphological evidence of warm-humid and cold-dry glaciations in the dry western Cordillera of the tropical Peruvian Andes
- 14:30–14:45 EGU2012-6256  
**D. McDougall**  
 Glaciation Style, Paraglacial Reworking and the Geomorphological Record: The Challenges of Reconstructing Younger Dryas Glaciers
- 14:45–15:00 EGU2012-6316  
**G. Roe**  
 The Natural Variability of Glaciers

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**GM9.2 – Glacial landforms and palaeoclimatic interpretation – Posters**

Convener: S. Winkler | Co-Conveners: T. Davies, M.P. Kirkbride, L. Iturrizaga

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

Author in Attendance: 17:30–19:00

Chairperson: Stefan Winkler

- XL276 EGU2012-12364  
**P. Fu**, J. Harbor, A.P. Stroeven, C. Hättestrand, M.W. Caffee, J. Heyman, and L.P. Zhou  
 Paleo-glaciations of the Shaluli Shan, southeastern Tibetan Plateau
- XL277 EGU2012-5911  
**D.H. Roberts**, B. Rea, T. Lane, C. Schnabel, and A. Rodes  
 The Uummannaq Ice Stream System, West Greenland
- XL278 EGU2012-2459  
**E. Ravier**, J.F. Buoncristiani, S. Clerc, M. Guiraud, and E. Portier  
 Sedimentological and deformational evidence for a terrestrial deglaciation: Ballyhorsey, eastern Ireland
- XL279 EGU2012-2966  
**K. Leith**, J. Moore, P. Sternai, S. Ivy-Ochs, F. Hermann, and S. Loew  
 Reconstruction of an extensive Younger Dryas glacial stadial in Canton Valais, Switzerland
- XL280 EGU2012-3573  
**L.L. Siame**, H.-T. Chu, D.L. Boulès, F. Derrieux, L. Léanni, R.-F. Chen, and C.-C. Kang  
 Preservation of glacial landforms in the high mountains of Taiwan: Insights from in situ cosmogenic <sup>10</sup>Be
- XL281 EGU2012-6570  
**E. Šink?nas** and P. Šink?nas  
 Sedimentary structures from different proglacial glaciofluvial settings in Lithuania
- XL282 EGU2012-8762  
**P. Šink?nas**, B. Karmaza, D. Karmazien?, V. Kazakauskas, and R. Waller  
 Architecture and sedimentation pattern of Skeidarárjökull end moraine at Gigjukvisl gap, Iceland

- XL283 EGU2012-7838  
**A. Rudoy**  
Study diluvium: general provisions.
- XL284 EGU2012-3664  
**J. Alcalá**, D. Palacios, and L. Vázquez-Selém  
36Cl Exposures Ages and Equilibrium Line Altitude (ELA) of the Ampato Volcanic Complex (Southern Peru).
- XL285 EGU2012-3683  
**J. Úbeda**, D. Palacios, and L. Vázquez-Selém  
Glacial and volcanic evolution on Nevado Coropuna (Tropical Andes) based on cosmogenic 36Cl surface exposure dating
- XL286 EGU2012-3686  
L. García-Sancho, **D. Palacios**, J.J. Zamorano, A. Green, M. Vivas, and A. Pintado  
Recent Deglaciation of Darwin Mountains (Tierra de Fuego) after Little Ice Age: monitoring by photogrammetry, lichenometry, dendrochronology and field studies.
- XL287 EGU2012-3702  
**J. Úbeda**, C. Giráldez, and D. Palacios  
Equilibrium Line Altitudes and paleotemperature reconstructions from Nevado Hualcán (9°S) and Nevado Coropuna (15°S), Tropical Andes (Peru).
- XL288 EGU2012-3738  
**D. Palacios**, N. Andrés, G. Vieira, J. Marcos, and L. Vázquez-Selem  
Last Glacial Maximum and deglaciation of the Iberian Central System.
- XL289 EGU2012-3751  
A. Gómez-Ortiz, **D. Palacios**, B. Palade, L. Vázquez-Selem, F. Salvador-Franch, and L.M. Tanarro  
The deglaciation of the Sierra Nevada (southern Spain) and derived landforms
- XL290 EGU2012-3755  
**D. Palacios**, L. García-Sancho, J.J. Zamorano, N. Andrés, and A. Pintado  
The deglaciation of Iztaccíhuatl volcano (Mexico) from the Little Ice Age maximum to the present, determined by photogrammetry and lichenometry
- XL291 EGU2012-3759  
**D. Palacios**, N. Andrés, J. Úbeda, J. Alcalá, J. Marcos, and L. Vázquez-Selem  
The importance of polygenic moraines in the paleoclimatic interpretation from cosmogenic dating
- XL292 EGU2012-4446  
**A. Perret**, E. Reynard, and J.-J. Delannoy  
Glacial history of a mid-altitude mountain massif: cartography and dating in the Chablais area (France, Switzerland)
- XL293 EGU2012-5070  
M. Bichler, M. Reindl, H. Häusler, and J. M. Reitner  
Chronology of glacial and periglacial deposits in front of the 1850 moraine of the Goldberg-Glacier, Sonnblick area (Salzburg/Austria)
- XL294 EGU2012-9576  
**R.A. Shakesby** and J.A. Matthews  
Pronival ramparts, moraines, rockglaciers or slope failures? Distinctions and palaeoclimatic pitfalls of misidentification.
- XL295 EGU2012-8258  
**M. Brook**, D. Quincey, and S. Winkler  
Moraine formation during an advance/retreat cycle at a temperate alpine glacier
- XL296 EGU2012-6451  
**N. Reznichenko**, T.R.H. Davies, J. Shulmeister, and S. Winkler  
The rock avalanche sediment in moraines and its implication for palaeoclimate reconstruction
- XL297 EGU2012-13653  
**L. Iturrizaga**  
Glacial landform assemblages in the catchment area of the upper Quitarasca valley (Cordillera Blanca, Perú)
- XL298 EGU2012-6508  
**I. W. Wolff** and N. F. Glasser  
The Reconstruction and Climatic Implication of an Independent Palaeo Ice Cap in the Vicinity of the Lago Buenos Aires/Lago Pueyrredón Palaeo Ice Streams, Patagonia.

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#### HS5.9 – Hydrological, ecological, geomorphic and economic implications of Mountain Resort Development (co-listed) – Orals

Convener: C. de Jong | Co-Conveners: B. Wemple

**Room: 39**

Chairperson: C. de Jong, B. Wemple

- 10:30–10:45 EGU2012-12589  
**B. McGlynn**, K. Gardner, and L. Marshall  
Quantifying watershed sensitivity to spatially variable N loading from mountain resort development
- 10:45–11:00 EGU2012-14025  
**S. Gaucherand** and I. Mauz  
Winter Tourism and mountain wetland management and restoration
- 11:00–11:15 EGU2012-13938  
**G. David**  
Effects of mountain resort development on stream geomorphic function in the White River National Forest, Colorado, USA
- 11:15–11:30 EGU2012-9417  
**R. Ristic**, B. Radic, N. Vasiljevic, Z. Nikic, and I. Malusevic  
Erosion Processes, Sediment Transport and Hydrological Responses Due to Land Use Changes in Serbian Ski Resorts
- 11:30–11:45 EGU2012-14085  
A.L. Shnyarkov, Y.G. Seliverstov, **S.A. Sokratov**, and K.P. Koltermann  
Change in snow avalanche and debris flow hazards in the region of Krasnaya Polyana as the result of anthropogenic activity
- 11:45–12:00 EGU2012-11398  
**C. Gonseth**  
The economic aspects of artificial snow production in the perspective of climate change

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### HS5.9 – Hydrological, ecological, geomorphic and economic implications of Mountain Resort Development (co-listed) – Posters

Convener: C. de Jong | Co-Conveners: B. Wemple

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: B. Wemple, C. de Jong

- A306 EGU2012-12889  
**P. Allamano**, P. Claps, and D. Poggi  
Reproducing snow making strategies with deterministic modeling and image-based validation
- A307 EGU2012-3754  
**M. Bonriposi** and E. Reynard  
Water use demand in the Crans-Montana-Sierre region (Switzerland)
- A308 EGU2012-3761  
**E. Magnier** and E. Reynard  
Artificial snowmaking and potential water conflicts in mountain resorts. The case of Avoriaz (Haute-Savoie, France)
- A309 EGU2012-14027  
**M. Breiling** and S. Sokratov  
Water demand for ski resort development in the Austrian Alps: an Overview
- A310 EGU2012-12979  
**T. Covino**, B. McGlynn, R. McNamarra, and K. Gardner  
In-stream nutrient uptake kinetics along stream size and development gradients in a rapidly developing mountain resort watershed
- A311 EGU2012-13485  
J. Shanley and **B. Wemple**  
Effects of mountain resort development - a case study in Vermont USA
- A312 EGU2012-13763  
**A. del Peral** and B. Wemple  
Evaluating the effects of mountain resort development on snowmelt and runoff production: a case study from northern New England, USA
- A313 EGU2012-14024  
**B. Radi?**, R. Risti?, N. Vasiljevi?, Z. Niki?, J. Beloica, and I. Maluševi?  
Multi-level landscape degradation due to tourist-oriented land use changes in Serbian mountainous regions
- A314 EGU2012-655  
**I. Blinova** and A. Bredikhin  
Assessment of geomorphic risks and attractiveness to recreational systems: a case of Nalychevo Nature Park (Kamchatka, Russia).
- A315 EGU2012-12937  
**C. de Jong**  
Natural hazards in the Alps triggered by ski slope engineering and artificial snow production

- A316 EGU2012-14186  
**H.P. Rauch**, S. Schuler, and M. Oberhammer  
 Monitoring of performance of greening techniques on skiing runs at the skiing region of Montafon/Vorarlberg
- A317 EGU2012-14424  
**R Imhof**  
 Tourism and Water: Themes of the Alpine Convention
- A318 EGU2012-2694  
 S. Piccione, **E. Comino**, M. Rosso, and I. Chouquet  
 Hydrological, geomorphological and ecological river characterization: PELLIDRAC (Alcotra Project)

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**HS9.3/SS5.23 – Effects of forest cover loss and land use change on erosion, sediment dynamics and ecosystem health (co-listed) – Orals**

Convener: J. Bathurst | Co-Conveners: P. Owens

**Room: 39**

Chairperson: J.C. Bathurst & P.N. Owens

- 08:30–08:45 EGU2012-1363  
**M. Vanmaercke**, J. Poesen, G Govers, G Verstraeten, A Kettner, and M Van Den Eeckhaut  
 Quantifying the effects of human impact on sediment yield for European catchments
- 08:45–09:00 EGU2012-256  
**E. Nadal Romero**, P. Serrano Muela, and D. Regüés  
 The effects of forest cover in the hydrological and sediment response in a small Mediterranean mountain catchment
- 09:00–09:15 EGU2012-11476  
**W. Meng** and T.A. Bogaard  
 Evaluation of Mechanical Effect of Vegetation on Slope Stability in Terms of Root Evolution
- 09:15–09:30 EGU2012-13911  
**F. Cisneros**, E. Pacheco, C. Coello, and G. Wyseure  
 Assessment the spatial and temporary variability of sediments production taken into account the land use and the climate change, In the Paute river basin southern Ecuador
- 09:30–09:45 EGU2012-6876  
**P.N. Owens**, T.R. Giles, W.H. Blake, E.L. Petticrew, and R. Bol  
 Muted response of fine-grained sediment to a wildfire in British Columbia: the role of landscape disturbances and driving forces
- 09:45–10:00 EGU2012-8747  
**A.J. Espejo Perez**, J.V. Giraldez Cervera, and K. Vanderlinden  
 A probabilistic water erosion model for Mediterranean olive orchards with changing cover factor

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**HS9.3/SS5.23 – Effects of forest cover loss and land use change on erosion, sediment dynamics and ecosystem health (co-listed) – Posters**

Convener: J. Bathurst | Co-Conveners: P. Owens

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: J.C. Bathurst & P.N. Owens

- A376 EGU2012-1316  
**W. Maetens**, J. Poesen, and M. Vanmaercke  
 Plot runoff and soil loss rates under forest and shrubland in Europe and the Mediterranean. - A review -
- A377 EGU2012-8228  
**J.C. Bathurst**  
 Forests and Soil Erosion across Europe
- A378 EGU2012-8219  
 S. Fabregas, **R. Hurtado**, J. Mintegui, J.C. Robredo, and J.L. García-Rodríguez  
 The effects of reforestation of mountain basins on its evolution into forests, and on the stabilization of the streams draining into them. The case of Arratiecho's gorge basin in Aragon Pyrenees (Spain)
- A379 EGU2012-7143  
**T. Orfanus**  
 Wood logging and surface runoff generation under central European conditions (mechanisms, mitigation measures)
- A380 EGU2012-3231  
**A. Iroume**, P. Schuller, A. Bronstert, P. Carey, H. Palacios, and H. Ulloa  
 Runoff and suspended sediment transport after plantation interventions in experimental catchments with contrasting rainfall conditions, Chile

- A381 EGU2012-2156  
P. Schuller, D.E Walling, **A. Iroume**, A. Castillo, and C. Quilodran  
Sediment source fingerprinting to quantify fine sediment sources in forested catchments, Chile.
- A382 EGU2012-2785  
**M. Guns**, V. Vanacker, and A. Demoulin  
Role of land use change in landslide-related sediment fluxes in tropical mountain regions
- A383 EGU2012-14291  
K.A. Caley and **P.N. Owens**  
The influence of historical forestry practices and climate forcing on the sediment retention function of wetlands and their ability to protect downstream aquatic ecosystems
- A384 EGU2012-12545  
**E. L. Shuttleworth**, M. G. Evans, J. J. Rothwell, and S. M. Hutchinson  
Suitability of field portable XRF for the study of contaminated peat soils
- A385 EGU2012-4257  
**N. J. Kuhn**  
Interrill Erodibility of P and C on conventionally and organically farmed Devon soils
- A386 EGU2012-965  
**T. Russo** and A. Fisher  
Monitoring wildfire impacts on surface water-groundwater interactions in a Coho salmonid stream habitat
- A387 EGU2012-491  
**H. Gibbs**, A. Gurnell, K. Heppell, and K. Spencer  
Urban river restoration: implications on channel sedimentation patterns and associated ecosystem and human health

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#### SSS5.4 – Assessment and modeling of concentrated flow erosion (co-listed) – Orals

Convener: R. Giménez | Co-Conveners: L. Gordon, E. Taguas, Dr. Casalí, M. James, R. Egozi, G. Eshel

**Room: 22**

Chairperson: Javier Casalí

- 15:30–15:45 EGU2012-872  
**R.L. Bingner**, H.G. Momm, R.R. Wells, and S.M. Dabney  
Contributions and Concerns of Concentrated Flow Erosion and Assessment Technologies in Watershed Systems
- 15:45–16:00 EGU2012-1059  
**R. Egozi** and G. Eshel  
Extreme soil erosion events in Israel coastal area: observations & measurements
- 16:00–16:15 EGU2012-1376  
**S. Nouwakpo** and C. Huang  
The role of subsurface hydrology in soil erosion and channel network development on a laboratory hillslope
- 16:15–16:30 EGU2012-10356  
A. Afana, Y Cantón, and **A Solé-Benet**  
Hillslope evolution in Tabernas badlands (SE Spain) since 1995. Erosion pins and laser scanner measurements.
- 16:30–16:45 EGU2012-14262  
**C. Castillo**, R. Pérez, M.R. James, J.N. Quinton, E.V. Taguas, and J.A. Gómez  
Field methods for measuring concentrated flow erosion
- 16:45–17:00 EGU2012-280  
**V. Ranga**, J. Poesen, A. Van Rompaey, S.N. Mohapatra, and P. Pani  
Spatial analysis of badland dynamics in the lower Chambal Valley India

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#### SSS5.4 – Assessment and modeling of concentrated flow erosion (co-listed) – Posters

Convener: R. Giménez | Co-Conveners: L. Gordon, E. Taguas, Dr. Casalí, M. James, R. Egozi, G. Eshel

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

Author in Attendance: 17:30–19:00

Chairperson: Javier Casalí

- XY535 EGU2012-1075  
**N. Christanto**, D.P Shrestha, V.G Jetten, and A. Setiawan  
Modeling the effect of terraces on land degradation in tropical upland agricultural area
- XY536 EGU2012-1378  
**S. Nouwakpo** and C. Huang  
A simplified close range photogrammetric technique for soil erosion assessment

- XY537 EGU2012-2656  
**S. Strohmeier**, A. Klik, and S.K. Nouwakpo  
Physical Model Study: Rill Erosion Morphology and Flow Conditions
- XY538 EGU2012-4597  
**M. R. James**, C. Castillo, R. Pérez, E. V. Taguas, J. A. Gomez, and J. N. Quinton  
Determining gully volume from straightforward photo-based 3D reconstruction
- XY539 EGU2012-4638  
**Y. Chahor**, J. Casalí, and R. Giménez  
Assessment of the Compound Topographic Index CTI to predict Potential Ephemeral Gullies in Navarre (Spain)
- XY540 EGU2012-10248  
**S. Wirtz**, T. Iserloh, G. Rock, V. Butzen, M. Seeger, S. Betz, and J.B. Ries  
Soil erosion on abandoned land in Andalusia - a comparison of sheet- and rill erosion rates
- XY541 EGU2012-10579  
**F. Fiorucci**, M. Rossi, F. Ardizzone, I. Marchesini, and D. Torri  
Use of stereoscopic satellite images for mapping and characterization of rill and gully erosion
- XY542 EGU2012-10730  
**O. Yermolaev**  
Slope erosion estimation in the river basin of the boreal zone of the East Russian Plain
- XY543 EGU2012-10976  
**C. Castillo**, R. Pérez, J. Mora, and J.A. Gómez  
Quantification of gully erosion in a cultivated area in Southern Spain under high rainfall conditions
- XY544 EGU2012-11173  
**C. Castillo**, R. Pérez, E.V. Taguas, J.S. Lora, J.V. Giráldez, and J.A. Gómez  
Improvement on a portable laser profiler for gully volume evaluation: laboratory and field testing
- XY545 EGU2012-11276  
J. Rebolledo, **E.V. Taguas**, T. Vanwallegem, J.L. Ayuso, and J.A. Gómez  
Quantitative evaluation of concentrated flow erosion in a Mediterranean olive orchard microcatchment
- XY546 EGU2012-12483  
**A. Raveloson**, F. Visnovitz, B. Székely, G. Molnár, and B. Udvardi  
A multidisciplinary study on lavaka (gully erosion) formation in Central Highlands, Madagascar
- XY547 EGU2012-13808  
**M. Seeger**, S. Wirtz, and M. Ali  
Erosion by shallow concentrated flow - experimental model deconstruction
- XY548 EGU2012-14124  
**R.L. Bingner**, S.M. Dabney, E. J. Langendoen, H. G. Momm, R. R. Wells, and G. V. Wilson  
USDA-ARS Concentrated Flow Erosion and Assessment Technology Research for Evaluation of Conservation Practices in Watershed Systems
- XY549 EGU2012-14252  
**Y. Chahor**, J. Casalí, and R. Giménez  
Testing AnnAGNPS model in predicting ephemeral gully erosion in Navarre (Spain)

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### SSS5.8 – Models and scaling: Assessing impact of climate change and land management on erosion and sediment dynamics (co-listed) – Orals

Convener: S.D. Keesstra | Co-Conveners: E. NADAL ROMERO, G. Eshel, M.J. Kirkby, Dr. Seeger, J. A. Gómez, A. M. Tarquis, N. J. Kuhn, J. P. Nunes, J. C. Gonzalez-Hidalgo, S. Beguería, P. Lionello, C. Dazzi, E. Taguas

**Room: 22**

Chairperson: Saskia Keesstra

- 10:30–10:45 EGU2012-6628  
**J. Wainwright**, A.J. Parsons, J.R. Cooper, Y. Onda, T. Furukawa, E. Obana, B. Kitchener, E.J. Long, and G.K. Hargrave  
Scaling sediment dynamics on hillslopes using particle-based approaches
- 10:45–11:00 EGU2012-174  
**N. Cortesi**, J.C. González-Hidalgo, M. Brunetti, and J. Martin-Vide  
Daily Precipitation Concentration across Europe during 1971-2010
- 11:00–11:15 EGU2012-4947  
**I. Tsermegas**, M. D?u?ewski, K. Biejat, and A. Szyrkiewicz  
Degradation of terraced slopes in Mediterranean conditions
- 11:15–11:30 EGU2012-8132  
**J.E.M. Baartman**, A.J.A.M. Temme, A. Veldkamp, V.G. Jetten, and J.M. Schoorl  
Addressing the time-scale gap in erosion modelling - comparison of an event-based and a landscape evolution model



- 11:30–11:45 EGU2012-9435  
**M. López-Vicente**, L. Quijano, L. Gaspar, J. Machín, and A. Navas  
 Spatial and temporal heterogeneity of water soil erosion in a Mediterranean rain-fed crop
- 11:45–12:00 EGU2012-1334  
**J. Maroulis**  
 Queensland 2010-2011: A Summer of Extremes

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**LUNCH BREAK**

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Chairperson: Estela Nadal Romero

- 13:30–13:45 EGU2012-5901  
**JM García Ruiz**, N. Lana Renault, E Nadal Romero, and S. Beguería  
 Erosion in Mediterranean Ecosystems: changes and future challenges
- 13:45–14:00 EGU2012-11935  
**D.C. Buarque**, W. Collischonn, and R.C.D. Paiva  
 Coupling a basin erosion and river sediment transport model into a large scale hydrological model: an application in the Amazon basin
- 14:00–14:15 EGU2012-10913  
**A.C. Schmengler** and P.L.G. Vlek  
 Facing the scaling problem: A multi-methodical approach to simulate soil erosion at hillslope and catchment scale
- 14:15–14:30 EGU2012-5126  
**E. Argaman**, R. Egozi, and N. Goldshlager  
 Analysis the temporal and spatial impact of water harvesting on Aforestation processes, at the Northern Negev region, Israel
- 14:30–14:45 EGU2012-10966  
**E.V. Taguas**, M. Burguet, R. Pérez, J.L. Ayuso, and J.A. Gómez  
 Interpretation of the impact of different managements and the rainfall variability on the soil erosion in a Mediterranean olive orchard microcatchment
- 14:45–15:00 EGU2012-12086  
**N. Bellin**, V. Vanacker, and P. Kubik  
 Contrasting Modern and <sup>10</sup>Be- derived erosion rates for the Southern Betic Cordillera, Spain

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**SSS5.8 – Models and scaling: Assessing impact of climate change and land management on erosion and sediment dynamics (co-listed)** – Posters

Convener: S.D. Keesstra | Co-Conveners: E. NADAL ROMERO, G. Eshel, M.J. Kirkby, Dr. Seeger, J. A. Gómez, A. M. Tarquis, N. J. Kuhn, J. P. Nunes, J. C. Gonzalez-Hidalgo, S. Beguería, P. Lionello, C. Dazzi, E. Taguas

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

Author in Attendance: 17:30–19:00

Chairperson: Gil Eshel

- XY582 EGU2012-255  
**E. Nadal Romero**, T. Lasanta, M. de Luis, J. González Hidalgo, and J.M. García Ruiz  
 The suspended sediment response of different land uses to rainstorm events: Time compression in the Aísa Valley Experimental Station
- XY583 EGU2012-1554  
**JF Martínez Murillo**, JD Ruiz Sinoga, MA Gabarron Galeote, and JM Senciales Gonzalez  
 Spatial and temporal variability of soil water repellency in Mediterranean rangelands in South of Spain
- XY584 EGU2012-1555  
**JM Senciales Gonzalez**, P Aguayo Maldonado, JD Ruiz Sinoga, and JF Martínez Murillo  
 Spatial variability of pouring rain in the City of Málaga. (South of Spain)
- XY585 EGU2012-1600  
**R. Capra** and C. Morice  
 Super Detection of Variable Occurrences of Landslides
- XY586 EGU2012-4174  
 A. Uran, I. Lorite, and **J.A. Gomez**  
 Impact of cover crops on soil conservation in olive orchards under different agroecological conditions combining a conceptual soil water balance model (WABOL) and RUSLE.
- XY587 EGU2012-4246  
**J. Hooke**  
 Responses of Mediterranean channel ecosystems to climatic and land use variations

- XY588 EGU2012-7877  
**M. Burguet**  
Evaluation of different strategies for calibration of the simple distributed model SEDD for sediment transport in an olive microcatchment
- XY589 EGU2012-9129  
**K.E. Welsh** and R.C. Chiverrell  
Re-evaluation of slope processes in the CAESAR landscape evolution model
- XY590 EGU2012-9348  
**N. J. Kuhn** and K. Anderson  
Matching pixels, plots and catchments
- XY591 EGU2012-10719  
**C. Castillo**, R. Pérez, and J.A. Gómez  
A conceptual model of the hydraulics of check dam for gully control
- XY592 EGU2012-11100  
**F. Ardizzone**, F. Guzzetti, C. Iadanza, M. Rossi, D. Spizzichino, and A. Trigila  
Solid discharge and landslide activity at basin scale
- XY593 EGU2012-11106  
**G. Ravazzani**, M. C. Rulli, B. Groppelli, D. Bocchiola, F. Colombo, M. Mancini, and R. Rosso  
Raster based modelling of watershed erosion and sedimentation in an Alpine basin of Northern Italy
- XY594 EGU2012-11159  
A. Barkwith, L. Wang, C. Jackson, and **M. Ellis**  
Towards understanding the dynamics of environmental sensitivity to climate change: introducing the DESC model
- XY595 EGU2012-11321  
**C. Castillo**, R. Pérez, M.R. James, J.N. Quinton, E.V. Taguas, and J.A. Gómez  
Comparing the accuracy of several field methods for measuring gully erosion
- XY596 EGU2012-12711  
J. P. Nunes, J. C. Lima, **L. Bernard-Jannin**, S. Veiga, M. L. Rodríguez-Blanco, E. Sampaio, D. P. Batista, R. Zhang, M. E. Rial-Rivas, M. Moreira, J. M. Santos, J. J. Keizer, and J. Corte-Real  
Impacts of climate change on soil erosion in Portuguese watersheds with contrasting Mediterranean climates and agroforestry practices

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### SSS7.6 – Movement and Fate of eroded soil organic matter in terrestrial ecosystems (co-listed) – Orals

Convener: N. J. Kuhn | Co-Conveners: T. Quine, K. Van Oost, m. evans

#### Room: 3

Chairperson: Nikolaus J. Kuhn

- 08:30–08:45 EGU2012-3009  
**E.T. Sundquist**, K. Visser Ackerman, R.F. Stallard, and N.B. Bliss  
Historical Influence of Soil and Water Management on Carbon Erosion and Burial in the United States
- 08:45–09:00 EGU2012-5509  
**V. Dlugoš**, P. Fiener, and K. Schneider  
Depth distribution of soil organic carbon fractions and AMS 14C concentrations at different landscape positions
- 09:00–09:15 EGU2012-9572  
**R.E. Brazier**, L. Turnbull, J. Wainwright, A. Puttock, and R. Bol  
Quantifying carbon loss by water erosion across a semi-arid grass to shrub transition
- 09:15–09:30 EGU2012-8400  
**J. N. Quinton**, M.C Ockenden, C. Deasy, and N. Favaretto  
Trapping carbon in small ponds and wetlands
- 09:30–09:45 EGU2012-10424  
**L.H. Cammeraat**, F. Kirkels, and N.J. Kuhn  
Soil erosion, sedimentation and the carbon cycle
- 09:45–10:00 EGU2012-8037  
Z. Wang, **G. Govers**, K. Van Oost, and R. Merckx  
Timing the carbon cycle: how far does the soil erosion benefit stretch ?

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### SSS7.6 – Movement and Fate of eroded soil organic matter in terrestrial ecosystems (co-listed) – Posters

Convener: N. J. Kuhn | Co-Conveners: T. Quine, K. Van Oost, m. evans

#### Hall X/Y | Display Time 08:00–19:30

Author in Attendance: 17:30–19:00

Chairperson: Nikolaus J. Kuhn

- XY640 EGU2012-2105  
**N. J. Kuhn** and E.K. Armstrong  
Erosion of organic matter from sandy soils: solving the mass balance
- XY641 EGU2012-2109  
**N. J. Kuhn**  
Connecting the cycles: Impact of sediment, carbon and nutrient erosion on GHG emissions
- XY642 EGU2012-2328  
**W Schwanghart**, T Jarmer, A Bayer, U Hoffmann, M Hunziker, NJ Kuhn, and M Ehlers  
Regression techniques for estimating soil organic carbon contents from VIS/NIR reflectance spectra
- XY643 EGU2012-3091  
**R.T. Jones**, K. Caley, and P. Owens  
Paleolimnological records of Holocene carbon cycling: a late-glacial - Holocene record from Boswell Lake, British Columbia
- XY644 EGU2012-4245  
**P.I.A. Kinnell**  
The effect of particle travel rate on the loss of organic matter for sheet and interrill erosion areas
- XY645 EGU2012-4998  
**U. Hoffmann**, T. Hoffmann, and E.A. Johnson  
Assessment of variability and uncertainty of regional soil organic carbon inventories in mountain environments (Canadian Rocky Mountains, Alberta)
- XY646 EGU2012-6371  
**N. Chirinda**, L. Elsgaard, IK Thomsen, M Lægdsmand, G Heckrath, BM Petersen, and JE Olesen  
Topographic variability influences the carbon sequestration potential of arable soils
- XY647 EGU2012-7937  
**F. Wiaux**, J.-T. Cornelis, K. Van Oost, and M. Vanclooster  
Space-time dynamics of soil respiration link to the C pool distribution at the hillslope scale
- XY648 EGU2012-8620  
**Y. Hu**, N.J. Kuhn, and W. Fister  
Selective nature and inherent variability of interrill erosion across prolonged rainfall simulation
- XY649 EGU2012-8659  
**Y. Hu**, L. Xiao, N.J. Kuhn, and W. Fister  
Using settling velocity to assess movement and fate of soil organic carbon after erosion
- XY650 EGU2012-9089  
**H. Croft** and K. Anderson  
Directional reflectance factors for monitoring spatial changes in soil surface structure and soil organic matter erosion in agricultural systems
- XY651 EGU2012-13465  
**W. Fister**, N.J. Kuhn, S. Tesch, N. Itin, G. Heckrath, and J.B. Ries  
Erosion of SOC and Phosphor - linkage between transport rate and grain size as a function of time
- XY652 EGU2012-13893  
N. J. Kuhn and **R. Strunk**  
Soil Organic Matter Feedback to changes in soil moisture regimes
- XY653 EGU2012-13895  
N. J. Kuhn, **M. Würsch**, M. Hunziker, and J. Þórrsson  
Soil Organic Matter recovery on eroding alluvial surfaces on Iceland
- XY654 EGU2012-13899  
E. Armstrong, A. Ling, and **N.J. Kuhn**  
Soil Organic Matter Erosion by Interrill Processes from Organically and Conventionally farmed Devon Soil
- XY655 EGU2012-13926  
**P. Greenwood**  
Exploring the potential for using artificial radionuclides to assess the selective erosion of sediment particles and soil organic matter

Wednesday, 25 April

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**GM2.4 – Complexity and nonlinearity in Earth surface processes – Concepts, methods and applications – Orals**

Convener: M. Keiler | Co-Conveners: A.J.A.M. Temme, A. Lang, D. Karssenberg

**Room: 21**

Chairperson: Margreth Keiler, Arnaud Temme

- 15:30–16:00 EGU2012-11350  
**A. B. Murray** and G. Coco  
 Cause and effect in geomorphic systems: Complex-systems perspectives
- 16:00–16:30 EGU2012-281  
**J.D. Phillips**  
 Thresholds, Mode-Switching, and Emergent Pseudo-Equilibrium in Geomorphic Systems
- 16:30–16:45 EGU2012-14472  
**A. Baldassarri** and B. Sapoval  
 Statistics of rocky coast erosion and percolation theory
- 16:45–17:00 EGU2012-6930  
 C.J. Thompson, **J.C. Croke**, and J.R. Grove  
 Spatial and temporal patterns of bank failure during extreme flood events: Evidence of nonlinearity and self-organised criticality at the basin scale?

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**GM2.4 – Complexity and nonlinearity in Earth surface processes – Concepts, methods and applications – Posters**

Convener: M. Keiler | Co-Conveners: A.J.A.M. Temme, A. Lang, D. Karssenberg

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

Author in Attendance: 17:30–19:00

Chairperson: Derek Karssenberg

- XL115 EGU2012-12653  
**K. v. Elverfeldt**  
 Self-organisation in geomorphic systems: criteria and measurability
- XL116 EGU2012-4119  
**E. Masson**  
 Toward a new system approach of complexity in geomorphology
- XL117 EGU2012-10242  
**L. Goren** and S. D. Willett  
 On the dynamics of stream piracy
- XL118 EGU2012-6100  
**A. Benaichouche**, O. Stab, I. Cojan, J. Brulhet, M. Tijani, and B. Tessier  
 Stream-piracy impact on the long-term evolution of the Meuse basin. Physical approach "modeling with GOLEM"
- XL119 EGU2012-7438  
 E. Giachetta, N. Gasparini, D. Capolongo, **A. Refice**, and F. J. Pazzaglia  
 The role of climate change in drainage network reorganization: insights from numerical experiments
- XL120 EGU2012-7783  
**J.M. Schoorl**, A.J.A.M. Temme, and A. Veldkamp  
 Landscape self organisation: Modelling Sediment trains
- XL121 EGU2012-5299  
**A.J.A.M. Temme** and M.J. van de Wiel  
 Filtering signals: complexity experiments with LAPSUS
- XL122 EGU2012-9790  
**D.L. Higgitt** and N.J. Rosser  
 The Emergence of Order in Clast-Mantled Desert Surfaces
- XL123 EGU2012-5890  
 O. Rozier and **C. Narteau**  
 A Real Space Cellular Automaton Laboratory (ReSCAL) to analyze complex geophysical systems
- XL124 EGU2012-8796  
 M. Bock, **A Günther**, A Ringeler, R Baritz, and J Böhner  
 Assessment of soil parent material formation in periglacial environments through medium scale landscape evolution modelling
- XL125 EGU2012-4298  
**N. J. Kuhn**, U. Hoffmann, H. Hikel, and A. Yair  
 Interaction of rainfall, runoff and erosion on dryland slopes in the Negev desert

- XL126 EGU2012-14220  
**N. J. Kuhn**, A. Yair, R. B. Bryan, W. Schwanghart, and H. Lavee  
 Badlands: too complex to be simple landscapes?
- XL127 EGU2012-9438  
**M. Rossi**, M. Cardinali, F. Fiorucci, I. Marchesini, A.C. Mondini, M. Santangelo, S. Ghosh, D.E.L. Riguer, T. Lahousse, K.T. Chang, and F. Guzzetti  
 A tool for the estimation of the distribution of landslide area in R

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**CL5.7/AS4.22/BG6.4/GM2.6 – Instrumental monitoring of caves: the key to understanding anthropogenic impacts and climate-proxy relationships in speleothems (co-organized) – Orals**

Convener: D. Matthey | Co-Conveners: C. Spötl, J. Baldini

**Room: 16**

Chairperson: James Baldini

- 15:30–15:45 EGU2012-5830  
**F. Bourges**, D. Genty, P. Genthon, A. Mangin, and D. D'Hulst  
 South-France caves monitoring : present day cave air dynamics characterization, paleoclimatic and archaeological interests
- 15:45–16:00 EGU2012-13481  
 J.L. Banner, **E.W. James**, D. Breecker, R. Casteel, C. Wong, K. Meyer, W. Feng, and B. Cowan  
 Long-term cave monitoring on the Edwards Plateau of Texas (USA) to advance speleothem paleoclimate proxies
- 16:00–16:15 EGU2012-12117  
**P. Aliaga** and J.P. Bernal  
 In-situ REE calibration as palaeohydrogeological proxies in stalagmites
- 16:15–16:30 EGU2012-6704  
**D.M. Tremaine**, B.P. Kilgore, and P.N. Froelich  
 Calcite Farming at Hollow Ridge Cave: Calibrating Net Rainfall and Cave Microclimate to Dripwater and Calcite Chemical Variability
- 16:30–16:45 EGU2012-11697  
**T. Atkinson**, D. Matthey, J-P. Latin, M. Ainsworth, and R. Durell  
 Generation and dispersal of carbon dioxide in the caves and karst of Gibraltar
- 16:45–17:00 EGU2012-10502  
**M. Luetscher** and P.-Y. Jeannin  
 Monitoring cave drips in a (partly) controlled hydrological system, Milandre cave, Switzerland

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**CL5.7/AS4.22/BG6.4/GM2.6 – Instrumental monitoring of caves: the key to understanding anthropogenic impacts and climate-proxy relationships in speleothems (co-organized) – Posters**

Convener: D. Matthey | Co-Conveners: C. Spötl, J. Baldini

**Hall Z | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Christoph Spötl

- Z150 EGU2012-831  
**E. Garcia-Anton**, S. Cuezva, A. Fernandez-Cortes, S. Sanchez-Moral, and J.C. Canaveras  
 Multiparametric surveillance of conservation measures at subterranean rock-art sites: case of Altamira cave
- Z151 EGU2012-874  
**S Sanchez-Moral**, A Fernandez-Cortes, S Cuezva, E Garcia-Anton, and D Benavente  
 Balance of pCO<sub>2</sub> in the carbonate-bearing unsaturated zone controlling mineral precipitation: Implications for geo-environmental analyses in caves
- Z152 EGU2012-4775  
**S. Riechelmann**, A. Schröder-Ritzrau, C. Spötl, D.F.C. Riechelmann, D.K. Richter, and A. Immenhauser  
 Water chemistry and isotope data from a five year monitoring programme of Bunker Cave, NW Germany
- Z153 EGU2012-13546  
**D. Matthey**  
 Continuous multichannel monitoring of cave air carbon dioxide using a pumped non-dispersive infrared analyser
- Z154 EGU2012-861  
**A. Fernandez-Cortes**, S Cuezva, M Garcia-Anton, M Alvarez-Gallego, JC Canaveras, E Porca, V Jurado, C Saiz-Jimenez, and S Sanchez-Moral  
 Assessment of aerodynamic processes on subsurface in karst terrains by rapid multi-parametric surveys (case of Castanar Cave, Spain)

- Z155 EGU2012-4209  
**S.F.M. Breitenbach**, M.-J. Gilbert, O. Kwecien, R. Seifert, and D. Fleitmann  
Monitoring drip water isotope and element variability: A new device for automatic drip water collection
- Z156 EGU2012-4859  
**E. Garcia-Anton**, S. Cuezva, A. Fernandez-Cortes, S. Sanchez-Moral, and D. Benavente  
Daily variations of CO<sub>2</sub>, d13CO<sub>2</sub> and CH<sub>4</sub> of cave air controlled by external weather conditions: example of rapid survey in Altamira cave (north of Spain)
- Z157 EGU2012-6118  
**D. Tapete**, F. Fratini, B. Mazzei, M. Camaiti, E. Cantisani, C. Riminesi, R. Manganelli Del Fà, O. Cuzman, and P. Tiano  
Calcium carbonate crystallizations on hypogean mural paintings: a pilot study of monitoring and diagnostics in Roman catacombs
- Z158 EGU2012-7910  
**M. Gasiorowski** and H. Hercman  
Monitoring of cave air temperature and humidity in the Niedzwiedzia Cave system (Sudetes, Poland) - a key to understanding tourists activity impact to cave environment
- Z159 EGU2012-9604  
**J.U.L. Baldini** and C.M. Sherwin  
Using high-resolution monitoring data to identify the effects of cave and surface conditions on cave drip water hydrochemistry
- Z160 EGU2012-10646  
**H. Ridley**, J.U.L. Baldini, and K.M. Prufer  
Monitoring tropical cave environmental parameters: Implications for palaeoclimate reconstruction
- Z161 EGU2012-10680  
**D. Ballesteros**, M. Jiménez-Sánchez, J. García-Sansegundo, M. Borreguero, and G. Sendra  
Quantitatively structural control of the karst based on speleological cave survey data: Cabeza Llerosos massif (Picos de Europa, Spain)
- Z162 EGU2012-11195  
**R. Kirk**, D. Matthey, and C. Collister  
Characteristics of annual laminae in speleothem from Grotte de Rolande, SW France and relationships to seasonal changes in the cave and surface environment.
- Z163 EGU2012-11463  
**C. Thrush**, D. Matthey, D. Lowry, D. Hoffmann, and E. Anton-Garcia  
Deciphering ENSO periodicity in an annually resolved speleothem from Fiji
- Z164 EGU2012-11604  
**D. Scholz**, M. Hansen, and W. Dreybrodt  
Stable carbon and oxygen isotope fractionation processes during speleothem growth: systematic investigation in novel laboratory experiments

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#### **GMPV4.10/GM2.7 – Spatio-temporal perspectives on volcanological processes and volcanic landforms (co-organized) – Orals**

Conveners: D. Karátson, H. Tuffen, A. Germa | Co-Conveners: B. Székely

**Room: 20**

Chairperson: Dávid Karátson, Hugh Tuffen, Aurélie Germa

- 15:30–15:45 EGU2012-12231  
**A.T. Calvert**  
Attaining high-resolution eruptive histories for active arc volcanoes with argon geochronology
- 15:45–16:00 EGU2012-6002  
**H.-U. Schmincke**, M. Sumita, and Paleovan scientific team  
Multiple explosive rhyolite/trachyte eruptions of alkaline-peralkaline Nemrut and dacite/rhyolite eruptions of neighboring subduction zone-related Süphan volcano over 600 000 years: the East Anatolian tephra province
- 16:00–16:15 EGU2012-5155  
A. Hildenbrand, F.O. Marques, **A.C.G. Costa**, A.L.R. Sibrant, P.F. Silva, B. Henry, J.M. Miranda, and P. Madureira  
Reconstructing the architectural evolution of volcanic islands from combined K/Ar, morphologic, tectonic, and magnetic data: the Faial Island example (Azores)
- 16:15–16:30 EGU2012-10857  
**D. Karátson**, T. Telbisz, Sz. Harangi, E. Magyari, B. Kiss, I. Dunkl, D. Veres, and M. Braun  
Lava dome morphometry and geochronology of the youngest eruptive activity in Eastern Central Europe: Ciomadul (Csomád), East Carpathians, Romania

- 16:30–16:45 EGU2012-11679  
**B. Edwards**, B. Oddsson, M.T. Gudmundsson, and R. Rossi  
 Field constraints for modeling the emplacement of the 2010 Gigjökull lava flow, southern Iceland: interplay between subaqueous, ice contact and subaerial lava emplacement
- 16:45–17:00 EGU2012-6573  
**S. Pepe**, G. Di Martino, A. Iodice, M. Manzo, A. Pepe, D. Riccio, G. Ruello, E. Sansosti, P. Tizzani, and I. Zinno  
 Analysis of the fractal dimension of volcano geomorphology through Synthetic Aperture Radar (SAR) amplitude images acquired in C and X band.

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**GMPV4.10/GM2.7 – Spatio-temporal perspectives on volcanological processes and volcanic landforms (co-organized) – Posters**

Conveners: D. Karátson, H. Tuffen, A. Germa | Co-Conveners: B. Székely

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

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL250 EGU2012-14334  
**C. Pallares**, X. Quidelleur, J.A. Debreil, P.Y. Gillot, and P. Tchilinguirian  
 Spatial and temporal evolution of a back-arc Plio-pleistocene magmatic series: an example of Auca Mahuida and El Tromen volcanoes from Payenia Basaltic Province, Argentina
- XL251 EGU2012-14120  
**A. Germa**, X. Quidelleur, P. Lahitte, S. Labanieh, and C. Chauvel  
 Evolution of Martinique Island since the Oligocene inferred from K-Ar dating, geochemical analyses and geomorphological reconstructions
- XL252 EGU2012-12736  
**E. Leocat**, P.-Y. Gillot, and A. Peccerillo  
 The western Aeolian Islands volcanoes (South Tyrrhenian Sea): highlight on their eruptive history based on K-Ar dating.
- XL253 EGU2012-12702  
 S. Self, **A. Calvert**, A. Pimentel, and R. Gertisser  
 The Tempo of Recent Volcanism on Terceira, Azores
- XL254 EGU2012-11514  
 A. Hicks, **D.F. Mark**, J. Barclay, and S. Loughlin  
 Tristan da Cunha: informing future eruption scenarios using high-precision Ar/Ar dating
- XL255 EGU2012-2108  
 T. Sanz, M. Lago, A. Gil, A. Pocoví, C. Galé, **T. Ubide**, P. Larrea, J. Ramajo, and P. Tierz  
 The Upper Triassic alkaline magmatism of the western Neo-Tethys (Bajo Ebro, NE Spain): age and geodynamic implications
- XL256 EGU2012-14300  
**F. Aydin**, W. Siebel, I. Uysal, E.Y. Ersoy, A.K. Schmitt, M. Sönmez, and R. Duncan  
 Geochemical, isotopic (Sr-Nd-Pb) and geochronological (Ar-Ar and U-Pb) constraints on Quaternary bimodal volcanism of the Nigde Volcanic Complex (Central Anatolia, Turkey)
- XL257 EGU2012-12005  
**L. Akin**, E. Aydar, A. K. Schmitt, and H. E. Çubukçu  
 Zircon Chemistry and chronostratigraphy of tephra: case of Cappadocia
- XL258 EGU2012-6053  
**P. Nomikou**, K. Croff Bell, S. Carey, K. Bejelou, M. Parks, and V. Antoniou  
 Submarine Volcanic Morphology of Santorini Caldera, Greece
- XL259 EGU2012-13100  
 A.V. Zernack, **J.N. Procter**, S.J. Cronin, M.S. Bebbington, R.C. Price, and I.E.M. Smith  
 Predicting the timescales of catastrophic stratovolcano collapse - A model based on Mt. Taranaki, New Zealand.
- XL260 EGU2012-3475  
**Zs. Koma**, B. Székely, P. Dorninger, and C. Nothegger  
 Geomorphometric analysis of volcanic edifices using a robust plane fitting method
- XL261 EGU2012-8560  
**M. R. James** and N. Varley  
 Near-automatic generation of lava dome DEMs from photos
- XL262 EGU2012-12964  
**B. Székely**, D. Karátson, Zs. Koma, P. Dorninger, G. Wörner, M. Brandmeier, and C. Nothegger  
 Automated recognition of quasi-planar ignimbrite sheets and paleo-surfaces via robust segmentation of DTM - examples from the Western Cordillera of the Central Andes

- XL263 EGU2012-67  
**A. Forbes**, S. Blake, D. McGarvie, and H. Tuffen  
 Pseudopillow fracture systems: Insights into cooling mechanisms and environments from lava flow fractures
- XL264 EGU2012-10218  
**J. Owen**, H. Tuffen, and D.W. McGarvie  
 What controls the explosivity of subglacial rhyolite in Iceland?
- XL265 EGU2012-10295  
**J. Owen**, H. Tuffen, and D.W. McGarvie  
 Reconstructing palaeo-ice thicknesses: on what type of volcano can the magma degassing technique be used?

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**GM4.2 – Organic matter export across landscapes: Understanding the rates and controls – Orals**

Convener: R. Hilton | Co-Conveners: M. Evans

**Room: 21**

Chairperson: n.n.

- 08:30–08:45 EGU2012-8834  
 O. Beyssac, M. Marocchi, L. Flukiger, V. Galy, F. Herman, S Cox, and **C.C. Chen**  
 Tracing fossil particulate organic carbon from bedrocks to river and marine sediments: implications for the geological carbon cycle
- 08:45–09:00 EGU2012-2553  
**C. Ramos-Scharron** and C. Restrepo  
 The transfer of modern organic Carbon by landslide activity in tropical montane ecosystems
- 09:00–09:15 EGU2012-9396  
 C. Rixen and **O. Korup**  
 Soil erosion and organic carbon export by wet snow avalanches
- 09:15–09:30 EGU2012-2458  
**J.C. Smith**, N. Hovius, A. Galy, A. Tye, and J. Turowski  
 Particulate organic carbon export from soil and vegetation in temperate mountain regions
- 09:30–09:45 EGU2012-9798  
**F. Tamooh**, F Meysman, T. R. Marwick, A. V. Borges, R Merckx, J Nyunja, and S Bouillon  
 Seasonal dynamics of organic carbon in the Tana River Basin, Kenya
- 09:45–10:00 EGU2012-13331  
**T. Eglinton**, V. Galy, X. Feng, N. Drenzek, A. Dickens, C. Ponton, L. Giosan, E. Schefuss, B. Voss, J. Vonk, O. Gustafsson, D. Montlucon, and Y. Wu  
 Climate controls on the residence time of terrestrial biospheric carbon in river basins

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**GM4.2 – Organic matter export across landscapes: Understanding the rates and controls – Posters**

Convener: R. Hilton | Co-Conveners: M. Evans

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

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL128 EGU2012-4407  
 L. Lombardo, T. Vanwalleghem, and **J.A. Gomez**  
 Organic carbon fluxes in stemflow, throughfall and rainfall in an olive orchard
- XL129 EGU2012-4232  
**J.A. Gomez**, M. Burguet, M.E. Taguas, R. Perez, J.L. Ayuso, T. Vanwallgehem, J.V. Giraldez, and K. Vanderlinden  
 Distribution of soil organic carbon in two small agricultural Mediterranean catchments.
- XL130 EGU2012-6510  
 M. Glendell and **R.E. Brazier**  
 Controls on suspended sediment, particulate and dissolved organic carbon export from two adjacent catchments with contrasting land-uses, Exmoor UK.
- XL131 EGU2012-12415  
**E. L. Shuttleworth**, M. G. Evans, J. J. Rothwell, and S. M. Hutchinson  
 Impacts of erosion and restoration on POC flux and pollutant mobilisation in the peatlands of the Peak District National Park, UK
- XL132 EGU2012-10760  
**M. Moreno** and M. M Castillo  
 Storage and transport of particulate organic matter in tropical headwater streams with different catchment land use



- XL133 EGU2012-7232  
K. Bunte, **JM Turowski**, N Federspiel, K Swingle, C Rickli, and SR Abt  
Coarse particulate organic matter transport and particle-size distribution in two mountain streams
- XL134 EGU2012-8156  
**J. Bouchez**, V. Galy, J. Gaillardet, C. France-Lanord, R.G. Hilton, and L. Maurice  
Transport of particulate organic carbon in the Amazon River: insights from river sediment depth-profiles
- XL135 EGU2012-4584  
**R. G. Hilton**, A. Galy, N. Hovius, S. J. Kao, M. J. Horng, and H. Chen  
Climatic and geomorphic controls on the erosion of biomass from subtropical mountain forest
- XL136 EGU2012-11086  
**B. M. Voss**, B. Peucker-Ehrenbrink, T. I. Eglinton, and V. Galy  
Do different components of terrestrial sources contribute to the riverine suspended load?
- XL137 EGU2012-5474  
**G. Erkens**, M. Van der Meulen, and H. Middelkoop  
The storage of carbon in Holocene deposits in the Netherlands
- XL138 EGU2012-10920  
**C. Goulsbra**, M. Evans, and T. Allott  
Oxidation rates of overbank POC deposition in an eroding peatland
- XL139 EGU2012-12455  
**C. Goulsbra**, M. Evans, and T. Allott  
Inferring rates of in-river POC-DOC transformation using radio carbon dating
- XL140 EGU2012-8380  
**S. Waldron**, S. Drew, D. Gilvear, H. Murray, and K. Heal  
Advancing understanding of the fluvial export of organic matter through high-resolution profiling of dissolved organic carbon.
- XL141 EGU2012-2624  
**D.N. Kothawala**, C.A. Stedmon, G.A. Weyhenmeyer, S. Köhler, R.A. Müller, and L.J. Tranvik  
Structure of dissolved organic matter across 500 boreal lakes analyzed by fluorescence spectroscopy
- XL142 EGU2012-12546  
**G. Riise**, D. Hongve, S. Haaland, R. Müller, and S. Sobek  
Key factors determining DOM and colour in boreal forest lakes

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#### GM4.3 – Sediment and carbon fluxes under human impact and climate changes – Orals

Convener: T. Hoffmann | Co-Conveners: G. Erkens, G. Verstraeten

**Room: 21**

Chairperson: n.n.

- 10:30–10:45 EGU2012-3047  
S. M. Mudd and **K. Yoo**  
Influence of erosion rates on particle size and carbon export from upland landscapes
- 10:45–11:00 EGU2012-11695  
**J. O. Kaplan** and T. Vanwalleghem  
Anthropogenic soil erosion over the Holocene: Application of a new dynamic soils module for global vegetation models
- 11:00–11:15 EGU2012-13834  
**K. Van Oost**, G. Verstraeten, B. Notebaert, N. Broothaerts, S. Doetterl, and F. Wiaux  
Carbon emissions as a result of land use change and accelerated soil erosion: perspectives in time & space.
- 11:15–11:30 EGU2012-12571  
**R. Aalto** and A. Aufdenkampe  
Episodic Emplacement of Sediment + Carbon within Large Tropical River Basins
- 11:30–11:45 EGU2012-7709  
**D. Schillereff**, R. Chiverrell, J. Boyle, N. Macdonald, and J. Hooke  
Brotherswater, English Lake District: a record of organic and inorganic sediment flux over the past two millenia
- 11:45–12:00 EGU2012-6827  
**R. Wasson**  
Delays in fluvial systems

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#### GM4.7 – Late Quaternary environments and societies: progress in geoarchaeology – Posters

Convener: H. Brückner | Co-Conveners: M. Engel

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

Author in Attendance: 17:30–19:00

Chairperson: H. Brückner & M. Engel

- XL143 EGU2012-8  
D. Psomiadis, **M. Ghilardi**, F. Demory, and D. Delanghe-Sabatier  
New insights for the Late Pleistocene to Mid Holocene landscape reconstruction in the Western part of the Thessaloniki Plain (Greece): evidence for an abrupt transition and consequences on the settling history
- XL144 EGU2012-15  
**M. Ghilardi**, D. Psomiadis, F. Longo, V. Amato, F. Demory, D. Delanghe-Sabatier, M. Colleu, L. Sinibaldi, and N. Carayon  
Palaeoenvironmental investigations in the vicinity of Ancient Phaistos (Crete, Greece): preliminary results
- XL145 EGU2012-104  
**E. Fouache**, S. Desruelles, W. Eddargach, C. Cammas, J. Wattez, C. Martin, M. Tengberg, C. Cable, and C. Thornton  
When was irrigation first used in Bat (Wadi Sharsah, northwestern Oman)?
- XL146 EGU2012-1606  
G. Kaufmann, **B. Ullrich**, and P. Hoelzmann  
Multi-geophysical exploration of iron-age settlement sites: From field measurements to model predictions
- XL147 EGU2012-2312  
**M. Martín Seijo**, J. Mayo Torné, C. Mayo Torné, and R. Piqué i Huerta  
Forest Resources, Chiefdoms and Mortuary Practices in the Neotropics: Preliminary Archaeobotanical Analysis from El Caño Funerary Complex (Coclé Province, Panamá)
- XL148 EGU2012-2481  
**M. Dotterweich**, J. Rodzik, W. Zg?obicki, A. Schmitt, G. Schmidtchen, and H.R. Bork  
High resolution studies of gully erosion, sedimentation processes, and land use changes since the late Pleistocene and future trajectories in the Kazimierz Dolny area (Na??czów Plateau, SE-Poland)
- XL149 EGU2012-2898  
**A. Petropoulou**  
Relation between the Classical Sciences and Geographic Information Systems (GIS).
- XL150 EGU2012-6076  
J.F. Berger, P.G. Salvador, **G. Erkens**, W.H.J. Toonen, L. Purdue, A. Barra, and P. Houben  
Hydroclimatic signal and LBK cultural activity in the Upper and Lower Rhine, inferred from abandoned channel fill deposits
- XL151 EGU2012-7114  
**E. Eckmeier** and R. Gerlach  
Characterization of archaeological soils and sediments using VIS-spectroscopy
- XL152 EGU2012-9413  
**V. Heyvaert**, D. Kaniewski, M. Sintubin, K. Szkornik, G. Verstraeten, and J. Walstra  
Studying the driving forces of landscape change in the surroundings of the Late Bronze Age harbor town Halla Sultan Tekke, Cyprus.
- XL153 EGU2012-9519  
J. Walstra, **V. Heyvaert**, and P. Verkinderen  
The role of rivers in ancient societies, or how man transformed the alluvial landscapes of Khuzestan (SW Iran)
- XL154 EGU2012-9926  
**G. Sarti**, V. Rossi, A. Amorosi, D. Bertoni, A. Ribolini, I. Sammartino, and G. Zanchetta  
Deciphering natural to anthropogenic control on sedimentation: the Late Holocene Magdala (Kinneret Lake, Israel) harbour hystory
- XL155 EGU2012-11383  
**M. Forbriger**, K. Schitteck, B. Höfle, C. Siart, and B. Eitel  
Multi-method investigation of cushion peatlands (
- XL156 EGU2012-11401  
**C. Cammas**, J. Blanchard, P. Broutin, and A. Berga  
Pedo-sedimentary record of human-environment interaction in ditches and waterlogged depressions on tableland (roman and early medieval period) : micromorphological cases studies from Marne-la-Vallée area (Paris Basin, France)
- XL157 EGU2012-11729  
**E. Draganits**  
Relative sea-level change in the central Cyclades (Greece) since the Early Bronze Age
- XL158 EGU2012-13901  
**S. Sechi-Sapowicz**, D. Sebag, B. Laignel, and T. Lepert  
The last millennia history of detrital sedimentation in the Lower Seine Valley geosystem (Normandy, NW France)
- XL159 EGU2012-12033  
**Q. Borderie**, C. Cammas, and C. Petit  
The geoarchaeology of urban wastes: from refuses to activities and towns organisation (France, 6th c. BC - 10th c. AD)

Convener: K.P. Norton | Co-Conveners: JD Jansen, P. Valla, N. Jacob-Rousseau, F. Gob, G. Houbrechts, L. Astrade

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

Author in Attendance: 17:30–19:00

Chairperson: Frederic Gob, Pierre Valla

- XL160 EGU2012-136  
**A. Braun**, K. Auerswald, and J. Geist  
Quantifying heterogeneity in stream ecosystems' hyporheic zone: Benefits for representative sampling
- XL161 EGU2012-1816  
**A. A. Beylich**, K. Laute, and S. Liermann  
Integrating field measurements with flume experiments for analysing fluvial bedload transport in steep mountain streams
- XL162 EGU2012-4546  
**G. Houbrechts**, Y. Levecq, and F. Petit  
Characterisation of sand transport in gravel-bed rivers using iron slag dated by historical studies
- XL163 EGU2012-4646  
**J. Petrovski**, B. Székely, and G. Timár  
River Sinuosity Classification - The method
- XL164 EGU2012-4687  
**J. Petrovski**  
Multi-variable connection of slope, discharge and sinuosity in the Pannonian Basin
- XL165 EGU2012-6563  
**E. Reynard**, L. Laigre, and D. Baud  
The use of historical maps for reconstructing landforms before river damming. The case of the Swiss Rhone River
- XL166 EGU2012-6945  
**J.B.H. Shyu** and K.-Y. Du  
The validity of simplified shear-stress incision models in meandering river systems: a case study along the Hsiukulan River, eastern Taiwan
- XL167 EGU2012-8506  
L. Nardi and **L. Campo**  
A comparison between riverbank erosion models with an evaluation of the risk
- XL168 EGU2012-9259  
**W. Schwanghart** and O. Korup  
Towards quantifying fuzzy stream power
- XL169 EGU2012-9982  
**I. Per?oiu**, N. R?doane, and S. Rusu  
Geologic control of rivers in the perimeter of Somes River Drainage Basin, Romania
- XL170 EGU2012-10142  
M. Radoane, F. Obreja, and **N. Radoane**  
Channel-bed elevation changes for the Eastern Carpathian Rivers from streamflow gage records
- XL171 EGU2012-10612  
**I. Cristea**, M. R?doane, and M. Mîndrescu  
Contemporary pattern adjustments of Putna River's channel (South - Eastern Carpathians) reflected by cartographic materials
- XL172 EGU2012-10657  
**M. Takla**, F. Müller, A. Nicolay, A. Raab, T. Raab, H. Rösler, and E. Bönisch  
An early industrial charcoal production area in Lower Lusatia (Germany) - a GIS-based reconstruction of past land use and environmental change
- XL173 EGU2012-11596  
**W. H. J. Toonen**, T. G. Winkels, M. A. Prins, L. V. de Groot, F. P. M. Bunnik, and K. M. Cohen  
A Lower Rhine flood chronology based on the sedimentary record of an abandoned channel fill
- XL174 EGU2012-13456  
**D. Lague**, S. Bonnet, N. Brodu, T. Davies, and J. Leroux  
High precision terrestrial laser scanning : measuring the individual impact of floods and landslides on meandering bedrock river dynamics (Rangitikei river, New-Zealand)
- XL175 EGU2012-728  
**M. Rusnák**, M. Frandofer, and M. Lehotský  
Channel planform evolution: Spatial and temporal aspect
- XL176 EGU2012-1739  
**D. Pflanz** and B.H. Shyu  
Fluvial processes along a tectonically active coast, eastern Coastal Range, Taiwan
- XL177 EGU2012-4083  
W.I. van de Lageweg, **W.M. van Dijk**, and M.G. Kleinans  
Experimental insights on the effects of varying discharge on fluvial landscape evolution

- XL178 EGU2012-5075  
**T. Bekaddour**  
 Flood magnitude-frequency analysis and sediment transport capacity rate assessment in a mixed alluvial-bedrock channel at Val Lumnezia, Eastern Switzerland, (Graubünden)
- XL179 EGU2012-12177  
**H. Chauvet**, O. Devauchelle, F. Metivier, A. Limare, and E. Lajeunesse  
 Secondary flow structures in large rivers
- XL180 EGU2012-1658  
**R. Schläppy**, V. Jomelli, D. Grancher, D. Brunstein, M. Stoffel, M. Bollschweiler, C. Corona, N. Eckert, and M. Deschatres  
 Improvement of snow avalanche hazard and vulnerability assessment in the French Alps using a combination of dendrogeomorphic and statistical approaches
- XL181 EGU2012-5047  
**E. Hallot**, Y. Cornet, and P. Hallot  
 Mapping error due to image geometric correction
- XL182 EGU2012-13157  
**D. Béal**, F. Arnaud, H. Piégay, A.-J. Rollet, and L. Schmitt  
 Geomorphological Monitoring of a Sediment Injection Experimentation: the Old Rhine between Kembs and Breisach dams (France, Germany)
- XL183 EGU2012-13336  
**N. Jacob-Rousseau**  
 From the farmer's plot to the floodplain: assessing contemporary flood-risk with archival documents (Southern France).
- XL184 EGU2012-220  
**M. Ghilardi**, M.A. Vella, D. Hermitte, J.C. Parisot, P. Dussouillez, T.J. Fleury, M. Provansal, D. Delanghe-Sabatier, F. Demory, P.E. Mathé, Y. Quesnel, S. Danos, S. Balossino, Y. Delpey, A. Hartmann-Virnich, and M. Berthelot  
 Finding the lost arches of the Medieval Avignon's Bridge (Avignon, Provence, South France): a geoarchaeological approach
- XL185 EGU2012-7458  
**F. Gob**, N. Jacob-Rousseau, Y. Le Drezen, and J.-P. Degeai  
 Geomorphological evolutions of river courses following three centuries of severe hydro-morphological engineering for timber floating in an upland catchment of central France (Yonne River).

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#### HS4.1/GM7.8/NH1.7 – Flash floods: processes, forecasting and risk management (co-organized) – Orals

Convener: M. Borga | Co-Conveners: G. T. Aronica, G. Blöschl, J. Szolgay, J. J. Gourley, E. Gaume, J. Boardman

**Room: 39**

Chairperson: Marco Borga

- 08:30–08:45 EGU2012-8894  
 F. Pignone, **N. Rebor**a, and F. Silvestro  
 Estimation of rainfall field by combining radar data and raingauge observations: the modified conditional merging technique
- 08:45–09:00 EGU2012-11734  
**F. Marra** and E. Nikolopoulos  
 Radar rainfall estimation as a support for the hydro-meteorological analysis of debris flow and flash flood events
- 09:00–09:15 EGU2012-4682  
**P.J. Smith**, K. Beven, and L. Panziera  
 Flash flood forecasting using simplified hydrological models, radar rainfall forecasts and data assimilation
- 09:15–09:30 EGU2012-13404  
**E.I. Nikolopoulos**, D. Zoccatelli, and E.N. Anagnostou  
 Mapping storm velocity over catchments: Distribution and scale dependence for flash flood-inducing storms.
- 09:30–09:45 EGU2012-1619  
**J. Boardman**  
 Flash Flooding and 'Muddy Floods' on Arable Land
- 09:45–10:00 EGU2012-12846  
**K. Larnier**, H. Roux, P. Garambois, and D. Dartus  
 Data assimilation method for real-time flash flood forecasting using a physically based distributed model

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**COFFEE BREAK**

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Chairperson: John Boardman

- 10:30–10:45 EGU2012-7145  
**D. Defrance**, P. Javelle, P. Arnaud, and V. Andréassian  
 Flash flood warning at ungauged locations: can proxy data be useful to calibrate the hydrological model used?
- 10:45–11:00 EGU2012-5721  
**A. Bronstert**, B Creutzfeldt, T Graeff, I Hajnsek, M Heistermann, S Itzerott, T Jagdhuber, D Kneis, E Lück, D Reusser, and E Zehe  
 Potentials and constraints of different types of soil moisture observations for flood simulations in headwater catchments
- 11:00–11:15 EGU2012-6535  
**G. Werren**, D. Balin, E. Reynard, and S. N. Lane  
 Flash flood hazard assessment through modelling in small semi-arid watersheds. The example of the Beni Mellal watershed in Morocco
- 11:15–11:30 EGU2012-3045  
**M. Calianno**, I. Ruin, and JJ. Gourley  
 The use of SHAVE and NWS flash flood reports for impact characterization and prediction
- 11:30–11:45 EGU2012-11730  
**G. Brigandi**, G.T. Aronica, G. Basile, L. Pasotti, and M. Panebianco  
 An experimental operative system for shallow landslide and flash flood warning based on rainfall thresholds and soil moisture modelling
- 11:45–12:00 EGU2012-6889  
**T. Yamakoshi**, Y. Nakano, T. Ishizuka, K. Tamura, and Y. Hasegawa  
 Time Sequence on the Flash Flood Disaster in the Tsurugi River, Hofu City, in Japan

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**HS4.1/GM7.8/NH1.7 – Flash floods: processes, forecasting and risk management (co-organized) – Posters**

Convener: M. Borga | Co-Conveners: G. T. Aronica, G. Blöschl, J. Szolgay, J. J. Gourley, E. Gaume, J. Boardman

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: E. Nikolopoulos

- A139 EGU2012-991  
**L. D. Donado**, E. Bravo, and R. O. Ortiz  
 A proposal for mitigation of floods in main colombian rivers
- A140 EGU2012-2768  
 J.L. Ruiz-Bellet, J.C. Balasch, J. Tuset, and **D. Vericat**  
 Flash floods reconstruction from historical data in the ungauged Ondara River basin at Tàrrrega (NE Iberian Peninsula)
- A141 EGU2012-3606  
**Z.-Y. Feng**, S.-C. Chen, C.-W. Kao, and C.-M. Lo  
 A numerical simulation of overflow failure of landslide dams by particle flow technique
- A142 EGU2012-3757  
**M. Merheb**, C. Abdallah, and N. Baghdadi  
 Flash flood modeling in semiarid regions - NE Lebanon as a case study
- A143 EGU2012-4127  
**V.I. Arghius**, A. Ozunu, I. Samara, and Gh. Rosian  
 Results of the post flash-flood disaster investigation occurred in the Transylvanian Depression during the last decade (2001-2010)
- A144 EGU2012-7558  
**D. Bertermann**, C. Bialas, and A. Zacherl  
 An expeditious risk analysis of intense rainfall events in low mountain ranges of Central German Uplands under the aspect of a sustainable and decentralised flood retention
- A145 EGU2012-9010  
**K. Hlavčová**, S. Kohnová, K. Jeneiová, O. Horvát, L. Blaškovičová, and J. Szolgay  
 Estimation of flash floods on SvacenicÁ½ and Debernický Creeks in Slovakia
- A146 EGU2012-7802  
**C. Abon**, M. Heistermann, D. Kneis, and A. Bronstert  
 Hydrologic simulations using rainfall radar data for flood forecasting in Marikina River Basin, Philippines
- A147 EGU2012-9148  
**J. Moravcová**, T. Pavlíek, M. Koupilová, P. Ondr, and T. Kvítek  
 Modeling of runoff conditions in the pasture sites of small catchments
- A148 EGU2012-9437  
 C. Ruch, **C. Reszler**, G Rock, and M Plieschnegger  
 Flash Flood Warning System - One Model, Two Methods

- A149 EGU2012-11084  
**D. Zoccatelli**  
Roles of hillslope processes and river network routing in the hydrologic response to spatially variable rainfall fields
- A150 EGU2012-11287  
**B. Bhattacharya** and A. Suman  
Flash flood characterisation of the Haor area of Bangladesh
- A151 EGU2012-12112  
**F. Ciervo**, M.N. Papa, V. Medina, and A. Bateman  
Reconstruction and numerical modelling of a flash flood event: Atrani 2010
- A152 EGU2012-12230  
**P. Tarolli**, G.T. Aronica, D. Penna, M. Borga, and G. Brigandi  
Shallow landslides and debris flows triggering and rainfall thresholds using a quasi-dynamic wetness index: a case study in Sicily
- A153 EGU2012-12777  
**A. Cavallo**, S. Gabellani, R. Rudari, and F. Silvestro  
An Hydrological Description of the 4th November 2011 event in Genoa
- A154 EGU2012-13864  
**S. Schnabl**, M. Brilly, N. Humar, and A Kryżanowski  
Structural measures to cope with floods: KULTURisk case studies
- A155 EGU2012-14480  
**F. Marra** and D. Zoccatelli  
Design of rain gauge networks for flash flood prediction: assessment based on spatial moments of catchment rainfall
- A156 EGU2012-13657  
**C. Fouchier**, P. Javelle, P. Arnaud, and D. Defrance  
Comparison of different routing functions in the AIGA flood forecasting method for ungauged watersheds.
- A157 EGU2012-11393  
**P-A Garambois**, H Roux, K Larnier, and D Dartus  
Flash flood modelling for ungauged catchments

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**ML32 – Geomorphology Outstanding Young Scientist Award & Penck Lecture by V. Vanacker (co-listed) – Orals**

Convener: A. Lang

**Room: 21**

Chairperson: n.n.

- 13:30–14:30 EGU2012-14468  
**V. Vanacker**  
Anthropogenic control on geomorphic process rates: can we slow down the erosion rates?  
(Geomorphology Outstanding Young Scientist Award & Penck Lecture)

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**NP2.6 – Complex networks: Theory and methods applied to geophysical systems (co-listed) – Orals**

Convener: R. V. Donner | Co-Conveners: J. Kurths, T. Heckmann, W. Schwanghart, R.G. Budich, P. Nyberg, K. Steinhaeuser

**Room: 28**

Chairperson: n.n.

- 13:30–14:00 EGU2012-4342  
**J.F. Donges**, R.V. Donner, M.H. Trauth, N. Marwan, H.J. Schellnhuber, and J. Kurths  
Recurrence network-based time series analysis for identifying tipping points in Plio-Pleistocene African climate
- 14:00–14:30 EGU2012-6424  
**P. Fox**  
Scientific Knowledge Discovery in Complex Semantic Networks of Geophysical Systems
- 14:30–14:45 EGU2012-5346  
**I. Petrova** and A. Loew  
Structural Interrelationship in the Ecosystem Network Using Method of Complex Networks
- 14:45–15:00 EGU2012-14274  
**J. Hlinka**, D. Hartman, M. Vejmelka, and M. Palus  
Non-linear contributions to interactions in climate networks: sources, relevance, nonstationarity
- 15:00–15:15 EGU2012-4593  
**A. Rheinwalt**, N. Marwan, J. Kurths, and P. Werner  
Boundary effects in network measures of spatially embedded networks - A case study for German rainfall data

**NP2.6 – Complex networks: Theory and methods applied to geophysical systems (co-listed) – Posters**

Convener: R. V. Donner | Co-Conveners: J. Kurths, T. Heckmann, W. Schwanghart, R.G. Budich, P. Nyberg, K. Steinhaeuser

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

Author in Attendance: 15:30–17:00

Chairperson: n.n.

- XY395 EGU2012-9286  
**S. Hage-Packhäuser** and M. Dellnitz  
Time-Varying Dynamical System Networks in the Light of Hybrid Symmetry
- XY396 EGU2012-4099  
**W. Schwanghart** and T. Heckmann  
Fuzzy delineation of drainage basins through probabilistic interpretation of diverging flow networks
- XY397 EGU2012-4944  
**H. Ghaffari** and R.P Young  
Friction Networks: Network-Configurations of Dynamic Friction Patterns
- XY398 EGU2012-5073  
**T. Zerenner** and A. Hense  
Graph theoretical analysis of climate data
- XY399 EGU2012-8397  
**M. Palus**, D. Hartman, J. Hlinka, and M. Vejmelka  
Connectivity, topology and dynamics in climate networks
- XY400 EGU2012-14275  
**M. Vejmelka**, J. Hlinka, D. Hartman, and M. Palus  
Spatiotemporal modes of climatic variability: building blocks of complex networks?
- XY401 EGU2012-5098  
**J. I. Deza**, M. Barreiro, and C. Masoller  
Detecting long-range tele-connections in the climate network via ordinal pattern analysis
- XY402 EGU2012-5705  
**J. Runge**, J.F. Donges, and J. Kurths  
Climate networks with causal links
- XY403 EGU2012-7577  
**A. Radebach**, R. V. Donner, J. G. B. Runge, J. F. Donges, and J. Kurths  
Disentangling different types of El Niño episodes by evolving climate network analysis
- XY404 EGU2012-4691  
**M. Wiedermann**, J.F. Donges, J. Heitzig, and J. Kurths  
Coupled climate network analysis of multidecadal dynamics in the Arctic
- XY405 EGU2012-6415  
**N. Boers**, B. Bookhagen, N. Marwan, and J. Kurths  
Investigating Temperature and Rainfall Patterns over the Amazon Region using Complex Networks
- XY406 EGU2012-5622  
**P. Martin**, N. Malik, N. Marwan, and J. Kurths  
Complex network analysis of high rainfall events during the northeast monsoon over south peninsular India and Sri Lanka
- XY407 EGU2012-11674  
**K. Oluoch**, N. Marwan, M. Trauth, A. Loew, and J. Kurths  
Complex Networks Dynamics Based on Events-Phase Synchronization and Intensity Correlation Applied to The Anomaly Patterns and Extremes in The Tropical African Climate System
- XY408 EGU2012-6483  
**H. Kutza**, J. F. Donges, N. Marwan, R. V. Donner, U. Feudel, and J. Kurths  
Pattern recognition in complex networks, based on spatially embedded time series
- XY409 EGU2012-14310  
**K. Steinhaeuser**  
Knowledge Discovery from Climate Data using Graph-Based Methods
- XY410 EGU2012-11187  
**T. Nocke**  
Visual Analytics of Climate Networks

Thursday, 26 April

**GM2.1 – High definition topography - data acquisition, modelling, interpretation – Posters**

Convener: D. Rieke-Zapp | Co-Conveners: A. Reiterer, J. Chandler, D. Vericat, N. Tate, D. M. Powell, J. Brasington, I. Marzoff

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

Author in Attendance: 17:30–19:00

Chairperson: D. Vericat / N. Tate

- XL206 EGU2012-7714  
A. Wagner, A. Reiterer, P. Wasmeier, **D. Rieke-Zapp**, and T. Wunderlich  
Vision-Based Geo-Monitoring - A New Approach for an Automated System
- XL207 EGU2012-7858  
**R. Berther** and D. Rieke-Zapp  
Geomonitoring for understanding of sediment transport in an Alpine river catchment
- XL208 EGU2012-5566  
**A. Beer**, L. Campana, and D. Rieke-Zapp  
Evaluating sub-millimetre erosion monitoring in a mountain torrent
- XL209 EGU2012-14172  
**P. Marzahn**, D. Rieke-Zapp, and R. Ludwig  
Soil surface roughness characterization for microwave remote sensing applications
- XL210 EGU2012-4952  
**D. Rieke-Zapp**  
Insitu measurement of bedrock erosion
- XL211 EGU2012-12789  
**A. Volkwein**, A. Beer, and L. Egli  
Applications of terrestrial laser scanning in natural hazard sciences
- XL212 EGU2012-10565  
**M. Lo Brutto**  
Automatic reconstruction of 3D models in geomorphology through close-range photogrammetry and 3D web-based services
- XL213 EGU2012-5759  
**J. Gance**, T. Dewez, J.-P. Malet, and A. Stumpf  
Time-lapse stereo-photogrammetry to monitor electrical sounding electrodes on an unstable slope
- XL214 EGU2012-3537  
**H.K. Seo**, Y.H. Noh, J.G. Um, Y.S. Choi, and M.H. Park  
Applicability of digital photogrammetry technique to quantify rock fracture surfaces
- XL215 EGU2012-8167  
**F. Bretar**, M. Pierrot-Deseilligny, D. Schelstraete, O. Martin, and P. Quernet  
Generating High resolution surfaces from images: when photogrammetry and applied geophysics meets
- XL216 EGU2012-936  
**M. Westoby**, J. Brasington, N.F. Glasser, M.J. Hambrey, and J.M. Reynolds  
Structure-from-Motion photogrammetry: a novel, low-cost tool for geomorphological applications
- XL217 EGU2012-6261  
**C. Hugenholtz**, K. Whitehead, B. Moorman, O. Brown, T. Hamilton, T. Barchyn, K. Riddell, and A. LeClair  
High-resolution terrain and landcover mapping with a lightweight, semi-autonomous, remotely-piloted aircraft (RPA): a case study and accuracy assessment
- XL218 EGU2012-8822  
**C. Wiegand**, C. Geitner, K. Heinrich, and M. Rutzinger  
Multi-temporal analysis of aerial images for the investigation of spatial-temporal dynamics of shallow erosion - a case study from the Tyrolean Alps
- XL219 EGU2012-10016  
C. Capanna, L. Jorda, G. Gesquière, and **P. Lamy**  
A new 3D reconstruction technique applied to small solar system bodies
- XL220 EGU2012-9765  
S. Delalieux, S. Livens, M. Goossens, I. Reusen, and **C. Tote**  
Spatial unmixing for environmental impact monitoring of mining using UAS and WV-2
- XL221 EGU2012-8875  
A Constantinescu, I. Nichersu, **C Trifanov**, I. Nichersu, and M. Mierla  
Morphometric analyze for flood hazard map using DTM built with LIDAR and Echo-sounder data in Danube Delta



- XL222 EGU2012-8905  
**M. Avian**  
First results of repeated Terrestrial Laserscanning monitoring processes at the rock fall area Burgstall/Pasterze Glacier, Hohe Tauern Range, Central Austria
- XL223 EGU2012-10081  
**M. Avian**  
Performance and limits of different long-range TLS-sensors for monitoring high mountain geomorphic processes at different spatial scales
- XL224 EGU2012-12400  
**A. Prokop** and M. Chiari  
Long term monitoring of geomorphological changes caused by torrent activity using terrestrial laser scanning
- XL225 EGU2012-10244  
**D.J. Luscombe**, K. Anderson, A. Wetherelt, E. Grand-Clement, N. Le-Feuvre, D. Smith, and R.E. Brazier  
Understanding the structure of Exmoor's peatland ecosystems using laser-scanning technologies
- XL226 EGU2012-10512  
N. Perez-Gallego, T. Francke, J. Latron, S. Werth, S. Werb, and **F. Gallart**  
Testing a Terrestrial Laser Scanner for studying badlands forms and erosion rates. Vallcebre (Catalan Pre-Pyrenees)
- XL227 EGU2012-2469  
**M. Dotterweich** and S. Bub  
Using of high resolution morphometric thalweg analyses of dry valleys under woodland to assess land use impact and soil erosion in the late Holocene
- XL228 EGU2012-13442  
**B.D. Collins**, S.C. Corbett, and H.C. Fairley  
Measuring and modeling high-resolution topographic change at archaeological sites in Grand Canyon National Park, Arizona, U.S.A.
- XL229 EGU2012-731  
**Á. Gómez**, S. Schnabel, F. Lavado, and J. Rubio  
Developing a methodology to estimate historical sheet erosion rates using exposed roots and terrestrial laser scanner
- XL230 EGU2012-5543  
**D. Vericat**, M. Smith, J.A. López-Tarazón, A. Tena, J. Brasington, and R.J. Batalla  
Monitoring Topographic Change In Highly Erodible Landscapes By Means Of Terrestrial Laser Scanning
- XL231 EGU2012-8691  
**M. Etchebes**, P. Tapponnier, Y. Klinger, J. Van Der Woerd, X. Xu, S. Xinzhe, T. Xibin, M. Rizza, and T. Lok Hang  
Application of terrestrial LiDAR topographic data to reconstruct offset geomorphic markers along the Fuyun strike-slip fault, Xinjiang, China
- XL232 EGU2012-1288  
**R.M. Frings** and S. Vollmer  
Use of 3D photogrammetry for measurement of river bed porosity
- XL233 EGU2012-4785  
**M. Smith** and D. Vericat  
Evaluating through-water terrestrial laser scanning under a range of flow and suspended sediment conditions

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## GM2.2 – Digital Landscapes: Quantitative Interrogation and Use to Examine Geomorphic Processes – Posters

Convener: J. K. Hillier | Co-Conveners: P. Tarolli, P. Passalacqua, D.C. Mason, S. Conway

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

Author in Attendance: 17:30–19:00

Chairperson: Susan Conway

- XL234 EGU2012-4560  
**A.P. Valentine**, L.M. Kalnins, and J. Trampert  
Hunting for seamounts using neural networks: learning algorithms for geomorphic studies
- XL235 EGU2012-13482  
**VB Ernstsen**, A Lefebvre, J Bartholdy, A Bartholomä, and C Winter  
On the determination of net bedload transport patters in a natural tidal inlet system (Knudedyb in the Danish Wadden Sea)
- XL236 EGU2012-13310  
F. Haas, **T. Heckmann**, L. Hilger, and M. Becht  
Measuring debris flows in the proglacial area of the Gepatschferner/Austrian Alps using repeat ground-based and airborne LiDAR data
- XL237 EGU2012-5046  
**J. K. Hillier** and M. S. Smith  
Robust 3D Quantification of Glacial Landforms: A Use of Idealised Drumlins in a Real DEM

- XL238 EGU2012-7660  
**L. Carturan**, S. Calligaro, F. Cazorzi, G.A. Baldassi, D. Moro, A. Carton, G. Dalla Fontana, A. Guarnieri, N. Milan, and P. Tarolli  
 Mass balance and surface dynamics of Montasio Occidentale glacier (Eastern Italian Alps) investigated by Terrestrial Laser Scanner
- XL239 EGU2012-10137  
**A. J. Cook**, T. Murray, A. Luckman, and D. G. Vaughan  
 A new 100-m Digital Elevation Model of the Antarctic Peninsula suitable for glacier morphology studies, using ASTER Global DEM
- XL240 EGU2012-9296  
**L. Rieg**, R. Sailer, M. Sproß, M. Rutzinger, and V. Wichmann  
 Comparison of different DTM resolutions for surface change calculations in a high mountain environment
- XL241 EGU2012-8750  
**S. Trevisani**, M. Cavalli, and L. Marchi  
 Reading alpine morphology according to surface texture: two approaches compared
- XL242 EGU2012-13565  
**J. B. Salisbury**, J.R. Arrowsmith, T. K. Rockwell, D. Haddad, O. Zielke, and C. Maddugo  
 The Climatic Role in Formation of Fault-Offset Geomorphic Features: Reliable Measurements for Slip-Per-Event Studies
- XL243 EGU2012-215  
**Yu. Yu. Yurchenko** and S.V. Sokolov  
 Experience using of DEM's as a basis for landscapes classification at selection of geochemical methods of prospecting.
- XL244 EGU2012-8510  
**A. Doglioni** and V. Simeone  
 Identification of large geomorphological anomalies based on 2D discrete wavelet transform
- XL245 EGU2012-3422  
**C. W. Lin**, P. Tarolli, C. M. Tseng, and Y. H. Tseng  
 Recognition of large scale deep-seated landslides in vegetated areas of Taiwan
- XL246 EGU2012-5000  
**C.-M. Tseng**, P. Tarolli, and C.-W. Lin  
 Variations of Geomorphic Signatures after a Major Typhoon
- XL247 EGU2012-5035  
**S. Calligaro**, P. Tarolli, M. Mancini, A. Righetto, D. Capraro, G. Mei, and A. Spinazzè  
 Terrestrial Laser Scanner survey of a small headwater basin in the Dolomites
- XL248 EGU2012-6729  
**J.-K. Liu**, M.-S. Yang, M.-C. Wu, and W.-C. Hsu  
 LiDAR DEM for Slope regulations of land development in Taiwan
- XL249 EGU2012-9407  
 L. Cavallari, M. Dierna, M. Gelmini, and **G. P. M. Vassena**  
 Multiresolution and multisensors 3D laser scanner survey of a landslide in the Italian Apls
- XL250 EGU2012-9865  
**P. Tarolli** and A. Righetto  
 Regional scale analysis of the topographic signatures of landslide/debris flow dominated processes
- XL251 EGU2012-843  
**A. Tomczyk** and M. Ewertowski  
 Digital Elevation Models of Differences (DODs): implementation for assessment of soil erosion on recreational trails.
- XL252 EGU2012-914  
**S. d'Oleire-Oltmanns**, I. Marzloff, and L. Schrott  
 The use of very high resolution DSMs for the investigation of gully evolution in the Souss Basin, Morocco derived from UAV missions
- XL253 EGU2012-12427  
**J. H. Blöthe**, H. Munack, and O. Korup  
 Sediment storage and stability along the western Tibetan plateau margin
- XL254 EGU2012-3184  
**F. Cazorzi**, A. De Luca, A. Checchinato, F. Segna, and G. Dalla Fontana  
 A LiDAR based analysis of hydraulic hazard mapping
- XL255 EGU2012-4114  
**G. Sofia**, P. Tarolli, and G. Dalla Fontana  
 LiDAR DTMs and anthropogenic feature extraction: testing the feasibility of geomorphometric parameters in floodplains
- XL256 EGU2012-4636  
**M. Della Seta**, J.P. Galve, D. Piacentini, and F. Troiani  
 Computation, validation and sensitivity of the DTM-derived geomorphic parameters: the case of Stream-Length Gradient Index

- XL257 EGU2012-5363  
**K. Fieber**, I. Davenport, J Ferryman, R Gurney, J Walker, and J Hacker  
 Analysis of full-waveform LiDAR pulse properties for vegetation discrimination and characterisation
- XL258 EGU2012-6172  
**F. Pirotti**, A. Guarnieri, and A. Vettore  
 Full waveform airborne laser scanning for mapping morphometric parameters in terrain with varying vegetation cover
- XL259 EGU2012-6345  
**J. Filski**  
 The State of Health of Nature Reserves: A Case Study using the Fusion of Hyperspectral and Lidar Data

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**GM2.3 – Geomorphological maps - indispensable tool in geomorphology – Orals**

Convener: W. Schwanghart | Co-Conveners: JC Otto, T. Heckmann

**Room: 2**

Chairperson: Jan-Christoph Otto, Wolfgang Schwanghart

- 15:30–15:45 EGU2012-6114  
**A.C. Seijmonsbergen**  
 Current trends in geomorphological mapping
- 15:45–16:00 EGU2012-1763  
**J. Hjort**  
 Geomorphological mapping and analysis using statistically-based distribution modelling: advantages and pitfalls
- 16:00–16:15 EGU2012-7242  
**D. Loibl**  
 Detailed geomorphological mapping from high resolution DEM data (LiDAR, TanDEM-X): two case studies from Germany and SE Tibet
- 16:15–16:30 EGU2012-11305  
**T. Hoffmann** and W. Schwanghart  
 Geomorphic mapping using pixel-based slope-area plots
- 16:30–16:45 EGU2012-2765  
 E. Vannamettee, L.V. Babel, **D. Karszenberg**, J. Schuur, M.R. Hendriks, and M.F.P. Bierkens  
 Automated geomorphological mapping using Multiple Point Geostatistics
- 16:45–17:00 EGU2012-12585  
**M. Geilhausen** and J.-C. Otto  
 Smart "geomorphological" map browsing - a tale about geomorphological maps and the internet

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**GM2.3 – Geomorphological maps - indispensable tool in geomorphology – Posters**

Convener: W. Schwanghart | Co-Conveners: JC Otto, T. Heckmann

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

Author in Attendance: 17:30–19:00

Chairperson: Tobias Heckmann

- XL260 EGU2012-3373  
**J. Jasiewicz** and T.F. Stepinski  
 Machine vision approach to auto-generation of high resolution, continental-scale geomorphometric map from DEM
- XL261 EGU2012-9171  
**H. Hikel**, T. Jarmer, W. Schwanghart, N.J. Kuhn, Y. Yair, and M. Shoshani  
 Geomorphological mapping in arid regions supported by the analysis of shrub patterns
- XL262 EGU2012-11966  
**E. Miccadei**, T. Piacentini, and F. Daverio  
 Morphotectonic mapping and Quaternary landscape evolution on the eastern Central Apennines and adriatic area (Italy)
- XL263 EGU2012-13363  
 M. Thiel, **T. Heckmann**, and M. Becht  
 Predictive Mapping of Sediment Cascades in Alpine Geosystems
- XL264 EGU2012-14233  
 L. Hilger, **T Heckmann**, F Haas, and M Becht  
 Geomorphological mapping of the proglacial zone of the Gepatschferner glacier, Austria
- XL265 EGU2012-14388  
**J Goetz** and JC Otto  
 Adapted geomorphological mapping for sediment budget analysis - mapping focus and data base structure

- XL266 EGU2012-14396  
**G Prasicek** and JC Otto  
 Semi-automated mapping of geomorphological process domains - towards a geomorphological map of the European Alps
- XL267 EGU2012-14387  
**C Eisank** and L Dragut  
 An object-based approach to hierarchical classification of the Earth's topography from SRTM data
- XL268 EGU2012-7250  
**J.A. Stevenson**, X. Sun, and N.C. Mitchell  
 A feature-preserving denoising algorithm to improve the quality of geomorphic analysis
- XL269 EGU2012-3672  
**J. Alcalá**, J.J. Zamorano, and D. Palacios  
 Geomorphologic map and derived geomorphological evolution model of the Ampato volcanic complex (Southern Peru).
- XL270 EGU2012-3677  
**J. Alcalá**, J.J. Zamorano, and D. Palacios  
 Volcanic and glacial evolution of Chachani-Nocarane complex (Southern Peru) deduced from the geomorphologic map.
- XL271 EGU2012-14400  
**T. Strasser** and C Eisank  
 (Semi-)Automated landform mapping of the alpine valley Gradental (Austria) based on LiDAR data

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**TS4.3/GD3.9/GM3.1 – Orogen-scale coupling between tectonics, erosion and climate (co-organized) – Orals**

Convener: F. Mouthereau | Co-Conveners: Dr. Garcia-Castellanos, P.A. van der Beek, F. Herman, J.-D. Champagnac, P. Valla

**Room: 29**

Chairperson: F. Mouthereau and P. van der Beek

- 13:30–13:45 EGU2012-1345  
**F. Schlunegger** and K.P. Norton  
 Surface control on contrasts in deformation between eastern and western margins of the Central Andes
- 13:45–14:00 EGU2012-1518  
**J.-D. Champagnac**, P. Molnar, C. Sue, and F. Herman  
 Tectonics, Climate, and Mountain Topography
- 14:00–14:15 EGU2012-1893  
**M. Trauerstein**, K. P. Norton, F. Schlunegger, and F. Preusser  
 Climatic imprint on landscape morphology in the western escarpment of the Andes
- 14:15–14:30 EGU2012-3242  
**J.A. McDermott**, K.X Whipple, K.V. Hodges, and M.C. van Soest  
 Plio-Pleistocene N-S extension at the southern margin of the Tibetan Plateau as evidenced from fluvial incision patterns and thermochronology
- 14:30–14:45 EGU2012-7957  
**L. M. Mesalles**, F. Mouthereau, C.P. Chang, M. Bernet, and X. Sengelen  
 New thermochronological constraints on the exhumational history at the Taiwan subduction-collision transition.
- 14:45–15:00 EGU2012-10441  
**L. Goren**, S. Castellort, S. D. Willett, J.-D. Champagnac, F. Herman, and J. Braun  
 Passive advection and dynamic reorganization of mountainous bedrock rivers: A landscape evolution modeling approach
- Chairperson: J.-D. Champagnac and D. Garcia-Castellanos
- 15:30–15:45 EGU2012-6301  
**G. Roe**, R. Headley, and J. Tomkin  
 Glacier long profiles in regions of active uplift, and their role in orogen dynamics.
- 15:45–16:00 EGU2012-2627  
**D. Scherler**, B. Bookhagen, and M.R. Strecker  
 Hillslope-glacier coupling: from debris cover to landscape evolution
- 16:00–16:15 EGU2012-4433  
**P. Steer**, R. S. Huisman, P. G. Valla, S. Gac, and F. Herman  
 Recent glacial erosion of fjords and low-relief surfaces in western Scandinavia
- 16:15–16:30 EGU2012-7305  
**P. Sternai**, F. Herman, J.-D. Champagnac, M. Fox, B. Salcher, and S. D. Willett  
 Pre-glacial topography of the European Alps

- 16:30–16:45 EGU2012-4341  
**V.K. Pedersen** and D.L. Egholm  
 Interactions between glacial erosion, the extent of glaciation, and topography investigated using numerical modeling
- 16:45–17:00 EGU2012-9478  
**M. Dühnforth**, R.S. Anderson, and W. Colgan  
 The influence of glacier ice temperature on the long-term evolution of longitudinal valley profiles: Can a landscape escape from the "glacial buzzsaw"?

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**TS4.1/GM3.5/SSP3.4 – Tectonics, sedimentation and surface processes: from the erosional engine to basin deposition (sponsored by IAS) (co-organized) – Orals**

Convener: A. Whittaker | Co-Conveners: S. Castellort, L. Kirstein, J. Vergés

**Room: 29**

Chairperson: n.n.

- 08:30–08:45 EGU2012-3613  
**U. Ryb**, A. Matmon, N. Porat, and O. Katz  
 From mass-wasting to slope stabilization - putting constraints on the transition in slope erosion mode: A case study in the Judea Hills, Israel
- 08:45–09:00 EGU2012-1361  
**M. Vanmaercke**, A. Kettner, M Van Den Eeckhaut, J Poesen, G Govers, A Mamaliga, G Verstraeten, M Radoane, and J Syvitski  
 Predicting sediment yield for catchments under pristine conditions: the role of tectonic activity
- 09:00–09:15 EGU2012-8710  
**G. de Jager**, A. Forzoni, and J.E.A. Storms  
 Climate, sea level and tectonics signal propagation - an analysis using 2DStratSim: a source-to-sink numerical model
- 09:15–09:30 EGU2012-14406  
**G. Duclaux** and T. Salles  
 3D Stratigraphic and geomorphic modelling from source to sink
- 09:30–09:45 EGU2012-212  
**E. Garzanti**, P. Vermeesch, S. Andò, M. Boni, M. Lustrino, and G. Vezzoli  
 From Lesotho basaltic highlands to the Namib Sand Sea: long-distance transport and compositional variability in the wind-displaced Orange Delta
- 09:45–10:00 EGU2012-8951  
**V. Olivetti**, M. L. Balestrieri, F. Rossetti, and F. M. Talarico  
 Tectonic/climatic control on sediment provenance in the Cape Roberts Project core record (southern Victoria Land, Antarctica): A pulsing late Oligocene/early Miocene signal from south revealed by detrital thermochronology

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**COFFEE BREAK**

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Chairperson: n.n.

- 10:30–10:45 EGU2012-10360  
**B. Salcher**, J. Lomax, B. Meurers, J. Smit, F. Preusser, and K. Decker  
 Tectonics and Quaternary sequence development of basins along the active Vienna Basin strike-slip fault
- 10:45–11:00 EGU2012-4230  
**D. Huyghe**, C. Bonnel, B. Nivière, G. Messenger, D. Dhont, B. Fasantieux, Y. Hervouët, and J-P Xavier  
 Tectono-sedimentary evolution of the Neuquén basin (Argentina) between 39°S and 41°S during the Neogene
- 11:00–11:15 EGU2012-10345  
**E. Costa**, M. Garcés, M. López-Blanco, E. Beamud, M. Gómez-Paccard, and J.C. Larrasoña  
 Closing and continentalization of the South Pyrenean Foreland Basin (NE Spain) and its impact on basin fill trends and thrust-belt evolution
- 11:15–11:30 EGU2012-1657  
**P.D. Clift** and L. Giosan  
 Sediment Source-to-Sink Processes in the Indus River since the Last Glacial Maximum
- 11:30–11:45 EGU2012-5741  
**C. Petit** and S. Migeon  
 Submarine erosion and active tectonics offshore Nice (Southern Alps, France): insights from numerical models

11:45–12:00 EGU2012-9700  
 C.-S. Liu, **Y.-T. Chang**, H.-H. Hsu, S.-C. Chen, and S.-H. Chung  
 Development of an Intra-Slope Basin Offshore Southwestern Taiwan

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**GD3.1/GM3.7/SM4.4/TS1.6 – Plate kinematics, mantle convection, paleogeography and sea level (co-organized) –**

Posters

Convener: R. D. Müller | Co-Conveners: H.-P. Bunge, J. Golonka, M. Seton, S. Brune, L. Quevedo, G. Helffrich, G. Laske, Y. Ricard

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

Author in Attendance: 15:30–17:00

Chairperson: n.n.

- XL163 EGU2012-5692  
**B. Guillaume**, L. Husson, and G. Choblet  
 Freeboard, sea level and dynamic topography during aggregation of a supercontinent
- XL164 EGU2012-6101  
**M. W?osi?ska**, T. Niedzielski, I. G. Priede, and P. Migo?  
 On a goodness-of-fit between theoretical hypsometric curve and its empirical equivalents derived for various depth bins from 30 arc-second GEBCO bathymetry
- XL165 EGU2012-6897  
**L. G. Yeo**, C. Heine, and R. D. Müller  
 Using global paleogeographic datasets towards ground-truthing dynamic topography models
- XL166 EGU2012-9517  
**S. M. Masterton**, P. Markwick, R. Bailiff, D. Campanile, E. Edgecombe, D. Eue, A. Galsworthy, and K. Wilson  
 The integration of palaeogeography and tectonics in refining plate tectonic models: an example from SE Asia
- XL167 EGU2012-5537  
 E. Ostancaux, C. Robin, F. Guillocheau, G. Trotin, and **L. Husson**  
 The eustatic chimera: isn't the Cenomanian maximum flood a dynamic topography puzzle?
- XL168 EGU2012-12121  
**A. Rozel**, T.W. Becker, C. Faccenna, F. Funiciello, and L. Husson  
 Scaling laws of dynamic topography and uplift-rate in 3D spherical geometry
- XL169 EGU2012-10926  
**L. Anderson**, F. Ferraccioli, G. Eagles, B. Steinberger, and J. Ritsema  
 Spatial and Temporal variability in Dynamic Topography in East Antarctica
- XL170 EGU2012-4670  
**L. Quevedo**, C. Heine, and R. D. Müller  
 Reconstructing global grids of oceanic and continental lithospheric thickness
- XL171 EGU2012-6981  
**M. Seton** and R.D. Muller  
 Long-term sea level and the cycle of supercontinent formation and dispersal
- XL172 EGU2012-1208  
**H. Zhang** and J.M. Zhao  
 P-wave velocity structure under Tibetan plateau revealed by seismic tomography
- XL173 EGU2012-1219  
**J.M. Zhao**  
 Where Has the Shortened Lithosphere Gone —Mantle Flow below the Tibet

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

Author in Attendance: 17:30–19:00

Chairperson: n.n.

- XL174 EGU2012-3942  
**V. Puchkov**  
 Lithospheric response to plume- and plate-tectonic interactions
- XL175 EGU2012-4885  
**S. Brune** and C. Heine  
 3d Numerical Modeling of the Equatorial Atlantic Break-Up
- XL176 EGU2012-5433  
 C. Cadio, M. Ballmer, **I. Panet**, N. Ribe, and M. Diament  
 New constraints on the Hawaiian swell origin using wavelet analysis of the geoid to topography ratio
- XL177 EGU2012-6145  
 J. Reyes and **L.E. Lara**  
 Juan Fernández Ridge (Nazca Plate): petrology and thermochronology of a rejuvenated hot spot trail
- XL178 EGU2012-7692  
**E. Koivisto** and R.G. Gordon  
 A Globally Self-Consistent Model of Plate Motions Relative to the Hotspots for the Past 48 Million Years

- XL179 EGU2012-3262  
**M. D. Ballmer**, G. Ito, C. J. Wolfe, C. Cadio, and S. C. Solomon  
Double layering of a thermochemical plume in the upper mantle beneath Hawaii
- XL180 EGU2012-8537  
**M. Pears** and C. Lithgow-Bertelloni  
Can plumes collapse?: Experimental results and applications to Iceland.
- XL181 EGU2012-8601  
**R. Govers**, K. Warners-Ruckstuhl, C. Hochard, P. Webb, R. Wortel, G. Stampfli, C. van Oosterhout, and H. Davies  
Evolution of forces on Eurasia since the Miocene
- XL182 EGU2012-8930  
**Á. Benediktsdóttir**, R.N. Hey, F. Martinez, and Á. Höskuldsson  
Tectonic Evolution of the Reykjanes Ridge During the Past 15
- XL183 EGU2012-11400  
**P. Szatmari**  
Rifting by continental rotation, mantle flow and hotspot volcanism in the salt-depositing South Atlantic

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**GM4.4/BG1.8 – Biophysical processes: from biological soil crusts to macro process (co-organized) – Orals**

Convener: G. J. Kidron | Co-Conveners: B. Büdel, J. Belnap, X. Li, JM Turowski, S. Rice, M. Stoffel, S. Lane

**Room: 22**

Chairperson: J.M. Turowski, G.J. Kidron

- 08:30–08:45 EGU2012-4215  
**J. Hooke**  
Flood disturbance and regrowth of vegetation in ephemeral channels: conditions and interactions
- 08:45–09:00 EGU2012-13555  
**A.C. Wilcox**, P.B. Shafroth, A. Lightbody, J.C. Stella, S. Bywater-Reyes, L. Kiu, and K. Skorko  
Feedbacks among Floods, Pioneer Woody Vegetation, and Channel Change in Sand-Bed Rivers: Insights from Field Studies of Controlled Flood Releases and Models
- 09:00–09:15 EGU2012-2861  
**C. Bilodeau**, F. Gob, M.B. Albert, J. Belliard, and J.M. Baudoin  
Quantification of hydromorphological alteration of water courses from regional models across the French territory for their evaluation and their ecological restoration
- 09:15–09:30 EGU2012-7961  
**N. Broothaerts**, G. Verstraeten, B. Notebaert, C. Kasse, S. Bohncke, R. Assendelft, and J. Vandenberghe  
Humans reshaped the floodplain geocology in NW Europe through intense agricultural impact
- 09:30–09:45 EGU2012-247  
**J. Belnap**, B. Wilcox, N. Barger, J. Herrick, and M. van Soyoc  
Biological Soil Crusts Influence Hydrologic Function Differently in Various Deserts And Future Climate and Land Use will Affect These Relationships
- 09:45–10:00 EGU2012-358  
**M.A. Bowker**, D.J. Eldridge, and F.T. Maestre  
Runoff source or sink? Biocrust hydrological function strongly depends on the relative abundance of mosses

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**COFFEE BREAK**


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Chairperson: G.J. Kidron

- 10:30–10:45 EGU2012-13225  
**Y. Canton**, S. Chamizo, E. Rodriguez-Caballero, I. Miralles, R. Lazaro, A. Sole-Benet, and F. Domingo  
Role of Biological Soil Crusts on hydrological cycle drivers of semiarid ecosystems
- 10:45–11:00 EGU2012-5034  
**T. Fischer**, A. Yair, and M. Veste  
Infiltration, water holding capacity and growth patterns of biological soil crusts on sand dunes under arid and temperate climates
- 11:00–11:15 EGU2012-650  
**R.L. Jia**, X.R. Li, L.C. Liu, and Y.H. Gao  
Effects of sand burial and wind disturbances on moss soil crusts in a revegetated area of the Tennger Desert, Northern China

- 11:15–11:30 EGU2012-6898  
**F. Garcia-Pichel**  
 Microbial exopolysaccharides as determinants of geomorphological, hydrological and optical properties of soil crusts from the Precambrian till today
- 11:30–11:45 EGU2012-1182  
**F. T. Maestre**, C. Escolar, J. L. Quero, M. Ladrón de Guevara, R. Lázaro, V. Ochoa, B. Gozalo, and M. Berdugo  
 Will climate change reduce the ability of biological soil crusts to act as a carbon sink in drylands?
- 11:45–12:00 **Toward a Synthesis: Bridging the gap between micro and macro, methodological dilemmas and collaboration between life and earth scientists**

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**GM4.4/BG1.8 – Biophysical processes: from biological soil crusts to macro process (co-organized)** – Posters

Convener: G. J. Kidron | Co-Conveners: B. Büdel, J. Belnap, X. Li, JM Turowski, S. Rice, M. Stoffel, S. Lane

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

Author in Attendance: 17:30–19:00

Chairperson: J. Belnap

- XL272 EGU2012-2187  
**X.R. Li**, M.Z. He, X.J. Li, and R.L. Jia  
 Cryptogamic communities in biological soil crusts in arid deserts of China: Diversity and their relationships to habitats in different scales
- XL273 EGU2012-2191  
**X.J. Li**  
 Effects of patchy distribution of vegetation on infiltration, runoff generation and resources redistribution in Tengger Desert, north China
- XL274 EGU2012-4142  
**M. Veste**, A. Yair, S.-W. Breckle, and T. Littmann  
 Ecohydrology of biological soil crusts in arid sand dunes - integration from the micro-scale to the landscape
- XL275 EGU2012-6372  
**R. Spröte**, M. Veste, T. Fischer, T. Raab, O. Bens, and R. F. Hüttl  
 Development of biological soil crusts and their influence on soil hydrology in the recultivation area of lignite open-cast mining district in Lower Lusatia (Germany)
- XL276 EGU2012-13058  
**S. Chamizo**, Y. Cantón, R. Lázaro, E. Rodriguez-Caballero, and F. Domingo  
 The role of biological soil crusts on soil moisture
- XL277 EGU2012-1784  
**F. Gil-Sotres**, I Miralles, Y. Canton -Castilla, F. Domingo, M.C. Leiros, and C. Trasar-Cepeda  
 Influence of biological soil crusts at different successional stages in the implantation of biogeochemical cycles in arid and semiarid zones
- XL278 EGU2012-1005  
**M. Delgado-Baquerizo**, L. Morillas, F. Maestre, and A. Gallardo  
 C, N and P ratios modulate the dominance of soil N forms, microbial N transformation processes and microbial functional diversity under biological soil crust in a semi-arid grassland.
- XL279 EGU2012-3306  
**M. Z. He**  
 Biological soil crusts are the main contributor to winter soil respiration in a temperate desert ecosystem of China
- XL280 EGU2012-9531  
**F. Ehrhardt**, I. Bertrand, C. Joulain, C. Valentin, G. Alavoine, and O Malam Issa  
 Biological soil crusts (BSC) in the Sahelian zone. Can they impact soil C and N cycles?
- XL281 EGU2012-6607  
**W. Williams**, B. Budel, H. Reichenberger, and N. Rose  
 Endurance of Australian dry-savannah cyanobacteria regulated by extra-cellular polysaccharides - EPS and environment
- XL282 EGU2012-7768  
**B. Weber**  
 Climatically driven distribution patterns of soil crusts and their implications for climate change scenarios
- XL283 EGU2012-11040  
**J. Bevan**, R. Alexander, and R. Lazaro-Suau  
 Transplant experiments to examine the habitat exclusivity of lichen dominated soil crust communities in the El Cautivo badlands, SE Spain
- XL284 EGU2012-2220  
**X. Zhao.**, Y. Shi., C. Chen., R. Jia., and X. Li.  
 The physiology mechanisms on drought tolerance and adaptation of biological soil crust moss *Bryum argenteum* and *Didymodon vinealis* in Tengger Desert



- XL285 EGU2012-4961  
**P. Porada** and A. Kleidon  
A Process-based Model of Global Lichen Productivity
- XL286 EGU2012-948  
**E. Rodriguez-Caballero**, P. Escribano, S. Chamizo, and Y. Canton  
Mapping biological soil crusts for understanding their functional relevance in dryland ecosystems
- XL287 EGU2012-931  
**M. Temina**  
Distribution patterns of terricolous and saxicolous lichens in extreme desert conditions
- XL288 EGU2012-3533  
**I. Grishkan**, E. Zaady, and G. Kidron  
Mycobiota of biological soil crusts in the Negev desert, Israel - differences on a regional and local scale
- XL289 EGU2012-416  
**G.J. Kidron**, H.C. Monger, B. Büdel, A. Vonshak, and W. Conrod  
Runoff initiation versus runoff yield: Understanding the complexity of the hydrological effect of biological soil crusts
- XL290 EGU2012-9502  
**N. Bätz**, S.N. Lane, A.J.A.M. Temme, and F. Lang  
Understanding the Fluvial Critical Zone
- XL291 EGU2012-3229  
**A. Cunnings**, E.A. Johnson, and Y.E. Martin  
Riparian seed dispersal: transport and depositional processes
- XL292 EGU2012-2772  
T. Skalski, R. Kedzior, and **A. Radecki-Pawlik**  
The effect of inundation frequency on ground beetle communities in a channelized mountain stream
- XL293 EGU2012-232  
**P. Dieras** and J.A. Constantine  
Is there a pattern to oxbow lake geomorphic evolution?
- XL294 EGU2012-5749  
**A. Popovici**, Gh. Kucsicsa, D. Balteanu, I. Sandric, and M. Micu  
Land-use changes as uncertainties in landslide hazard assessment. An application in Vrancea Seismic Region
- XL295 EGU2012-6948  
**T. Hong**, S.B. Bai, J. Wang, B. Thiebes, and Z.G. Zhang  
Reconstruction of landslide activity by tree-ring analysis - a case study for Jiufangshan landslide, Gansu
- XL296 EGU2012-13248  
**P.M. Saco** and M. Moreno de las Heras  
Coevolution of Semiarid Hillslopes: Ecogeomorphologic Patterns for Varying Biotic and Abiotic Conditions

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#### GM4.7 – Late Quaternary environments and societies: progress in geoarchaeology – Orals

Convener: H. Brückner | Co-Conveners: M. Engel

**Room: 22**

Chairperson: M. Engel & H. Brückner

- 13:30–13:45 EGU2012-9975  
A. Raab, **T. Raab**, M. Takla, A. Nicolay, F. Müller, H. Rösler, and E. Bönisch  
Reconstructing past environments and societies - interdisciplinary research in the open cast mine Jänschwalde, Germany
- 13:45–14:00 EGU2012-1700  
**J. F. Tolksdorf** and K. Kaiser  
Are phases of increased Holocene aeolian dynamics in the North European Plain indicating past human induced soil erosion?
- 14:00–14:15 EGU2012-1  
**M. Ghilardi**, M. Colletu, S. Fachard, D. Psomiadis, F. Demory, D. Delanghe-Sabatier, M. Triantaphyllou, K. Pavlopoulos, and A. Bicket  
Geoarchaeology of Ancient Avlida (Boeotia, Central Greece): a long-term connectivity between human occupation and landscape changes
- 14:15–14:30 EGU2012-3700  
**K. Nicoll**  
Records of urbanism, imperialism, & environmental change in southeastern Turkey
- 14:30–14:45 EGU2012-3827  
**P.C. Fanning**, S.J. Holdaway, J. Shiner, and F. Petchey  
Geoarchaeological approaches to understanding human-environment interactions in Australia's tropical north: the Weipa shell mounds revisited.

14:45–15:00 EGU2012-921

**J. Brancier**, C. Cammas, D. Todisco, and E. Fouache

Precolombian settlements in French Guiana : geoarchaeological approach toward a new understanding of the human impact on landscape.

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**GM6.2/HS9.6/SS5.21 – Connectivity in water and sediment dynamics: how do we move forwards? (co-organized) –**

Orals

Convener: A. Parsons | Co-Conveners: S.D. Keesstra, L. Bracken, J. Wainwright, R. Poepl, D. Dunkerley

**Room: 21**

Chairperson: Parsons/Bracken

08:30–08:45 EGU2012-3521

**M.J. Kirkby**

Do Not Only Connect

08:45–09:00 EGU2012-4463

**LJ Bracken**, G Ali, AG Roy, MW Smith, D Tetzlaff, and J. Wainwright

Hydrological connectivity for catchment management: research approaches, pathways and future agendas

09:00–09:15 EGU2012-9265

**R.E. Poepl**, S.D. Keesstra, S. Fuchs, M. Seeger, R. Bertsch, and T. Glade

Humans as (dis)connecting agents in fluvial systems: a conceptualization with case studies from small to meso-scale catchments

09:15–09:30 EGU2012-5214

**M.-A. Harel**, E. Mouche, and E. Ledoux

1D Runoff-runon stochastic model in the light of queueing theory : heterogeneity and connectivity

09:30–09:45 EGU2012-7441

**L. Chen**, S. Sela, T. Svoray, and S. Assouline

Impact of soil surface sealing on Rainfall-Runoff Processes in semi-arid areas

09:45–10:00 EGU2012-3958

**A. Zimmermann**, B. Zimmermann, and H. Elsenbeer

Connectivity: What is it good for?

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**COFFEE BREAK**

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Chairperson: Keesstra/Dunkerley

10:30–10:45 EGU2012-6347

**C. Soulsby** and D. Tetzlaff

Hydrological connectivity as an evolutionary control for the ecohydrology of montane drainage systems

10:45–11:00 EGU2012-13252

**L. Pfister**, N. Martínez-Carreras, C. Wetzel, L. Ector, J. Frenress, and J.J. McDonnell

Innovative interdisciplinary approaches in catchment hydrology: on the potential for diatoms and thermal infrared imagery for documenting spatio-temporal dynamics and connectivity of saturated areas in the hillslope-riparian zone-stream system

11:00–11:15 EGU2012-13260

**T. Heckmann** and W. Schwanghart

One framework, different approaches: Exploring graph theory for the assessment of sediment connectivity

11:15–11:30 EGU2012-7872

**M. Moreno de las Heras**, P.M. Saco, and G.R. Willgoose

Landscape Degradation in Australian Semiarid Shrublands: Variations in Hydrological Connectivity Indicate Abrupt Changes in Ecosystem Functionality

11:30–11:45 EGU2012-3277

**J. Croke**, C. Thompson, and F. Watson

Spatial patterns of sediment erosion and deposition during an extreme flood event: Data to assess the meaning and interpretation of sediment connectivity in river systems.

11:45–12:00 EGU2012-13765

**B. Wemple**, K. Garvey, L. Morrissey, A. Pechenick, D. Rizzo, and D. Ross

Hydrological connectivity of road and stream networks and implications for material transfer and channel morphology

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**GM7.1 – Quantifying fluvial channel processes - New and innovative multidisciplinary approaches – Orals**

Convener: K.P. Norton | Co-Conveners: JD Jansen, P. Valla, N. Jacob-Rousseau, F. Gob, G. Houbrechts, L. Astrade

**Room: 21**

Chairperson: n.n.

- 13:30–14:00 EGU2012-12721  
**H. Wittmann** and F. von Blanckenburg  
 The geological significance of cosmogenic nuclides in sediment of large lowland basins
- 14:00–14:15 EGU2012-12146  
**K. Hippe**, F. Kober, S. Ivy-Ochs, L. Wacker, P.W. Kubik, and R. Wieler  
 Quantifying sediment storage using combined cosmogenic in situ <sup>14</sup>C-<sup>10</sup>Be-<sup>26</sup>Al analysis
- 14:15–14:30 EGU2012-1820  
**S. Savi**, K. Norton, F. Schlunegger, V. Picotti, F. Brardinoni, N. Akçar, and P.W. Kubik  
 How does sediment mixing affect <sup>10</sup>Be concentrations in alluvial sediments? A case study from a small catchment of the Alps, Zielbach, Alto Adige, Italy
- 14:30–15:00 EGU2012-7106  
**S. Castellort**, L. Goren, S.D. Willett, J.-D. Champagnac, F. Herman, and J. Braun  
 River basins as dynamic markers of crustal deformation
- Chairperson: Pierre Valla, Frederic Gob
- 15:30–15:45 EGU2012-9178  
**O. Korup**, Y. Hayakawa, and T. Oguchi  
 Flipside coupling of bedrock-river sinuosity and slope-failure size
- 15:45–16:00 EGU2012-6886  
**S. Zanardo**, A. Singh, I. Zaliapin, E. Fofoula-Georgiou, and W.E. Dietrich  
 Climatic controls on river network topology
- 16:00–16:15 EGU2012-10611  
**J. Braun**  
 A fast, parallel algorithm to solve the basic fluvial erosion/transport equations
- 16:15–16:30 EGU2012-2466  
**M. Dotterweich**  
 Perception and research of soil erosion by water until the mid-20th century - examples from central Europe and south-eastern USA
- 16:30–16:45 EGU2012-12818  
**A. Hénaff**, B. Van Vliet-Lanoë, and E. Le Cornec  
 Improvement of the knowledge in the historical coastal hazards in Brittany by combining archives and geoindicators
- 16:45–17:00 EGU2012-1528  
**A. Metzger**  
 A historical climatological point: rebuilding the snow fluctuations from narrative sources, in the XVIIth - XVIIIth centuries, in the Netherlands and neighboring regions.

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### GM10.1/PS2.9 – Planetary Geomorphology (co-organized) – Orals

Convener: S. Conway | Co-Conveners: M. Balme, C. Gallagher

**Room: 22**

Chairperson: Susan Conway

- 15:30–15:45 EGU2012-12381  
**J. Head**, J. L. Dickson, J. S. Levy, D. M. H. Baker, and D. R. Marchant  
 Antarctic Dry Valleys: Geological Processes in Hyperarid, Hypothermal Environments and Implications for Water on Mars
- 15:45–16:00 EGU2012-10722  
**E. Hauber**, M. Ulrich, D. Reiss, H. Hiesinger, A. Johnsson, M. Balme, and C. Gallagher  
 Reconstructing the recent climate of Mars: What can we learn from periglacial terrestrial analogues?
- 16:00–16:15 EGU2012-1045  
**G Jouannic**, J Gargani, F Costard, C Marmo, F Schmidt, O Bourgeois, M Massé, and GG Ori  
 Morphological characterization of springtime seasonal activity on the Russell dune (Mars)
- 16:15–16:30 EGU2012-532  
**M. Gourronc**, O. Bourgeois, D. Mège, B. Bultel, and S. Pochat  
 Valles Marineris: a past glaciated valley landsystem along the Martian equator
- 16:30–16:45 EGU2012-219  
**D. G. Blumberg**, Y. August, and S.R. Rotman  
 Measuring geomorphic stability and mobility; Interferometric coherence data as an indicator for aeolian (wind-blown) dune stability

16:45–17:00 EGU2012-11174

**R. A. Craddock**, Z. A. Needell, and T. R. Rose

Characteristics Of Basaltic Sand: Size, Shape, And Composition As A Function Of Transport Process And Distance

**GM10.1/PS2.9 – Planetary Geomorphology (co-organized) – Posters**

Convener: S. Conway | Co-Conveners: M. Balme, C. Gallagher

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

Author in Attendance: 17:30–19:00

Chairperson: Matthew Balme

XL297 EGU2012-285

**A. Barrett**, M.R. Balme, A. Hagermann, and M.R. Patel

A Periglacial Landscape in Acidalia Planitia, Mars?

XL298 EGU2012-1047

**A. Séjourné**, F. Costard, J. Gargani, and C. Marmo

Formation and evolution of periglacial landforms in context of global warming: Comparison Earth-Mars

XL299 EGU2012-1242

R.J. Soare, **S.J. Conway**, and J.M. Dohm

Putative crater-floor pingos, paleolakes and periglacial landscapes in north Utopia Planitia, Mars.

XL300 EGU2012-9187

**S.J. Conway**, N. Mangold, M.R. Balme, and V. Ansan

The Morphologic Difference between Crater Slopes with and without Gullies on Mars.

XL301 EGU2012-11720

**J. Gargani**, G. Jouannic, F. Costard, G.G. Ori, C. Marmo, F. Schmidt, A. Lucas, and J. Busson

How much liquid water was there on Martian dunes?

XL302 EGU2012-5844

**C. Gallagher** and M.R. Balme

Evidence of stratabound liquefaction in the formation of fractured topographic margins, cone chains and pit catenas along the Martian Dichotomy Boundary and in Isidis Planitia, Mars.

XL303 EGU2012-10062

**M.R. Balme** and C. Gallagher

Decametre scale, spiral-shaped landforms in Elysium Planitia, Mars

XL304 EGU2012-325

**D Baioni** and M Sgavetti

Karst terrains in northern Sinus Meridiani, Mars.

XL305 EGU2012-326

**D Baioni**, M Sgavetti, G Tampella, and F C Wezel

Lithostratigraphical analysis in northern Sinus Meridiani, Mars.

XL306 EGU2012-10454

**C. Quantin**, N. Mangold, E. Haubert, J. Flahaut, L. Le Deit, F. Fueten, A Rossi, and H. Clenet

Age and erosion rates of sulfate-rich Interior Layered Deposits of Valles Marineris

XL307 EGU2012-1890

**D.W.T. Jackson**, T. Smyth, and M. Bourke

Airflow modelling over aeolian bedforms, Proctor Crater, Mars

XL308 EGU2012-3416

**D. G. Blumberg**

Radar observation of Venus' terrestrial analogues using TecSAR X-band SAR

XL309 EGU2012-1505

**N. Mangold**, D. Baratoux, O. Arnalds, J.-M. Bardintzeff, B. Platevoet, M. Gregoire, and P. Pinet

Segregation of olivine grains in volcanic sands in Iceland and implications for mineralogy on Mars

XL310 EGU2012-10075

**Dm.V. Uchaev**, V.A. Malinnikov, D.V. Uchaev, and J. Oberst

A Multifractal Approach to the Analysis of Size-Frequency Distributions of Craters on Planetary Bodies

XL311 EGU2012-13584

**B. Székely**, P. Dorninger, Zs. Koma, J. Jansa, G. Kovács, and C. Nothegger

Feasibility analysis and residual evaluation of automated planar segmentation results of large-scale Martian surface structures

XL312 EGU2012-4305

**W Poole**, J-P Muller, and S Gupta

On the calibration of Mars Orbiter Laser Altimeter surface roughness estimates using high-resolution DTMs

**ML12 – Ralph Alger Bagnold Medal Lecture by Gregory E. Tucker (co-listed) – Orals**

Convener: A. Lang

**Room: 6**

Chairperson: n.n.

- 19:00–20:00 EGU2012-14445  
**G.E. Tucker**  
 Hillslope, river, and Mountain: some surprises in Landscape evolution (Ralph Alger Bagnold Medal Lecture)

**SSS13.3 – Modeling the experiment, experimenting the models - combining rain and wind to soil erosion (co-listed) –**

Orals

Convener: Dr. Seeger | Co-Conveners: T. Iserloh, M. Basaran, A. Cerdà, C. Geißler, G. Erpul, W. Fister, D. Gabriels, N. J. Kuhn, J. L. M. P. de Lima, J. Ries

**Room: 3**

Chairperson: Manuel Seeger

- 08:30–08:45 EGU2012-9657  
**P. Ashmore**, S. Bennett, and C. McKenna-Neuman  
 Laboratory and experimental geomorphology: examples from fluvial and aeolian systems
- 08:45–09:00 EGU2012-5786  
**M. Housais** and E. Lajeunesse  
 Experimental investigation of the influence of the sediment size distribution on bedload transport
- 09:00–09:15 EGU2012-13866  
**J.B. Ries** and T. Iserloh  
 Rainfall Simulation: methods, research questions and challenges
- 09:15–09:30 EGU2012-3188  
**T. Iserloh** and J.B. Ries  
 Experiments for comparison of small scale rainfall simulators
- 09:30–09:45 EGU2012-3656  
**J.L.M.P. de Lima**, J.M.G.P. Isidoro, V.P. Singh, and M.I.P. de Lima  
 A study of the effect of moving storms on hillslope hydrology using laboratory experiments
- 09:45–10:00 EGU2012-4259  
**E. Long**, G.K. Hargrave, J.R. Cooper, B. Kitchener, A.J. Parsons, and J. Wainwright  
 New insights into the mechanisms of splash erosion using high speed, three dimensional, particle tracking velocimetry

**COFFEE BREAK**

Chairperson: Thomas Iserloh

- 10:30–10:45 EGU2012-1912  
**P. Kinnell**  
 Erosion mechanisms in rain impacted flows and their effects and interactions
- 10:45–11:00 EGU2012-3995  
**R. Giménez**, M.A. Campo, M. González-Audicana, J. Álvarez-Mozos, and J. Casali  
 Water depression storage under different tillage conditions: measuring and modelling
- 11:00–11:15 EGU2012-2183  
**J.M.G.P. Isidoro**, J.L.M.P. de Lima, and J. Leandro  
 Evaluating the influence of rooftop connectivity on the rainfall-runoff processes by means of (wind-driven) rainfall simulation.
- 11:15–11:30 EGU2012-2393  
 J. Schmidt and **M. von Werner**  
 Impact of wind direction and speed on the spatial distribution of soil loss on catchment scale
- 11:30–11:45 EGU2012-7712  
**H. Samray**, G. Erpul, D. Gabriels, and W.M. Cornelis  
 The Effects of Wind Driven Rain Vectors on the Stream Power of Thin Flow
- 11:45–12:00 EGU2012-1196  
**M. Dietze** and A. Kleber  
 Environmental significance of vesicular sediment structure in arid regions

**SSS13.3 – Modeling the experiment, experimenting the models - combining rain and wind to soil erosion (co-listed) –**

Posters

Convener: Dr. Seeger | Co-Conveners: T. Iserloh, M. Basaran, A. Cerdà, C. Geißler, G. Erpul, W. Fister, D. Gabriels, N.

J. Kuhn, J. L. M. P. de Lima, J. Ries

**Hall Z | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Christian Geißler

- Z157 EGU2012-12476  
**K. Gerke**, B. Gartsman, A. Bugayets, and D. Korost  
Solute flow in extremely stony forest soil: case study in Russian Far East
- Z158 EGU2012-9206  
**H. Hikel**, A. Yair, N.J. Kuhn, W. Schwanghart, and U. Hoffmann  
experimental investigation of soil ecohydrology on rocky desert slopes in the Negev Highlands, Israel
- Z159 EGU2012-1373  
**L. Antronico**, O. Terranova, and D. Torri  
Investigation on sediment erosion and water runoff by means of simulated rainfall in Calabria (southern Italy)
- Z160 EGU2012-9966  
T. Lassu and **M. Seeger**  
Set-up and calibration of an indoor nozzle-type rainfall simulator for soil erosion studies
- Z161 EGU2012-2139  
**J.M.G.P. Isidoro** and J.L.M.P. de Lima  
Exact solution of the linear KWE for 1D overland flow under moving rainstorms.
- Z162 EGU2012-12574  
**W. Fister** and N.J. Kuhn  
A pressure nozzle inventory for rainfall simulations in soil erosion research
- Z163 EGU2012-12676  
**W. Fister**, N.J. Kuhn, N. Itin, S. Tesch, G. Heckrath, and J.B. Ries  
Soil erosion rates by wind-driven rain from a sandy soil in Denmark
- Z164 EGU2012-13798  
**A. Dr. habil. Farsang**, M. Bartus, G. Négyesi, K. Barta, and J. Szatmári  
Estimation of nutrient movement caused by wind erosion on chernozems based on wind channel experiments
- Z165 EGU2012-13859  
**A. Cerdà**, C. Azorin-Molina, and Th. Iserloh  
Wind, rain and soil erosion rates on bare and plant covered agriculture plots at the experimental station of El Teularet -Sierra de Enguera, Eastern Spain
- Z166 EGU2012-6246  
**M. Marzen**, T. Iserloh, M. Seeger, and J.B. Ries  
Quantification of Splash and Splash-Saltation
- Z167 EGU2012-7865  
S. Deviren Saygin and **G. Erpul**  
Interactive assessment of the splash erosion and aggregate breakdown mechanism for the soils of different semi-arid land uses
- Z168 EGU2012-14348  
**S. Ahn**, S. Doerr, P. Douglas, R. Bryant, C. Hamlett, G. McHale, M. Newton, and N Shirtcliffe  
High-Speed Video for Investigating Splash Erosion Behaviour: Obtaining Initial Velocity and Angle of Ejections by Tracking Trajectories.
- Z169 EGU2012-14350  
**C. A. E. Hamlett**, N. J. Shirtcliffe, G. McHale, S. Ahn, S. H. Doerr, R. Bryant, and M. I. Newton  
Velocity dependant splash behaviour
- Z170 EGU2012-11179  
**J. León**, M. Seeger, M. Echeverría, D. Badía, and P. Peters  
The effect of the fires on gypseous soil properties: changes of the hydrology and splash resistance.
- Z171 EGU2012-5107  
**S. Jomaa**, D.A. Barry, A. Brovelli, B.C.P. Heng, G.C. Sander, and J.-Y. Parlange  
Soil erosion and effluent particle size distribution under different initial conditions and rock fragment coverage
- Z172 EGU2012-1428  
**N. Goldshleger**  
Using remote sensing method (spectral measurements) for Assessing infiltration rate (IR) induced by structural crust
- Z173 EGU2012-5284  
**J. Swiechowicz**  
Rainfall thresholds for soil supply to stream channel in agricultural catchments
- Z174 EGU2012-13024  
A. U. Ozcan, **U Oguzhan**, S. Saygı Deviren, A.N. Gharahassanlou, F. Youssef, M. Basaran, and G. Erpul  
Assessing the effects of the vegetation pattern and topography on the wind-driven sediment flux by GIS and Geostatistics

- Z175 EGU2012-4430  
**J.A. Gomez**, E. Taguas, and F. Licciardello  
Hydrological response of a Mediterranean agricultural catchment on a Vertic soil
- Z176 EGU2012-4518  
**J.A Gomez**, EV. Taguas, R. Pérez, and J.L. Ayuso  
Carbon losses by water erosion in two small agricultural Mediterranean catchments.
- Z177 EGU2012-10780  
**E.V. Taguas**, M.D. Redel, and J.A. Gómez  
Modelling soil erosion using artificial neural networks in an olive orchard microcatchment in Spain
- Z178 EGU2012-8713  
**T. Dvorakova**, T. Dostal, V. David, P. Kavka, J. Krasa, and P. Koudelka  
Methodology of C factor verification in conditions of the Czech Republic
- Z179 EGU2012-5453  
**G. Bussi**, X. Rodríguez, F. Francés, G. Benito, Y. Sánchez-Moya, and A Sopeña  
Reconstruction of the sediment flow regime in a semi-arid Mediterranean catchment using check dam sediment information.
- Z180 EGU2012-9828  
**T. Maurer**, R. Bartsch, A. Schneider, and H.H. Gerke  
Modeling the initial 3D distribution of sediment structures of an artificial hydrological catchment
- Z181 EGU2012-2323  
**H. Hölzel**, B. Diekkrüger, D. Biemelt, and A. Gädeke  
Simulation of hydrological impact of dumped sediment structures in the artificial Chicken Creek catchment, Germany
- Z182 EGU2012-7826  
**H. Holländer**, D. Schoenheinz, and S. Stadler  
Well-controlled experimentation in artificial catchments as the key to better understand natural hydrologic systems?
- Z183 EGU2012-13009  
**V. D'Agostino**, G. Bertoldi, and E. Rigon  
On the measure of large woody debris in an alpine catchment
- Z184 EGU2012-13007  
**T. Vezmar**, M. Kasanin-Grubin, N.J. Kuhn, and D. Milovanovic  
Comparison of rate of physical and chemical decomposition of rocks in weathering by wetting-drying and wetting-freezing-drying cycles

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### TS1.1 – Open Session: Tectonics and Structural Geology (co-listed) – Posters

Convener: F. Storti | Co-Conveners: S. Buiter

**Hall A | Display Time 08:00–19:30**

Author in Attendance: 17:30–19:00

Chairperson: Fabrizio Storti and Susanne Buiter

- A413 EGU2012-2078  
**I.D. Bastow**, R.S.M. De Plaen, and R.J. Gallacher  
The Nature of the Cameroon Volcanic Line: Evidence from Seismic Anisotropy and Receiver Functions
- A414 EGU2012-5053  
**H. Otsuka**, J. Ashi, S. Morita, and M. Tanahashi  
Attempt to estimate uplift process of outer ridge taking account of distribution and geometry of Foldback Reflectors
- A415 EGU2012-9801  
**C.-Y. Hsieh**, K.-M. Yang, and B.-I. Chuang  
Trishear model and kinematics of a fault-related structure in the frontal part of Fault-and-thrust belt, NW Taiwan
- A416 EGU2012-2555  
**Y.T. Lo** and H.Y. Yen  
Gravity data inversion for 3D topography of the Moho discontinuity by separation of sources in Taiwan region
- A417 EGU2012-8177  
**K.-M. Yang**, J.-C. Wu, E.-W. Cheng, Y.-R. Chen, W.-C. Huang, C.-C. Tsai, J.-B. Wang, and H.-H. Ting  
Development of Tectonostratigraphy in Distal Part of Foreland Basin in Southwestern Taiwan
- A418 EGU2012-492  
**J. Ukass**, T. Saks, and K. Popovs  
Thickness Reconstruction of Layers by 3D Geometrical Model to Characterize Caledonian Tectonic Complex and Data in Latvia
- A419 EGU2012-4846  
**H. Kranis**, E. Skourtsos, L. Gouliotis, and S. Lozios  
Structural Setting and Upper Quaternary landscape evolution at Delphi, Central Greece

- A420 EGU2012-5032  
**J. Scheibz**, H. Haeusler, F. Kohlbeck, W. Chwatal, and C. Koenig  
High resolution geophysics reveal a new Neogene basin southeast of the Leitha Mountains - The Winden Syncline (Burgenland, Austria)
- A421 EGU2012-5201  
**H. Häusler**  
Contribution to the discussion of folded Pannonian strata in the Southern Vienna Basin
- A422 EGU2012-2623  
**J. E. Reber**, O. Galland, M. Dabrowski, D. W. Schmid, and P. R. Cobbold  
On the usefulness of sheath folds as kinematic indicators
- A423 EGU2012-5359  
**L. Rodriguez**, J. Cuevas, and J. M. Tubía  
Paleozoic-involving thrust array in the central Sierras Interiores (South Pyrenean Zone, Central Pyrenees): regional implications
- A424 EGU2012-5422  
**L. Rodriguez**, J. Cuevas, and J. M. Tubía  
Structure of the Anayet Permian basin (Axial Zone, Central Pyrenees)
- A425 EGU2012-8223  
**C. García-Lasanta**, B. Oliva-Urcia, T. Román-Berdiel, A. Casas-Sainz, I. Gil-Peña, Y. Sánchez-Moya, and A. Sopeña  
Tectonically controlled magnetic fabrics in the Iberian Triassic basin
- A426 EGU2012-10979  
**M.R. Barchi**, G. Lena, W. Alvarez, F. Felici, and A. Lupattelli  
Mesoscopic S-C fabrics in shallow fault zones: a case history from the Umbria-Marche Apennines (Central Italy)
- A427 EGU2012-11423  
**F. Bucci**, R. Novellino, I. Adurno, E. Gueguen, F. Guzzetti, M. Cardinali, E. Tavarnelli, P. Guglielmi, and G. Prosser  
Low Angle Extensional Faults in a Thrusting/Compressive Regime
- A428 EGU2012-7977  
L. Gonzalez and **O.A. Pfiffner**  
The Central Andes of Peru: Structure and Evolution
- A429 EGU2012-10923  
**J.M. Tubía**, F.D. Hongn, A. Aranguren, and N. Vegas  
Inversion tectonics in the pre-andean basement of the Sierra de Cachi (Salta, Argentina)
- A430 EGU2012-4811  
**O. Bolle**, H. Diot, J. Bascou, and B. Charlier  
Anisotropy of magnetic susceptibility in the giant Lac Tio hemo-ilmenite ore body (Quebec Province, Canada): source and geological implications
- A431 EGU2012-10272  
**T. Torvela**, J. Moreau, R.W.H. Butler, A. Korja, and P. Heikkinen  
Toward detailed structural analysis of seismic reflection data from crystalline basement: the seismic attribute approach
- A432 EGU2012-3518  
**G. Berberich**, D. Klimetzek, C. Wöhler, and A. Grumpe  
Statistical Correlation between Red Wood Ant Sites and Neotectonic Strike-Slip Faults
- A433 EGU2012-9123  
**D. Herwartz**, T.J. Nagel, S. Sandmann, A. Vitale Brovarone, S. Rexroth, Y. Rojas-Agramonte, N. Froitzheim, A. Kröner, S.G. Skublov, and C. Münker  
Traditional applications and novel approaches in Lu-Hf geochronology
- A434 EGU2012-11615  
**M. Leitner**, S. Tschürtz, G. Kirchengast, H. Kranzelbinder, B. Prügger, R.A. Krause, M. Kalliokoski, and E. Thórhallsdóttir  
Greenland Expeditions by Alfred Wegener - A photographic window to past



## Friday, 27 April

**GM2.1 – High definition topography - data acquisition, modelling, interpretation – Orals**

Convener: D. Rieke-Zapp | Co-Conveners: A. Reiterer, J. Chandler, D. Vericat, N. Tate, D. M. Powell, J. Brasington, I. Marzloff

**Room: 22**

Chairperson: J. Brasington

- 08:30–08:45 EGU2012-10924  
**S. Van-Wierts** and P. Bernatchez  
Use of a mobile terrestrial laser system to quantify the impact of rigid coastal protective structures on sandy beaches, Quebec, Canada
- 08:45–09:00 EGU2012-2730  
**D. M. Powell** and D Ackerley  
Characterising the roughness properties of alluvial river banks using terrestrial laser scanning.
- 09:00–09:15 EGU2012-8878  
**J.M. Nield**, G.F.S. Wiggs, J. Leyland, S.E. Darby, J. King, F.D. Eckardt, R.C. Chiverrell, L.H. Vircavs, and B. Jacobs  
Quantifying small-scale temporal surface change on glaciers and salt pans using terrestrial laser scanning: implications for modelling ablation and dust emission
- 09:15–09:30 EGU2012-11944  
**C. Fey**, C. Zangerl, F. Haas, M. Rutzinger, R. Sailer, and M. Bremer  
Rock slide deformation measurements with Terrestrial Laser Scanning in inaccessible high mountain areas
- 09:30–09:45 EGU2012-12284  
**H. Croft**  
Soil surface microtopography from close-range laser data and hyperspectral directional reflectance factors
- 09:45–10:00 EGU2012-13139  
**S. Filin**, R. Arav, A. Mushkin, and O. Katz  
Monitoring coastal-cliff erosion processes using a novel change detection methodology for high-resolution terrestrial laser scanner data

**COFFEE BREAK**

Chairperson: D. Rieke-Zapp

- 10:30–10:45 EGU2012-4368  
N. Brodu and **D. Lague**  
3D point cloud classification of complex natural scenes using a multi-scale dimensionality criterion: applications in geomorphology
- 10:45–11:00 EGU2012-10317  
**C. Castagnetti**, E. Bertacchini, A. Capra, and A. Corsini  
Critical aspects of integrated monitoring systems for landslides risk management: strategies for a reliable approach
- 11:00–11:15 EGU2012-3775  
**J. Müller**, I. Gärtner-Roer, G. Menz, C. Ginzler, and P. Thee  
How accurate can we be? - An evaluation of airborne digital elevation models in a high mountain environment
- 11:15–11:30 EGU2012-911  
**S. d'Oleire-Oltmanns** and I. Marzloff  
UAV derived data for the monitoring of gully erosion in the Souss Basin, Morocco
- 11:30–11:45 EGU2012-12606  
**P. Allemand**, C. Delacourt, A. Deschamps, A. Quiquerez, P. Grandjean, J. Ammann, G. Ori, F. Cannarsa, R. Sabbadini, I. Dell'Archiprete, and D. Gasperini  
Drelia : an photogrammetric UAV for geomorphology
- 11:45–12:00 EGU2012-4550  
**M. R. James** and S. Robson  
The accuracy of photo-based structure-from-motion DEMs

**GM2.2 – Digital Landscapes: Quantitative Interrogation and Use to Examine Geomorphic Processes – Orals**

Convener: J. K. Hillier | Co-Conveners: P. Tarolli, P. Passalacqua, D.C. Mason, S. Conway

**Room: 22**

Chairperson: Paolo Tarolli

- 13:30–13:45 EGU2012-13881  
**A. B. Watts** and the SONNE 215 Shipboard Scientific Party  
 Repeat swath bathymetry surveys and the rates of growth and collapse of active submarine volcanoes
- 13:45–14:00 EGU2012-6079  
**Q. Li** and S. Dehler  
 Identify Foot of Continental Slope by singular spectrum and fractal singularity analysis
- 14:00–14:15 EGU2012-10599  
**M. D. Hurst**, S. M. Mudd, and M. Attal  
 Hysteresis in transient landscape topography recorded by hillslopes.
- 14:15–14:30 EGU2012-7207  
**G. Bertoldi**, M. Reginato, and V. D'Agostino  
 Merging field survey and LiDAR technology for the analysis of debris-flow erosion
- 14:30–14:45 EGU2012-9898  
**R. Bell** and H. Petschko  
 Landslide persistence and human impact in Lower Austria assessed by lidar data and aerial photography
- 14:45–15:00 EGU2012-10318  
**R. Rivola**, E. Bertacchini, C. Castagnetti, A. Capra, A. Corsini, F. Ronchetti, and F. Bonacini  
 GB-InSAR 3D maps for deformation monitoring: the importance of the digital surface models in data georeferencing and interpretation

Chairperson: John Hillier

- 15:30–15:45 EGU2012-6988  
**F. Shahzad** and T. A. Ehlers  
 Quantification of glacial and ground surface velocities from repeat terrestrial LiDAR scans
- 15:45–16:00 EGU2012-11024  
**M.J. Westoby**, J. Brasington, N.F. Glasser, M.J. Hambrey, and J.M. Reynolds  
 Close-range photogrammetric reconstruction of moraine dam failures
- 16:00–16:15 EGU2012-13302  
**C. Eisank**, L. Dr?gu?, and T. Blaschke  
 Object-based mapping of drumlins from DTMs
- 16:15–16:30 EGU2012-7816  
**J.R. Ford**, B. Napier, P.R. Wilby, A.H. Cooper, A.J.M. Barron, and L.B. Bateson  
 The central role of digital landscapes in virtual field reconnaissance for geological surveying
- 16:30–16:45 EGU2012-9258  
**S. J. Conway**, M. R. Balme, and P. M. Grindrod  
 Using Topographic Derivatives of High Resolution Data on Earth and Mars to Determine Active Processes on Mars.
- 16:45–17:00 EGU2012-11180  
**S. Ferrari**, M. Massironi, R. Pozzobon, A. Castelluccio, G. Di Achille, and G. Cremonese  
 DTM analysis and displacement estimates of a major mercurian lobate scarp.

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#### **TS4.3/GD3.9/GM3.1 – Orogen-scale coupling between tectonics, erosion and climate (co-organized) – Posters**

Convener: F. Mouthereau | Co-Conveners: Dr. Garcia-Castellanos, P.A. van der Beek, F. Herman, J.-D. Champagnac, P. Valla

**Hall A | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: P. Valla

- A452 EGU2012-1348  
**M. Boese** and D. Wenske  
 Late Pleistocene to Holocene geomorphological processes in the high mountains of Taiwan
- A453 EGU2012-1410  
**M. Dürst Stucki**, F. Schlunegger, F. Christener, J.-C. Otto, and J. Götz  
 Deepening of inner gorges through subglacial meltwater — An example from the UNESCO Entlebuch area, Switzerland
- A454 EGU2012-2253  
**D. Grabowski**, E. Enkelmann, and T. A. Ehlers  
 Quantifying the spatial distribution of rapid exhumation from glacial detritus, St. Elias Range (Alaska)
- A455 EGU2012-2427  
**G. Hanke**, A. Oswald, and K. Stuewe  
 U-He dating of the highest peak of Sinai: Mt Catherine, Egypt

- A456 EGU2012-2906  
**S. Falkowski**, E. Enkelmann, and T. A. Ehlers  
Exhumation of the northwestern Fairweather Range, southeast Alaska
- A457 EGU2012-3520  
**S.-H. Wang**, C.-P. Chang, J.-H. Hung, and C.-C. Kang  
Insights into active structures of the southeastern Central Range in Taiwan: Implications from geomorphic analyses
- A458 EGU2012-3625  
**R.R. Makshaev** and A.A. Svitoch  
Neotectonics of the Manych Trough
- A459 EGU2012-4358  
**D. Huyghe**, F. Mouthereau, and L. Emmanuel  
Oxygen isotope of mollusc shells record a middle Eocene elevation change in the Pyrenees
- A460 EGU2012-4566  
**C.-C. Kang**, L.L. Siame, C.-C. Chang, D.L. Bourlès, and L. Léanni  
Tectonic activity of the Eastern Central Range front in Taiwan: Perspective from in situ cosmogenic <sup>10</sup>Be
- A461 EGU2012-6551  
P.-Y. Filleaudeau, **F. Mouthereau**, O. Lacombe, R. Pik, and M.G. Fellin  
The role of rift inheritance during Cenozoic mountain building of the central Pyrenees and geodynamic implications
- A462 EGU2012-7474  
**A. Oswald** and K. Stüwe  
Geomorphology in a Rifting Environment. Can Channel Profiles from Arid Sinai, Egypt, Provide Constraints on Tectonics?
- A463 EGU2012-8329  
**J.-D. Champagnac**, P. Sternai, F. Herman, B. Guralnik, and F. Beaud  
Fracture density as a controlling factor of postglacial fluvial incision rate, Granite Range, Alaska.
- A464 EGU2012-9009  
**S. Nagel**, M. G. Fellin, S. Castelltort, S. D. Willett, F. Mouthereau, and A. T. Lin  
Provenance evolution of the Western foreland basin and its relationship to the exhumation of source rocks during arc-continent collision
- A465 EGU2012-11051  
E. Kali, **J. van der Woerd**, J. Liu-Zeng, M. LeBéon, P.-H. Leloup, G. Mahéo, P. Tapponnier, and R. Thuzat  
Active normal faults and river damming: the importance of tectonics and climate in shaping the landscape of the southern Tibetan plateau
- A466 EGU2012-12290  
A. Carracedo, **R. Beucher**, C. Persano, J. Jansen, A. Codilean, T. Hoey, and P. Bishop  
Quantifying active tectonic processes in orogenic belts from river analysis of the Sierra Nevada (Spain)
- A467 EGU2012-13220  
**A. Coudurier Curveur**, R. Armijo, and R. Lacassin  
The northern Chile coastal morphology: an interplay between recent tectonic uplift of the west andean margin and precipitation gradient
- A468 EGU2012-9885  
**J.L. Mugnier**, C. Godon, J.F. Buoncristiani, J.L. Paquette, and E. Trouvé  
Present-day subglacial erosion efficiency inferred from sources and transport of glacial clasts in the North face of Mont Blanc
- A469 EGU2012-4476  
**C. Thieulot**, P. Steer, and R.S. Huismans  
Three-dimensional numerical simulations of crustal systems subjected to convergence and to surface processes
- A470 EGU2012-7540  
**J. Liu**, L. Wen, M. Oskin, and L. Zeng  
Focused modern denudation of the Longmen Shan margin of the eastern Tibetan plateau
- A471 EGU2012-12629  
D. L. Egholm and **M. F. Knudsen**  
Fluvial bedrock erosion by sediment in suspension couples hillslope processes and channel evolution
- A472 EGU2012-4366  
**J. Babault**, J. Van Den Driessche, and A. Teixell  
Longitudinal to transverse drainage network evolution in the High Atlas (Morocco)
- A473 EGU2012-9843  
**B. Salcher**, F. Kober, E. Kissling, and S. Willett  
Glacial conditioning and postglacial erosion of the Central Alps - patterns and magnitude
- A474 EGU2012-12157  
**T. F. Schildgen**, D. Cosentino, B. Bookhagen, H. Echtler, B. Rojay, M.R. Strecker, and C. Yildirim  
Uplift of the southern margin of the Central Anatolian Plateau (Turkey): A record of tectonic and upper mantle processes

**TS4.1/GM3.5/SSP3.4 – Tectonics, sedimentation and surface processes: from the erosional engine to basin deposition (sponsored by IAS) (co-organized) – Posters**

Convener: A. Whittaker | Co-Conveners: S. Castelltort, L. Kirstein, J. Vergés

**Hall A | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: n.n.

- A426 EGU2012-4641  
**A. Beckers**, B. Bovy, and A. Demoulin  
 Factors of knickpoint migration on the moderately uplifted Ardennes Plateau, Western Europe
- A427 EGU2012-4732  
**A. Demoulin**, A. Beckers, G. Rixhon, R. Braucher, D. Bourlès, and L. Siame  
 A refined model of Quaternary valley downcutting emphasizing the interplay between tectonically triggered regressive erosion and climatic cyclicity
- A428 EGU2012-11198  
**E. Karymbalis**, M. Ferentinou, K. Gaki-Papanastassiou, D. Papanastassiou, and H. Maroukian  
 Late Quaternary stream incision rates due to tectonic uplift in North Peloponnese, Greece
- A429 EGU2012-11826  
**F. Giaconia**, G. Booth-Rea, J.M. Martínez-Martínez, V. Pérez-Peña, and J.M. Azañón  
 Geomorphic analysis of the Sierra Cabrera, an active pop-up in the constriction domain of conjugate strike-slip faults: the Palomares and Polopos fault zones (eastern Betics, SE Spain)
- A430 EGU2012-12654  
 J.M. Azañón, V. Pérez-Peña, **F. Giaconia**, G. Booth, M.J. Rodríguez-Peces, and C. Ureña  
 Uplift and active folding in the western sector of Sierra Nevada (Betic Cordillera, SE Spain).
- A431 EGU2012-11883  
**F. Giaconia**, G. Booth-Rea, J.M. Martínez-Martínez, J.M. Azañón, and I. Villegas  
 Fault segment linkage and growth of the Polopos transpressive fault zone and its influence on Pleistocene drainage captures (southeastern Betics).
- A432 EGU2012-11819  
**D. Gioia**, M. Moretti, S. Gallicchio, and M. Schiattarella  
 Morphometric analysis of drainage network in the northern sector of the southern Italian foredeep: implications for fluvial denudation processes and Late Quaternary geomorphological evolution
- A433 EGU2012-4814  
**A. Whittaker**, S. Erhardt, A. Norori-McCormac, and F. Knight  
 Quantifying the controls on grain size export from tectonically perturbed catchments: Case studies from Sicily, Calabria and Abruzzo, Italy
- A434 EGU2012-7786  
**F. Mirabella**, M. Menichelli, F. Pazzaglia, S. Pucci, L. Melelli, L. Saccucci, and M.R. Barchi  
 Tectonic control on extensional basins infill and on rivers incision. Examples from the Northern Apennines of Italy
- A435 EGU2012-6966  
 T. Salles, **G. Duclaux**, J. Mansour, P. Rey, and L. Moresi  
 Testing basin-scale evolution concepts on a supercomputer at realistic tectonic and sedimentary rates
- A436 EGU2012-2733  
**M. Collignon**, B. Kaus, M. Frehner, S. Castelltort, G. Simpson, and J.P. Burg  
 Modeling interactions between tectonics and surface processes in the Zagros Mountains, Iran
- A437 EGU2012-9466  
**G. Zeilinger**, P. Ballato, M. R. Ghassemi, G. Heidarzadeh, H. R. Javadi, and M. Baghernejad  
 Structural evolution and internal deformation of the Turkish-Iranian Plateau in northwestern Iran
- A438 EGU2012-3394  
**A. Bande**, E.R. Sobel, A. Mikolaichuk, and R. Teslyuk  
 Deciphering intracontinental basin evolution: the Fergana depression example.
- A439 EGU2012-4464  
**S.-Y. Huang**, Y.-G. Chen, T.-K. Liu, C.-H. Lo, G. Yin, and Z. Cao  
 Distributed unroofing history in the central and eastern Lhasa Terrane: revealed by multiple thermochronometers on detrital samples
- A440 EGU2012-13553  
**P. Štřpančíková**, M. Danišík, and N. J. Evans  
 Thermochronological record of long term faulting, burial and exhumation history in the Sudetes (Bohemian Massif, Central Europe): a multi-system thermochronological approach
- A441 EGU2012-11351  
**F.U. Bauer**, S. Roller, R.W. Grobe, U.A. Glasmacher, M. Hinderer, U. Ring, and V.S. Mambo  
 Constraining the thermal and erosional evolution of the Rwenzori Mtns, Albertine Rift, by detrital thermochronology

- A442 EGU2012-394  
**N. B. Palacios García** and M. Martini  
Provenance changes for sandstones from the Sierra de los Cuarzos (central Mexico): the possible record of a terrane accretion
- A443 EGU2012-8022  
**M. Genti**, J. Malavieille, G. Molli, S. Dominguez, A. Taboada, and A. Vitale-Brovarone  
Development of tectono-sedimentary mélanges in accretionary wedges: Insights from analog modeling
- A444 EGU2012-13452  
**L. Mocochain**, G. Clauzon, J. Robinet, C. Blanpied, J.P. Suc, C. Gorini, A. Al Abdalla, and F. Azki  
Messinian Erosional Surface in the Levantin margins: geodynamic implications.
- A445 EGU2012-4291  
C. Bonnel, **D. Huyghe**, B. Nivière, G. Messenger, D. Dhont, B. Fasentieux, Y. Hervouët, and J-P. Xavier  
Characterisation of the sedimentary processes responsible for the filling and excavation of two intra mountainous basins (Agua Amarga and Collon Cura) in the Andes of Neuquén (Argentina) during the Neogene
- A446 EGU2012-12694  
**S. Mollieux**, M. Rabineau, E. Leroux, D. Aslanian, F. Chauvet, D. Bourlès, S. Révillon, and G. Jouët  
Geomorphological feedback between watershed erosion and marine sedimentation in the Gulf of Lion margin (SE France).
- A447 EGU2012-8680  
**J. F. Lee**, C.S. Liu, H.H. Hsu, S.C. Chen, and S.H. Chung  
Mapping Geological Features in a 3D Seismic Volume for Gas Hydrate Investigation Offshore Southwestern Taiwan
- A448 EGU2012-10088  
**J.J. Ni**, C.S. Liu, and S.C. Chen  
Sedimentary Processes of a Slope Ridge on the Northern South China Sea Continental Slope
- A449 EGU2012-727  
**M. A. Islam**  
Depositional Environment of Neogene Reservoir Succession of Bengal Basin, Bangladesh constrain from lithofacies and electrofacies analysis
- A450 EGU2012-2376  
**V. Schuller** and U. Herzog  
In-Sequence /Out-Of-Sequence Thrusting - Governing Processes and Implications: an Example from the Subalpine Molasse Basin
- A451 EGU2012-3123  
**H. Ortner**, A. Kositz, E. Willingshofer, and D. Sokoutis  
Fault-related progressive unconformities: Growth strata of the transpressive Northern Calcareous Alps (NCA) fold belt (Austria) in field and analogue model

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**GD3.1/GM3.7/SM4.4/TS1.6 – Plate kinematics, mantle convection, paleogeography and sea level (co-organized) –**

Orals

Convener: R. D. Müller | Co-Conveners: H.-P. Bunge, J. Golonka, M. Seton, S. Brune, L. Quevedo, G. Helffrich, G. Laske, Y. Ricard

**Room: 30**

Chairperson: n.n.

- 08:30–08:45 EGU2012-9803  
**J. Braun**, R. Moucha, A. M. Forte, A. B. G. Bush, D. B. Rowley, N. Insel, F. Guillocheau, S. Robin, and D. Rouby  
The Topographic evolution of the African continent, constraints from coupling deep mantle, climate and surface processes models
- 08:45–09:00 EGU2012-7986  
**R. D. Müller**, N. Flament, and M. Gurnis  
The scale and time dependence of surface dynamic topography over the last 200 million years in the Atlantic and Indian ocean domains
- 09:00–09:15 EGU2012-1087  
**J.D. Paul**, G.G. Roberts, and N. White  
Temporal and Spatial Evolution of Dynamic Support From River Profiles: A Framework for Madagascar and Africa
- 09:15–09:30 EGU2012-7936  
**X. Robert**, P. Reiners, K.X. Whipple, R. Moucha, and A. Forte  
Dynamic uplift and erosion history of the Colorado Plateau: New insights from a SW-NE thermochronologic transect

- 09:30–09:45 EGU2012-11867  
**K. Czarnota**, M. J. Hoggard, N. White, and J. Winterbourne  
 Linking Observations of Dynamic Topography from Oceanic and Continental Realms around Australia
- 09:45–10:00 EGU2012-4578  
 E. Artyushkov and **P. Chekhovich**  
 Rapid paleodepth changes in epeiric Paleozoic basins as a consequence of crustal uplift and subsidence

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**COFFEE BREAK**

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Chairperson: n.n.

- 10:30–10:45 EGU2012-5572  
**L. Husson**  
 The dynamics of convergent boundaries over a convecting mantle
- 10:45–11:00 EGU2012-6181  
**C. Faccenna** and T.W. Becker  
 Mantle conveyor beneath the Tethyan collisional belt
- 11:00–11:15 EGU2012-4977  
**C. Gaina**, T. H. Torsvik, C. Labails, D. van Hinsbergen, S. Werner, and S. Medvedev  
 The African Plate: A history of oceanic crust accretion and subduction since the Jurassic
- 11:15–11:30 EGU2012-12689  
 S.C. Cande and **D.R. Stegman**  
 Surface expression of the Reunion Plumehead as witnessed by tectonics in the Indian Ocean
- 11:30–11:45 EGU2012-4084  
**R. Ramalho**  
 The evolution of ocean island volcanoes in a stationary plate environment and its implications concerning hotspot dynamics
- 11:45–12:00 EGU2012-5745  
**N. M. Ribe**  
 Inferring Properties of the Hawaiian Plume from the Hawaiian Swell

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**GM6.2/HS9.6/SS5.21 – Connectivity in water and sediment dynamics: how do we move forwards? (co-organized) –**

Posters

Convener: A. Parsons | Co-Conveners: S.D. Keesstra, L. Bracken, J. Wainwright, R. Poepl, D. Dunkerley

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: Poepl/Wainwright

- XL99 EGU2012-664  
**K. Auerswald**, F. Winter, and M. Disse  
 Statistical approach to a better prediction of surface runoff
- XL100 EGU2012-3358  
**J. Moody** and B. Ebel  
 Insights into Runoff Provided by Infiltration Measurements made during Different Types of Rainstorms
- XL101 EGU2012-5124  
**A. Penuela Fernandez**, C. Bielders, and M. Javaux  
 Scale effect on overland flow connectivity, at the interill scale
- XL102 EGU2012-5811  
**J. Davies** and K. Beven  
 The Multiple Interacting Pathways model - A scale-independent approach to modelling transport and flow in real soils and catchments
- XL103 EGU2012-5836  
**A. Puttock**, R.E. Brazier, J.A.J. Dungait, R. Bol, and C.J.A. Macleod  
 Vegetation change in dryland environments: understanding changes in fluvial fluxes via changes in hydrological connectivity
- XL104 EGU2012-7023  
**D. Milledge**, S.N. Lane, S. Reaney, and A.L. Heathwaite  
 Can a static metric for hydrologic connectivity improve predictions of instream water quality?
- XL105 EGU2012-7170  
 L. Turnbull and **J. Wainwright**  
 Shrub invasion of desert grassland increases the strength of system feedbacks through enhanced flow-path connectivity

- XL106 EGU2012-8562  
**P. Kavka**, K. Vrana, and T. Dostal  
Soil erosion and surface runoff model SMODERP
- XL107 EGU2012-9553  
**N. Volze**, M. Smoorenburg, P. Kienzler, F. Naef, L. Rabenstein, and W. Kinzelbach  
Characterising hydrological behaviour of springs draining different alpine formations
- XL108 EGU2012-10483  
**M. Delmas**, C. Gascuel-Oudou, O. Cerdan, D. Arrouays, and J.M. Mouchel  
Assessment of phosphorus transfer from agricultural lands to the surface water in France: definition of connectivity indices
- XL109 EGU2012-10841  
**C. Goulsbra** and M. Evans  
The connectivity of hydrological pathways in a peatland headwater catchment; models of dynamic catchment connectivity under wet and dry conditions
- XL110 EGU2012-11018  
**M. Smoorenburg**, N. Volze, P.M. Kienzler, and F. Naef  
Measuring, mapping and modeling deep subsurface stormflow contribution to the dampened flood response in a mountainous catchment
- XL111 EGU2012-12841  
**G. Quénéhervé** and M. Märker  
Assessment of Runoff Generation Processes on Hillslope Scale in semi-arid Environments of Northern Tanzania
- XL112 EGU2012-12881  
**S.D. Keesstra**, L. Wittenberg, A. Voogt, E. Argaman, and D. Malkinson  
Post-fire effects on hydrological and erodibility factors in a simulated burn and rainfall experiment
- XL113 EGU2012-13087  
**D. Korost**, K. Gerke, and E. Skvortsova  
Structure differences as a possible mechanism for biomat flow
- XL114 EGU2012-13114  
W.M. Appels, **P.W. Bogaart**, and S.E.A.T.M. van der Zee  
A successive-steady-state approach to integrated surface-subsurface modelling for runoff generation on the field scale
- XL115 EGU2012-13304  
**B.J. Irvine** and M.J. Kirkby  
Up-scaling sediment connectivity: a PESERA application
- XL116 EGU2012-13377  
**P.F. Quinn**, G.M. O'Donnell, and M.E. Wilkinson  
Connectivity: quantification, simulation and manipulation
- XL117 EGU2012-13961  
**R. Bertsch**, R.E. Poepl, and T. Glade  
Longitudinal sediment-connectivity in a dammed river system using fine sediment analyses - a case study in the Kaja river, Lower Austria

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### **GM7.2/HS9.2 – Morphodynamics of Rivers and Estuaries: Sediment Budgets, Monitoring Techniques and Process Dynamics (co-organized) – Orals**

Convener: A. Winterscheid | Co-Conveners: RM Frings, G. Erkens, PhD Hudson

**Room: 21**

Chairperson: Axel Winterscheid

- 13:30–13:45 EGU2012-2533  
**S. Trimble**  
The Sediment Budget approach in Erosion and Sediment Studies
- 13:45–14:00 EGU2012-10930  
**M. Tritthart**, M. Liedermann, and H. Habersack  
Channel incision at the Danube River east of Vienna: verifying bed-load transport rates by different methods
- 14:00–14:15 EGU2012-571  
**H.E. Reid**, R.D. Williams, S. Coleman, and G.J. Brierley  
A Novel Field-Based Approach for Analysing Bar Reworking: Trialled in the Tongariro River, New Zealand
- 14:15–14:30 EGU2012-8888  
**M. Lemoine**, J. Deloffre, R. Lafite, P. Le Hir, K. Oberle, and F. Petit  
Contribution of intra-estuarine tributaries to estuarine sediment budget

- 14:30–14:45 EGU2012-10453  
**S. De Roo**, L. Vanhaute, and P. Troch  
 How ship wave action influences the sediment budget of a nature friendly bank protection in a confined, non-tidal waterway
- 14:45–15:00 EGU2012-5971  
**G. Erkens**, M. Prins, and W. Toonen  
 Human impact on the Middle and Late Holocene floodplain sediment characteristics along the River Rhine

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**GM7.2/HS9.2 – Morphodynamics of Rivers and Estuaries: Sediment Budgets, Monitoring Techniques and Process Dynamics (co-organized) – Posters**

Convener: A. Winterscheid | Co-Conveners: RM Frings, G. Erkens, PhD Hudson

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: Paul Hudson

- XL118 EGU2012-1115  
**J. A. Lopez-Tarazon**, R.J. Batalla, and D. Vericat  
 The sediment budget of a highly dynamic mountainous catchment
- XL119 EGU2012-1290  
**R.M Frings**, G. Hillebrand, and S. Vollmer  
 From source to mouth: the sediment budget of the river Rhine
- XL120 EGU2012-1803  
**G. Hillebrand**, P. Heiningen, T. Krämer, C. Möhlenkamp, J. Pelzer, D. Schwandt, and E. Claus  
 Cohesive Sediments in Groyne Fields along the Elbe River
- XL121 EGU2012-2769  
**W.M. van Dijk**, W.I. van de Lageweg, and M.G. Kleinhans  
 Experimental rivers: from braided towards meandering by the addition of cohesive floodplain material
- XL122 EGU2012-3361  
**J. Moody** and R. Meade  
 Role of Erosion in Shaping Point Bars
- XL123 EGU2012-3744  
**A. Hejduk**, L. Hejduk, and K. Banasik  
 Characteristics of suspended sediment grain size in winter events of lowland river
- XL124 EGU2012-5963  
**J. A. Lopez-Tarazon**, G. Lobera, I. Andrés-Doménech, F. Martínez-Capel, R. Muñoz-Mas, F. Vallés, A. Tena, D. Vericat, and R.J. Batalla  
 Channel morphodynamics and habitat recovery in a river reach affected by gravel-mining (River Ésera, Ebro basin)
- XL125 EGU2012-5989  
**A. Nicholas**  
 Numerical simulation of morphodynamic diversity in the World's largest rivers
- XL126 EGU2012-6131  
**L. Solari**, S. Francalanci, and E. Paris  
 Monitoring and modelling sediment transport in Versilia river (Tuscany- Italy)
- XL127 EGU2012-8425  
**D. Oskoruš**, N. Mikovi?, and I. Ljevar  
 Monitoring and Risk Identification Caused by High Water, Floods and Erosion Processes in Urban Part of Sava Riverbed
- XL128 EGU2012-8434  
**N. Stark**, L. Pearson, D.P. Hamilton, C. Hendy, and A. Kopf  
 Unraveling fine sediment transport patterns along the Ohau Channel, NZ, using a dynamic penetrometer
- XL129 EGU2012-8695  
**J. Macias**, M.J. Castro, P. Barcenas, and L.M. Fernandez-Salas  
 Improvements on turbidity current models. Application to Adra River (southern Spain)
- XL130 EGU2012-9712  
**N. Stathopoulos**, E. Vasileiou, E. Charou, A. Perrakis, A. Kallioras, D. Rozos, and M. Stefouli  
 Coupling of remote sensing, climate and hydrologic data for assessing coastline changes in R. Sperchios estuary (Maliakos Gulf, Greece).
- XL131 EGU2012-10312  
**A. Nahon**, J.C.B. Da Silva, and P. Freire  
 Accurate mapping of a shallow, channelized tidal lagoon: Óbidos Lagoon (Portugal).
- XL132 EGU2012-11373  
**S. Francalanci**, L. Solari, M. Toffolon, and G. Parker  
 On the evaluation of sediment transport in gravel-bed rivers with alternate bars



- XL133 EGU2012-12190  
**M. Promny**  
Sediment budgeting of German waterways
- XL134 EGU2012-12308  
**N. Ohle**, I. Entelmann, and A. Winterscheid  
Results of a Monitoring Program at a Sediment Trap in the Elbe Estuary near Wedel
- XL135 EGU2012-12614  
G.A.M de Almeida and **J.F. Rodriguez**  
Exploring sediment processes in pool-riffle sequences using a simple 1D morphodynamic model.
- XL136 EGU2012-13271  
**R. Aalto**, A. Schwendel, and A.P. Nicholas  
Morphodynamics of Migration Surveyed at Large Spatial and Temporal Scales
- XL137 EGU2012-13522  
**E. Ferreira**, E. Alves, and R. M. L. Ferreira  
Mitigation of turbidity currents in reservoirs with passive retention systems: validation of CFD modeling
- XL138 EGU2012-13624  
**PH Hudson**, FT Heitmuller, and RH Kesel  
Overbank Sedimentation from the 2011 Flood along the Lower Mississippi River: Characterization and Comparison of Two Extreme Events
- XL139 EGU2012-14161  
**S. Baranya**, S. Rajmund, and J. Józsa  
Hydro-morphological analysis of a sand-bed river in Hungary

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**GM7.3/HS9.7/NH1.9 – Morphodynamics of steep mountain channels (co-organized) – Orals**

Convener: F. Brardinoni | Co-Conveners: JM Turowski, L. Mao, D. Rickenmann, a. Recking

**Room: 21**

Chairperson: n.n.

- 10:30–10:45 EGU2012-10163  
**J.W. Kean**, S.W. McCoy, G.E. Tucker, D.M. Staley, and J.A. Coe  
Investigating controls on debris-flow initiation and surge frequency at Chalk Cliffs, USA: initial results from monitoring and modeling
- 10:45–11:00 EGU2012-8498  
**B.W. McArdell** and B. Fritschi  
Field measurements of pressure fluctuations on an instrumented wall: implications for channel-bed erosion
- 11:00–11:15 EGU2012-3964  
**F. Kober**, K. Hippe, B. Salcher, S. Ivy-Ochs, P.W. Kubik, M. Christl, and L. Wacker  
Debris flows and cosmogenic catchment wide denudation rates
- 11:15–11:30 EGU2012-1989  
**L. Marchi**  
Control works in debris-flow channels: influence on morphology and sediment transfer
- 11:30–11:45 EGU2012-8590  
**I. fraccarollo** and h capart  
Measurements and theory for transport layer structure in intense bed-load
- 11:45–12:00 EGU2012-1191  
**F. Mettra**, J. Heyman, and C. Ancey  
Characterization of bedload transport in steep-slope streams

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**GM7.3/HS9.7/NH1.9 – Morphodynamics of steep mountain channels (co-organized) – Posters**

Convener: F. Brardinoni | Co-Conveners: JM Turowski, L. Mao, D. Rickenmann, a. Recking

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 15:30–17:00

Chairperson: n.n.

- XL140 EGU2012-54  
**JM Turowski**, A Badoux, J Leuzinger, and R Hegglin  
Large floods, alluvial overprint, and bedrock erosion
- XL141 EGU2012-3218  
**A. Iroume**, A. Andreoli, H. Ulloa, V. Sandoval, and L.E. Lara  
Stream channel morphology, sediment and large wood transport evolution patterns following the 2008 Chaitén volcano eruption, Chile

- XL142 EGU2012-5377  
**D. Franke**, J. Hornung, and M. Hinderer  
Architectural analysis and chronology of an Alpine alluvial fan using 3D ground penetrating radar investigation and quantitative outcrop analysis
- XL143 EGU2012-6104  
**L. Marchi**, F. Comiti, M. Arattano, M. Cavalli, P. Macconi, and D. Penna  
A new debris-flow monitoring system in an Alpine catchment
- XL144 EGU2012-7433  
AR Beer, **JM Turowski**, B Fritschi, and D Rieke-Zapp  
Field measurements of bedrock erosion driven by bedload impacts
- XL145 EGU2012-6135  
**K Whitbread**, J Jansen, and P Bishop  
Controls on the distribution and geometry of postglacial bedrock channels
- XL146 EGU2012-7853  
**A Dell'Agnese**, L Mao, and F Comiti  
Sediment mobility and bedload transport rates in a high-elevation glacier-fed stream (Saldur river, Eastern Italian Alps)
- XL147 EGU2012-8115  
**A. Recking**  
On how sediment supply impacts step-pool bedload transport
- XL148 EGU2012-9763  
**E. Rascher**, H. Baewert, K.-H. Schmidt, and D. Morche  
Comparing the results of bed load transport equations to field measurements in an Alpine river
- XL149 EGU2012-10393  
**G.L. Bennett**, P. Molnar, H. Eisenbeiss, and B.W. McArdell  
Photogrammetric analysis of slope failures feeding the head of the Illgraben debris flow channel
- XL150 EGU2012-10740  
M. Lazzari, M. Danese, and **D. Gioia**  
The contribution of fluvial and mass wasting processes to sedimentary budget in mountain catchments of the southern Apennines, Italy
- XL151 EGU2012-9789  
**M. Kasai**, T. Kimura, and T. Marutani  
Airborne LIDAR investigation of lithological controls on river behavior in a mountainous catchment following a major storm event
- XL152 EGU2012-10575  
**G.L. Bennett**, P. Molnar, B.W. McArdell, F. Schlunegger, and P. Burlando  
Sediment transfer dynamics in the Illgraben
- XL153 EGU2012-11537  
**B. Rudaz**, A. Loye, B. Mazotti, E. Bardou, and M. Jaboyedoff  
Materosion - Modelling sediment cascade towards prediction of solid mass wasting in steep alpine catchments
- XL154 EGU2012-13477  
**T. Müller** and T. Hoffmann  
Simulation of long-term debris flow sediment transport based on a slope stability and a debris flow routing model
- XL155 EGU2012-13692  
**F. Brardinoni**, E. Perina, G. Bonfanti, G. Falsitta, and F. Agliardi  
Linking high-resolution geomorphic mapping, sediment sources, and channel types in a formerly glaciated basin of northeastern Alto-Adige/Sudtiro, Italy
- XL156 EGU2012-11005  
**T. Michelini**, G. Bertoldi, and V. D'Agostino  
Different approaches to assess the volume of debris-flows deposits: are results comparable?
- XL157 EGU2012-3538  
**K.-J. Shou** and Y.-Y. Lee  
On the Characteristics of the Upstream Bedrock Erosion in Taiwan
- XL158 EGU2012-11263  
**A. Burtin**, N. Hovius, J. Turowski, B. McArdell, and J. Vergne  
High-resolution seismic monitoring of geomorphic activity in a catchment
- XL159 EGU2012-6096  
**K Whitbread**, J Jansen, D Fabel, and P Bishop  
Fluvial incision in postglacial rivers: distribution, rates and controls
- XL160 EGU2012-10257  
**P. Molnar**  
A sandpile model of grain blocking and consequences for sediment dynamics in step-pool streams

Convener: N. Surian | Co-Conveners: W. Bertoldi, a. Recking, J. Brasington

**Room: 21**

Chairperson: N. Surian

- 15:30–15:45 EGU2012-11683  
J.T. Gardner and **P. Ashmore**  
Braided river deposit geometry and the morpho-dynamics of confluences
- 15:45–16:00 EGU2012-103  
**Y. Storz-Peretz** and J.B. Laronne  
Hydrological regime as key to the morpho-texture and activity of braided streams
- 16:00–16:15 EGU2012-5943  
**A. Nicholas**, P. Ashworth, S. Sandbach, M. Amsler, J. Best, R. Hardy, S. Lane, O. Orfeo, D. Parsons, A. Reesink, G. Sambrook Smith, and R. Szupiany  
Braid bar and island dynamics of the multi-threaded Rio Paraná, Argentina
- 16:15–16:30 EGU2012-849  
**R.D. Williams**, J. Brasington, D. Vericat, and D.M. Hicks  
Quantifying braided river morphodynamics through a sequence of high-flow events
- 16:30–16:45 EGU2012-11437  
**B. Belletti**, S. Dufour, and H. Piégay  
Regional assessment of braided riverscape multi-decadal changes following large floods (Example of 12 reaches in South East of France)
- 16:45–17:00 EGU2012-9784  
**L. Ziliani** and N. Surian  
Modelling and prediction of channel morphology evolution in a large braided river (Tagliamento River, Italy)

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**GM7.4 – Braided rivers: insights from new monitoring and modelling techniques – Posters**

Convener: N. Surian | Co-Conveners: W. Bertoldi, a. Recking, J. Brasington

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: n.n.

- XL161 EGU2012-2603  
**P. Leduc**, H. Bellot, and A. Recking  
Moiré method applied to sediment transport in a small-scale braided river
- XL162 EGU2012-3629  
**M. Welber**, W. Bertoldi, and M. Tubino  
Braided river morphodynamics as a driver of driftwood dispersal: a flume experiment
- XL163 EGU2012-13262  
E. Bastianon, A. Dussailant, and **W. Bertoldi**  
Outburst Floods and Morphology of Colonia and Baker Rivers, Patagonia
- XL164 EGU2012-8787  
S. Lallias-Tacon, F. Liébault, H. Piégay, and **P. Leduc**  
Study of morphological changes of a gravel-bed braided river with a combined analysis of airborne LiDAR and archive aerial photographs (French Prealps)
- XL165 EGU2012-8679  
**J. Moretto**, E. Rigon, L. Mao, F. Delai, L. Picco, and M.A. Lenzi  
Morphological changes analysis of gravel bed rivers through comparison of DTMs (DoD): integration of LiDAR data, DGPS survey and aerial photo.
- XL166 EGU2012-10484  
**L. Picco**, L. Mao, M. Cavalli, E. Buzzi, and M.A. Lenzi  
Short term morphological dynamics along a low impacted braided gravel-bed river
- XL167 EGU2012-4989  
**L. Guerit**, L. Barrier, C. Narteau, F. Métivier, Y. Liu, E. Lajeunesse, E. Gayer, L. Malverti, P. Meunier, and B. Ye  
The Grain-size Patchiness of Braided Gravel-Bed Streams: Example of the Urumqi River (northeast Tian Shan, China)
- XL168 EGU2012-11619  
J. Tunncliffe, M. Hicks, **P. Ashmore**, J. Walsh, J.T. Gardner, and M. Duncan  
Use of 2D hydraulic models to develop and improve parameterized 1D models of sediment transport
- XL169 EGU2012-757  
**K. Plesinski**, R. Jasek, and A. Radecki-Pawlik  
Hydrodynamic parameters in the braided river reach - the Ochotnica River study in Polish Carpathians

- XL170 EGU2012-4701  
**F.A. Chiriloaei**, M. Radoane, and N. Radoane  
 Channel adjustments over the last century of the Moldova River, Romania
- XL171 EGU2012-9561  
**M. Barban**, G. Monegato, N. Surian, and L. Ziliani  
 Vegetation dynamics in a large braided river (Tagliamento River, Italy)
- XL172 EGU2012-778  
**A. Kidová**, M. Rusnák, and M. Lehotský  
 Comprehensive approach to investigation of braided and wandering river (the River Belá case study)

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**GM7.5/HS10.9 – Dynamic riverine landscapes: the role of ecosystem engineers (co-organized) – Orals**

Convener: G.L. Harvey | Co-Conveners: W. Bertoldi

**Room: 21**

Chairperson: Walter Bertoldi and Gemma Harvey

- 08:30–08:45 EGU2012-1359  
**A.M. Gurnell**  
 Riparian and Aquatic Plants as River Ecosystem Engineers
- 08:45–09:00 EGU2012-1774  
**S.P. Rice**  
 The impact of benthic fauna on fluvial bed load transport: Challenges of upscaling laboratory experiments to river and landscape scales.
- 09:00–09:15 EGU2012-2386  
**P. Perona**  
 Vegetation roots and fluvial ecomorphodynamics: processes and related timescales
- 09:15–09:30 EGU2012-6962  
 S.J. Albers and **E.L. Peticrew**  
 Salmon as drivers of physical and biological disturbance in river channels
- 09:30–09:45 EGU2012-1286  
**D Corenblit**, E Tabacchi, J Steiger, E Gonzales, and AM Planty-Tabacchi  
 Ecosystem engineers modulate exotic invasions in riparian plant communities
- 09:45–10:00 EGU2012-9395  
**M.B. Soons**  
 Vegetation development following stream/river restoration: more natural fluvial dynamics and morphology, return of aquatic and riparian plant species?

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**GM7.5/HS10.9 – Dynamic riverine landscapes: the role of ecosystem engineers (co-organized) – Posters**

Convener: G.L. Harvey | Co-Conveners: W. Bertoldi

**Hall XL | Display Time 08:00–17:00**

Author in Attendance: 15:30–17:00

Chairperson: Walter Bertoldi and Gemma Harvey

- XL173 EGU2012-261  
**A. Pledger**, S.P. Rice, and J. Millett  
 The impact of feeding Cyprinids on river bed sediment structures and grain entrainment
- XL174 EGU2012-6429  
**N.S. Davies** and M.R. Gibling  
 Deep Time Ecosystem Engineers: The Correlation between Palaeozoic Vegetation, Evolution of Physical Riverine Habitats, and Plant and Animal Terrestrialization
- XL175 EGU2012-14053  
**L. E Polvi-Pilgrim** and E Wohl  
 Holocene planform change in broad valleys in the Southern Rocky Mountains: the role of vegetation type and beaver in shaping long-term channel complexity
- XL176 EGU2012-11151  
**S. Dixon** and D Sear  
 The effect of riparian forest management on flood risk and flood hydrology
- XL177 EGU2012-10791  
**D. Meire** and P. Troch  
 An overview of the implementation of macrophytes as ecosystem engineers in hydrological modelling.
- XL178 EGU2012-8677  
**S. Tealdi**, C. Camporeale, and L. Ridolfi  
 A lumped modeling of river - riparian vegetation interactions with flow variability

- XL179 EGU2012-8126  
**N. A. Osei**  
The influence of large wood accumulations on riparian seed bank diversity
- XL180 EGU2012-3649  
**M. Welber**, W. Bertoldi, and M. Tubino  
A physical model of driftwood-rich braided rivers
- XL181 EGU2012-9431  
**K. Edmaier**, B. Crouzy, P. Burlando, and P. Perona  
Resistance to uprooting of Alfalfa and Avena Sativa and related importance for flume experiments
- XL182 EGU2012-4369  
L. Mao, **W. Bertoldi**, F. Comiti, A.M. Gurnell, S.J. McLelland, N. Osei, D. Ravazzolo, M. Tal, M. Welber, and S. Zanella  
The morphodynamic impact of vegetation and large wood on fluvial systems
- XL183 EGU2012-10860  
**A.J. Henshaw**, W. Bertoldi, and A.M. Gurnell  
Exploring interactions between hydrogeomorphological processes and riparian vegetation along the Fiume Tagliamento, Italy, using remotely sensed data
- XL184 EGU2012-9703  
**B. Crouzy**, P. D'Odorico, D. Wütrich, and P. Perona  
On the role of vegetation in the formation of river anabranching patterns
- XL185 EGU2012-6974  
**H. Shimazu**  
Geomorphic process and vegetation diversity in the active riverbed and the floodplain in the Kamikochi valley, central Japan
- XL186 EGU2012-490  
**H. Gibbs**, A. Gurnell, K. Heppell, and K. Spencer  
Macrophytes: ecosystem engineers in UK urban rivers
- XL187 EGU2012-10449  
**A.G. Sutcliffe**, P. Rameshwaran, P.S. Naden, G. Wharton, G.H. Old, C. Roberts, and P.M. Scarlett  
The effects of cutting aquatic vegetation on local scale hydraulics in a chalk stream.

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### HS10.2/GM8.2 – Estuarine processes (co-organized) – Orals

Convener: M. Toffolon | Co-Conveners: A. Rinaldo, HHG Savenije, S. M. Mudd

**Room: 39**

Chairperson: Marco Toffolon

- 15:30–15:45 EGU2012-2138  
M. Kleinhans, R. Terwisscha van Scheltinga, M. van der Vegt, H. Markies, and **W. van Dijk**  
Turning the tide: experimental formation of dynamic tidal basin morphology
- 15:45–16:00 EGU2012-10908  
**A. D'Alpaos**, S.M. Mudd, and L. Carniello  
How do salt-marsh ecosystems respond to changes in the environmental forcings?
- 16:00–16:15 EGU2012-316  
**T. Van Oyen**, S. Lanzoni, A. D'Alpaos, S. Temmerman, P. Troch, and L. Carniello  
A simplified model to describe the flow field on tidal floodplains
- 16:15–16:30 EGU2012-55  
**J.C. Winterwerp** and Z.B. Wang  
Regime shifts in muddy estuaries: tidal response to river deepening and canalization
- 16:30–16:45 EGU2012-10721  
**M. Becker**, K. Schrottke, A. Bartholomä, V. B. Ernsten, C. Winter, and D. Hebbeln  
Tide-driven dynamics of ephemeral fluid mud deposits in troughs of large, subaqueous dunes in an estuarine turbidity zone
- 16:45–17:00 EGU2012-10685  
**M. Carpintero García**, A. Jurado López, E. Contreras Arribas, and M.J. Polo Gómez  
Density-salinity-suspended sediment experimental curves for Guadalquivir River estuary conditions

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### HS10.2/GM8.2 – Estuarine processes (co-organized) – Posters

Convener: M. Toffolon | Co-Conveners: A. Rinaldo, HHG Savenije, S. M. Mudd

**Hall A | Display Time 08:00–17:00**

Author in Attendance: 10:30–12:00

Chairperson: Hubert Savenije

- A257 EGU2012-1592  
**H. Cai** and H. H.G.Savenije  
Explicit solution to tidal damping equation in alluvial estuaries
- A258 EGU2012-1812  
**H. Cai**, M. Toffolon, and H. H.G.Savenije  
Application of the Lagrangian approach to calculate dispersion coefficient in estuaries
- A259 EGU2012-2550  
**J.I.A. Gisen** and H.H.G. Savenije  
Relationship between Estuary Shape and Hydrodynamics in Alluvial Estuaries
- A260 EGU2012-4130  
**M. Hegnauer** and H.H.G. Savenije  
Alternated pumping reduces the impact of freshwater diversion in the Pungue estuary
- A261 EGU2012-3503  
**H. E. de Swart**, A. Waterhouse, and A. Valle-Levinson  
Modelling lateral distribution of waves, currents and bedload transport in an estuarine cross-section
- A262 EGU2012-5647  
**J.-P. Belliard** and M. Toffolon  
Characteristic scales for eco-morphological processes in tidal flats and salt marshes
- A263 EGU2012-6554  
**B. Radosavljevic**, J. Gibeaut, and P. Tissot  
Sea-Level Rise: Estuarine Wetlands of Mustang Island at Imminent Risk of Submergence
- A264 EGU2012-9461  
**J. Leroux**, D. Lague, and N. Brodu  
Spatio-temporal variability of channel bank erosion in mega-tidal salt-marshes (Mont-Saint-Michel bay) quantified by terrestrial laser-scanner surveys
- A265 EGU2012-5886  
S. Eeman, **S.E.A.T.M. van der Zee**, E. Vermue, and P.G.B. de Louw  
Integrity of thin fresh water lenses in coastal wetlands to temporal changes of recharge by rainfall
- A266 EGU2012-8214  
**L. Sander**, M. Pejrup, and L. H. Nielsen  
Beach ridge and lagoon systems as indicator for sea-level changes
- A267 EGU2012-11680  
**P. Vethamony**, S. Rupali Patgaonkar, M. T.Babu, and S. Lokesh  
Residence time of pollutants is an indicator of health of the Gulf of Kachchh, a macrotidal regime: a numerical study
- A268 EGU2012-11367  
**J. Martins**, P. Portela, A. Soares, A. Ramos-Pereira, and J. Trindade  
Elemental and stable isotope analysis in the assessment of fluvio-marine interactions over the last 5000 years
- A269 EGU2012-12723  
**A. Ramos-Pereira**, J. Trindade, C. Ramos, A. Soares, R. Danielson, H. Granja, A. Torres, A. Ribeiro, J. Martins, and P. Portela  
A multi-proxy analysis in the assessment of fluvio-marine interactions over the last 5000 years

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### SSS8.1 – Ecology and Erosion (co-listed) – Orals

Convener: A. Cerdà | Co-Conveners: M.J. Kirkby, S. Manfreda, J. Mataix-Solera, V. Arcenegui, P. Dlapa

**Room: 3**

Chairperson: Victoria Arcenegui and Mike Kirkby

- 15:30–15:45 EGU2012-11494  
**T Mimmo**, R Terzano, L Medici, A Lettino, S Fiore, N Tomasi, R Pinton, and S Cesco  
Interaction of root exudates with the mineral soil constituents and their effect on mineral weathering
- 15:45–16:00 EGU2012-168  
**A. Carminati**  
Root water uptake and rhizosphere dynamics
- 16:00–16:15 EGU2012-629  
**D. J. Oyedele**, R. Pini, E. Sparvoli, and M. Scatena  
The dynamics of soil aggregate breakdown in water in response to landuse as measured with laser diffraction technique
- 16:15–16:30 EGU2012-8985  
**C. Geißler**, K. Nadrowski, P. Kühn, M. Baruffol, A.C. Lang, G. von Oheimb, W. Härdtle, and T. Scholten  
Soil erosion and biodiversity - Effects of ecological variables on throughfall kinetic energy for different spatial scales

- 16:30–16:45 EGU2012-366  
**A. Puttock**, R.E Brazier, J.A.J Dungait, R. Bol, and C.J.A Macleod  
 Developing an Understanding of Vegetation Change and Fluvial Carbon Fluxes in Semi-Arid Environments
- 16:45–17:00 EGU2012-4678  
**R. G. Hilton**, A. Galy, A. J. West, N. Hovius, and G. G. Roberts  
 Geomorphic control on the delta-15N of mountain forest: Implications for N cycling in terrestrial ecosystems

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**SSS8.1 – Ecology and Erosion (co-listed) – Posters**

Convener: A. Cerdà | Co-Conveners: M.J. Kirkby, S. Manfreda, J. Mataix-Solera, V. Arcenegui, P. Dlapa

**Hall X/Y | Display Time 08:00–17:00**

Author in Attendance: 13:30–15:00

Chairperson: Pavel Dlapa and Salvatore Manfreda

- XY572 EGU2012-970  
**A. S. Krivobok**  
 Microorganisms applying for artificial soil regeneration technology in space greenhouses
- XY573 EGU2012-2781  
**V. Jiménez-Donaire**, P. Hueso-González, and J.D. Ruiz-Sinoga  
 Preliminary study of the short term response of soil properties to forest fire in the South of Spain
- XY574 EGU2012-6427  
 O. Fernandez-Ugalde, **P. Barré**, F. Hubert, I. Virto, C. Girardin, E. Ferrage, L. Caner, and C. Chenu  
 To what extent clay mineralogy affect soil aggregation? Insights from fractionation analyses conducted on soils under different land-uses.
- XY575 EGU2012-10809  
**P. Dlapa**, K. Chrenková, A. Hrabovský, and J. Mataix-Solera  
 The effect of land use changes on water repellency and aggregate stability of soils in the viticulture district of Modra (SW Slovakia)
- XY576 EGU2012-11192  
 T Repas, **J Germida**, and S Kaminskyj  
 Phytoremediation of Alberta oil sand tailings using native plants and fungal endophytes
- XY577 EGU2012-11951  
**D. Termini**  
 Experimental observation of the rule of flexible vegetation on erosion processes
- XY578 EGU2012-3920  
**Y. Martin**, E. Johnson, and O. Chaikina  
 Investigating the Lack of Pit/Mound Microtopography in Subalpine Forests of the Canadian Rockies
- XY579 EGU2012-1110  
 M. Jordan, F. Garcia-Orenes, J. Mataix-Solera, and **E. Garcia-Sanchez**  
 Evaluation of the physical properties, bulk density and aggregate stability of potential substrates in quarry restoration.
- XY580 EGU2012-2812  
**P. Hueso-González**, V. Jiménez-Donaire, and J.D. Ruiz-Sinoga  
 Relationship soil-water-plant after the dry season in dry Mediterranean areas
- XY581 EGU2012-4827  
**A. Cerdà**, M.F. Jurgensen, and F.A. González-Peñaloza  
 The litter cover of citrus leaves control soil and water losses in chemically managed orchards
- XY582 EGU2012-9795  
**A. Bidló**, P. Szűcs, A. Horváth, O. Kámán, E. Németh, and P. Juhász  
 Comparing the methods for determination of carbon in soil
- XY583 EGU2012-3772  
**A. Cerdà**, J. Mataix-Solera, and V. Arcenegui  
 Aggregate stability in citrus plantations. The impact of drip irrigation
- XY584 EGU2012-96  
**J. Mataix-Solera**, A. Cerdà, V. Arcenegui, A. Jordán, and L.M. Zavala  
 Fire effects on soil aggregate stability: a review and synthesis
- XY585 EGU2012-2106  
**B.G. Rawlins**, R.M. Lark, and J. Wragg  
 A novel method for soil aggregate stability measurement by laser granulometry with sonication
- XY586 EGU2012-3023  
**N. J. Kuhn**  
 Connecting the cycles: impact of farming practices, Carbon and nutrient erosion on GHG emissions

