



## International Symposium on

# 'Sediment dynamics in changing environments'

1<sup>st</sup> – 5<sup>th</sup> December 2008

Christchurch, New Zealand

SECOND CIRCULAR

### Invitation for abstract submission

We cordially invite you to submit an abstract to the international symposium

**'Sediment dynamics in changing environments',**

which will be held in Christchurch, New Zealand, 1st – 5th December 2008.

We invite submissions on topics related to the following sub-themes:

- Scaling issues in sedimentary systems – from point to continents
- Dating and source tracing technologies.
- Global Change and erosion.
- Linking Erosion with environmental and societal impacts: Sediment production, River Regulations, Depositional environments, Hazards & Risks, Management & Policy.

(more details overleaf)

Details about format and procedure can be found on the symposium webpage.

**Deadline for abstracts** **30 November 2007**

**Webpage for abstract submission:** <http://www.civil.canterbury.ac.nz/icce2008/>

National Institute of Water and Atmospheric Research (NIWA)

[www.niwa.co.nz](http://www.niwa.co.nz)



Landcare Research

[www.landcareresearch.co.nz](http://www.landcareresearch.co.nz)



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University of Canterbury

[www.canterbury.ac.nz](http://www.canterbury.ac.nz)



SECOND CIRCULAR

ICCE IAHS Symposium 'Sediment Dynamics in changing environments', Christchurch, New Zealand 2008



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## Scientific Programme

To understand **sedimentary systems in changing environments**, we need to advance our knowledge of sedimentary processes and systems and in particular of **scaling issues in sedimentary systems**. This knowledge, derived from **historical information and analysis**, and system analysis and modelling should enhance our ability to assess impacts of **Global Change on erosional systems**. Finally we need to find ways to link our understanding and our models of **sedimentary systems with impacts on human environments** – including improvement of management options, hazard and risk assessment, and feedback into policy frameworks. The Scientific Programme will be organised around four themes.

1. Scaling issues in sedimentary systems – from point to continents

We invite papers tackling problems of understanding and scaling erosion, transport, and deposition processes within sedimentary systems, including

- Transfer of local process understanding to larger scale systems;
- Global changes and their local effects;
- Coupling and decoupling of erosional processes on different scales;
- Complex system behaviour and changes in system states;
- Temporal scales in sedimentary systems – extreme events vs. long-term changes.

2. Dating and source tracing technologies.

This session will explore the utility of dating sediment sinks such as floodplain profiles, lake, and coastal-shelf sequences to reconstruct long-term catchment erosion and sediment yield histories. Also studies on source tracing / fingerprinting for understanding catchment sediment generation and dispersal are invited.

3. Global Change and erosion.

Papers are invited on the effects of climate and land-use changes on erosion and sedimentation processes, including

- Global erosion as affected by climate change;
- Relative importance of land-use and climate change for sedimentary systems;
- Sensitivity of sedimentary systems in different environments;
- Erosion and the carbon cycle.

4. Linking Erosion with environmental and societal impacts: Sediment production, River Regulations, Depositional environments, Hazards & Risks, Management & Policy.

Political and environmental management agendas often move in advance of the science base. It is critical to improve linkages between science outcomes and decision making on various levels. We invite papers on linking sedimentary systems with socio-economic systems, including

- Sediment production and its impacts on societies;
- Sedimentary systems and catchment management;
- Sedimentary systems and environmental hazards and risks;
- Erosion and risk mitigation;
- Developing tools to meet policy targets in areas such as erosion, transfer of sediment-associated contaminants;
- Bridging the gap between research and practice for delivery of improved strategies for sustainable development.



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## Keynote Speakers

### Professor Andreas Lang

Andreas Lang is Chair of Physical Geography and Head of the Department of Geography, University of Liverpool, UK. His recent research focuses on: application of optical dating to sediments from fluvial and colluvial environments, reconstructing human impact on geomorphic systems; longer term changes in sediment flux and catchment transmission and modelling fluvial systems.



### Professor Michael Crozier

Michael Crozier has a personal chair in Geomorphology at Victoria University of Wellington, New Zealand. He is a ministerial appointment to the New Zealand Conservation Authority that has statutory responsibilities for national parks and regional conservation management strategies. While much of his research has been on the role of climate in landslide initiation, recent work has involved, earthquake-triggered landslides, response of slopes to deforestation, runoff behaviour of landslides, scarp evolution, natural hazard risk evolution, and the relationship between subsurface erosion, slope hydrology and landslides.



### Professor Des Walling

Des Walling is a Hydrologist with particular interests in the field of erosion and sediment yields and catchment sediment budgets. He is Reardon Smith Professor of Geography at the University of Exeter, UK. Des is heavily involved in national and international scientific activities. He is currently President of the World Association for Sediment and Erosion Research, past President of the International Commission on Continental Erosion (ICCE) and the International Association of Sediment Water Sciences (IASWS) and President of the World Association for Sediment and Erosion Research (WASER) and Honorary President of the International Association of Hydrological Sciences.



[http://www.sogaer.ex.ac.uk/geography/people/staff/d\\_walling/main.shtml](http://www.sogaer.ex.ac.uk/geography/people/staff/d_walling/main.shtml)

### Dr. James P.M. Syvitski

James Syvitski is Executive Director of CSDMS, a research group of the University of Colorado, specializing in building models for global change and environmental science, earth surface processes and extreme environments. His fields of expertise are in earth system science, in the fields of sedimentology, oceanography, mathematics, geophysics, geochemistry, landscape evolution and sediment transport modelling. James has worked at a variety of levels in world scientific bodies (IUGS, IGBP, INQUA, and IAS). He enjoys simplifying science for others and believes in educating the public on science issues.



<http://instaar.colorado.edu/people/bios/syvitski.html>

### Dr. Murray Hicks

Murray Hicks researches and consults on river and coastal sedimentation and geomorphic processes. Murray works for the National Institute of Water and Atmospheric Research (NIWA), New Zealand. His current research focuses on numerical morphodynamic modelling of gravel-bed rivers and gravel coastlines, with application to predicting the downstream effects of dams, diversions, flood-harvesting, irrigation water abstractions and climate change on river morphology and substrate and on coastal erosion.



## SECOND CIRCULAR



## Programme Schedule

The **IAHS ICCE Symposium** will be held in conjunction with **the Open LUCIFS Workshop** (see below for an announcement). In addition, one of our keynote speakers, Dr. James P.M. Syvitski is planning to give a modelling workshop in New Zealand around the same time (to be announced). So there will be good opportunities to combine the symposium attendance with the other events.

Dates	Academic Programme	Social Programme
<b>IAHS ICCE Symposium Christchurch 1<sup>st</sup> - 5<sup>th</sup> December 2008</b>		
Sunday (November 30 <sup>th</sup> )	Arrival/Registration	
Monday (December 1 <sup>st</sup> )	Registration / Full-day papers	Ice-breaker
Tuesday (December 2 <sup>nd</sup> )	Full-day papers	Social event - TBA
Wednesday (December 3 <sup>rd</sup> )	<i>Field trip led by Murray Hicks</i>	
Thursday (December 4 <sup>th</sup> )	Full-day papers	Conference Dinner
Friday (December 5 <sup>th</sup> )	Half-day papers	
<b>IGBP-PAGES LUCIFS open workshop (Preliminary Programme)</b>		
Saturday (December 6 <sup>th</sup> )	Full-day papers	
Sunday (December 7 <sup>th</sup> )	Full-day papers	
(December 8 <sup>th</sup> - 11 <sup>th</sup> )	<i>LUCIFS Field trip</i>	



## The Venue and Social Programme

The Symposium will be hosted at University of Canterbury Campus. University of Canterbury is located in the heart of the Christchurch Suburb of Ilam. Ilam is located approximately 4 kilometres west of the City Centre and has excellent facilities around the area and direct bus transport linkages to the Christchurch City Centre. A wide range of accommodation option exists nearby to meet most budgets.

The mid-Symposium field trip will take us to the gravel bed rivers of the Canterbury Plains which act as a conveyor belt transporting sediment out of the uplifting Southern Alps into the Pacific Ocean. We will also visit the Canterbury coastline and observe the intense coastal erosion and transport happening in that area. Several evening events will be included in the conference programme, including an Ice-Breaker reception and a Conference Dinner.

Christchurch is New Zealand's Garden City. Christchurch is a great starting point to explore the famous New Zealand Alps, the West Coast, and Central Otago with its stunning scenery and wineries – to name only a few options. Christchurch is the South Island communications and transport hub and can be reached by road, rail or by air (International airport 10 km).

## Sponsorship

Promotional sponsorship opportunities are available. Please contact the Conference Secretariat for sponsorship forms.

### Conference Secretariat

The Conference Office, University of Canterbury  
Private Bag 4800, Christchurch, New Zealand  
Tel: +64 3 364 2534  
Fax: +64 3 364 2324  
Email: [icce2008@uco.canterbury.ac.nz](mailto:icce2008@uco.canterbury.ac.nz)  
Website: <http://www.civil.canterbury.ac.nz/~icce2008.htm>



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## Scientific Contributions and Proceedings Publication

The Proceedings of the Symposium will be pre-published as an IAHS 'Red Book'. The price of the volume will be included in the registration fee and a copy of the Red Book will be provided to each participant. Participants wishing to contribute a paper should submit an abstract in English (maximum 250 words). After reviewing the abstracts, papers of 8-10 pages length will be invited for publication in the 'Red Book'. The schedule for abstract and full paper preparation is:

Additionally, poster presentations for the Symposium will be invited.

<b>Deadline for abstracts</b>	<b>30 November 2007</b>
<b>Replies to authors</b>	<b>31 January 2008</b>
<b>Deadline for full papers</b>	<b>30 March 2008</b>

<http://www.civil.canterbury.ac.nz/icce2008/>

## Registration Costs and Provision

The Registration Fee for the Symposium will be around NZD 800 (depending on sponsorship etc.), this will include a delegate's pack containing the '**IAHS Red Book Proceedings**', lunch and refreshments every day of the meeting, the mid-Symposium excursion, and evening entertainment as part of the social programme. A discount will be available for early registration and for full-time students. Finalized registration fees and options will be available in subsequent circulars.



## Contact & Convenors

The local committee organising the meeting comprises:

Dr Jochen Schmidt, NIWA	<a href="mailto:j.schmidt@niwa.co.nz">j.schmidt@niwa.co.nz</a>
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All enquiries should, in the first instance, be directed to  
Jochen Schmidt, PO Box 8602, Christchurch, New Zealand.

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OR

### Conference Secretariat

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Website: <http://www.civil.canterbury.ac.nz/icce2008/>

Further details will be provided in subsequent circulars. Conference registration will be possible through a dedicated web-site.

*Looking forward to seeing you in Christchurch!*



Christchurch Tram



Christchurch Cathedral



Lyttleton Harbour

### SECOND CIRCULAR

## **Compiling Records of Holocene Erosion and Sediment Transport**

**6<sup>th</sup> – 11<sup>th</sup> December 2008**

**Christchurch, New Zealand**

The LUCIFS group is pleased to announce an open workshop in December 2008, to run immediately following the ICCE-IAHS Symposium in Christchurch, New Zealand.

LUCIFS is located within IGBP-PAGES Focus 4, and is concerned with understanding past interactions between climate, environment, and human activity. Of particular relevance are aspects of sediment redistribution systems such as non-linear behaviour, the role of system configuration, scale effects, and emergent properties. The workshop will provide a stimulating working environment for discussion of a topical field in geomorphology: evaluating the geomorphic impact of humans on landscapes, with a strong emphasis on a geomorphological and sedimentological perspectives on mid- to long-term man-landscape interactions.

### **Workshop objectives**

The workshop programme is designed specifically to summarise existing knowledge of human influences on Holocene sediment fluxes. The overriding workshop objective is the compilation of information that will contribute to a state-of-the-art publication that will:

- summarise the extent to which we are currently able to comment on the influence of anthropogenic transformation on fluvial sediment flux, and
- put the case for why understanding these transformations in the context of geomorphic systems is useful and valid for landscape management (incl. responses to and anticipation of effects of climate change).

This review publication represents the most important workshop output, and it is intended that it should be published as an edited volume. Workshop participants are asked, therefore, to present summaries of the extent of understanding of anthropogenic influence on sedimentary systems in their countries or research areas.

### **Workshop structure and further information**

The workshop will involve two days of presentations and discussion, followed by a 3-4 day field trip, exploring the effects of Holocene, and especially recent anthropogenic, impacts on sediment redistributory systems in New Zealand. Further information about workshop themes, programme, field trips, timetable, costs, etc. will be available in a second circular.

### **Your expression of interest**

Please send a short notification to the workshop organisers if you are considering attending. If you wish to present a paper or poster, please indicate a provisional title.

### **Organising committee**

Dr. Nick Preston  
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