

The 3rd German-South African Research Lecture Series 2009 presents:

Flood Resilience in Climate Change Scenarios

- State-of-the-Art Approaches for Shoreline-Stabilisation -

DATE: 28 August, 2009
TIME: 15:30 for 16:00
VENUE: STIAS Stellenbosch Institute for Advanced Study,
Wallenberg Research Centre, Marais Street, Stellenbosch

SPEAKERS:

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| Prof. Erik Pasche | Director Institute of River and Coastal Engineering, Hamburg University of Technology/Germany |
| Prof. Hans von Storch | Director Institute for Coastal Research GKSS Geesthacht/Germany |
| David Phelp | Group Leader Coastal and Port Engineering, Council for Scientific and Industrial Research, Built Environment Area |
| Marius Rossouw | Numerical Modelling, Council for Scientific and Industrial Research, Built Environment Area |

References:

<http://kontakt.tu-harburg.de/en/suchergebnis.php?id=wbep> (Professor Erik Pasche)

<http://coast.gkss.de/staff/storch> (Professor Hans von Storch)

<http://www.engineeringnews.co.za/article/csir-coastal-engineering-expert-wins-jd-roberts-award-2009-07-17> (Dave Phelp)

http://www.csir.co.za/Built_environment/Infrastructure_engineering/cepi.html (CSIR Built Env.)

Please find further information below:

Dear Sir or Madam

Much has been written and said about Climate Change and the consequences of Global Warming to our planet. But on the other hand yet little emphasis has been put on the urgent following question, namely as of how to find appropriate technical adaption strategies to cope with these consequences. A serious situation to all coast linked countries will occur out of rising sea levels, changed currents and stronger winds due to climatic phenomena, e.g. "El Niño" and "La Niña". In the long run the affected countries must undertake adaptive provisions to ensure flood resilient coast lines under future weather conditions.

In a brief introduction Prof. Hans von Storch will present recent research results on future wind, surge and wave conditions forecasts. Using dynamical models of the Northern Sea area, it was possible to reconstruct conditional statistics for the time 1948-2005. A tool for the prediction of possible future scenarios has been developed. He regards this methodology to be applicable to all other parts of the globe.

Prof. Erik Pasche, one of Europe's leading coastal engineering experts, lines out his investigations on response strategies for the improvement of shoreline flood resilience facing possible extreme scenarios. His approach is not only about full avoidance of flood damages, but rather reducing the vulnerability of a coast linked population by a flood adapted built environment, a so called water sensitive urban environment. This innovative risk management approach demonstrates a state-of-the-art strategy to deal with the predicted severe impacts of climate change.

Recent floods and monster waves hitting the coastlines of Mozambique, Kwa-Zulu Natal and the Eastern Cap region, as well as the melting of the Antarctic ice shield, call for immediate actions on shoreline-stabilisation in South Africa as well. How will a rising sea level affect local coastal dwellings, infrastructure and sea-bound economies? Answers to these questions will be provided by Dave Phelp of CSIR, who was recently awarded the prestigious J.D. Roberts Award for the remarkable development of an innovative harbour and coastal structure monitoring method. This tool allows accurate analysis of surge and break water damage along the whole of the South African coast.

His colleague, Marius Rossouw, expert on numerical modelling of wave, current and wind conditions, will address recent research results on what impact possible future scenarios will have on the Western Cape, Eastern Cape and KZN shores.

The German Academic Exchange Service (DAAD), on behalf of the German Federal Ministry of Education and Research (BMBF), is facilitating this year's German – South African Research Lecture Series during spring 2009 at five South African universities. The main objectives of this lecture series are to promote research co-operation between the two countries and to showcase best practise examples in science and technology. The talks will address researchers, academics, postgraduate students, administrators as well as the interested public.

The Lecture on "Flood Resilience" will be the second out of 5 events of the 3rd German-South African Research Lecture Series 2009 and will take place on Aug 28 at the Stellenbosch Institute for Advanced Study 'STIAS'. Topics of the other talks will include science and ethics of climate change, accelerator based science, photonic detection

technology, and immunology with regards to the impact on HIV&Aids to Sothern Africa (tba). Representatives of leading South African research institutions as well as from the private sector are kindly invited to the series of lectures.

Please find further information regarding the event on August 28 in Stellenbosch attached. Media coverage is most welcome; please feel free to contact the DAAD Information Centre Johannesburg for more details!
The DAAD will be pleased to welcome you to this event.

Yours sincerely,

Lukas Kaiser
Project Coordinator

For DAAD Information Centre Johannesburg

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