

# Prediction of Climate Variations & its Application in the Southern African Region

22<sup>ND</sup> & 23<sup>RD</sup> August 2011

Venue: HPC, University of Pretoria, South Africa

**Monday 22<sup>nd</sup>:**

Registration: 08:30-09:00

## 1. Opening Session

(Chair: N. Sweijd)

09:00	Address I	Prof. S. Burton (University of Pretoria)
09:05	Address II	L. Matooane (Director, Earth Systems, DST)
09:10	Address III	Y. Shirayama (Executive Director, JAMSTEC, Japan)
09:15	Address IV	T. Nakamura (Resident Representative, JICA SA)

## 2. Key Note Speech

(Chair: K. Takahashi)

9:20	T. Yamagata (JAMSTEC/U. Tokyo, Japan) <i>"Tsunami Catastrophe: Lessons Learned from the 3.11 Calamity Caused by the Earthquake off Tohoku, Japan"</i>
9:40	J. Adegoke (CSIR / ACCESS, South Africa) <i>"Natural Disaster in the Horn of Africa"</i>

## 3. First Session - South African Climate Research under the SATREPS Framework -

(Chair: J. Adegoke)

10:00	H. Rautenbach (U. Pretoria, South Africa) <i>"Characteristics and regional scale simulation of extreme climate events during 2010-2011"</i>
10:20	S. Behera (JAMSTEC, Japan) <i>"Extreme rainfall events over South Africa associated with modes of climate variations"</i>

10:40-11:00 Coffee Break

## 4. Second Session - Climate and Ocean Processes (Chairs: T. Tozuka and H. Rautenbach)

11:00	M. Rouault (UCT, South Africa) <i>"On the intrusion of Tropical Water in The Benguela upwelling system"</i>
11:20	I. Richter (JAMSTEC, Japan)

**SATREPS SYMPOSIUM – AUGUST 2011**

	"On the origin of GCM biases in the Gulf of Guinea and the Benguela upwelling region"
11:40	M. Nagura (JAMSTEC, Japan) <i>"On the interannual variability in the Indonesian Throughflow"</i>
12:00	R. Maisha (UP) "WRF Simulations over SA and Limpopo".

12:20 – 13:30 Lunch Break

13:30	J. Botai (U. Pretoria, South Africa) <i>"Self-similarity in predictable water vapor derived from reanalysis data"</i>
13:50	P. Oettli (U. Tokyo, Japan) <i>"Spatial patterns of OLR anomalies over the tropical region at the intra-seasonal time scale, as revealed by a self-organizing map"</i>

**5. Third Session - Dynamical Downscaling :** (Chairs: W. Landman and S. Behera)

14:10	K. Takahashi (JAMSTEC, Japan) <i>"Simulating the Western Cape Climate using ultra-high Resolution Regional Models on the Earth Simulator"</i>
14:30	J. V. Ratnam (JAMSTEC, Japan) <i>"Downscaling of SINTEX-F forecast over Southern Africa using WRF model"</i>
14:50	I. Jansen van Rensburg & Hannes Rautenbach (U. Pretoria, South Africa) <i>"Dynamical downscaling of climate circulation over Mariepskop, Limpopo"</i>

15:10	B. Hewitson (CSAG, UCT) "Framing foci: fundamental gaps in the knowledge chain"
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15:10-15:30 Tea Break

(Chair: C. Lennard)

15:30	Discussion
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**Dinner: 7.30pm**

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**Tuesday 23<sup>rd</sup>:**

**6. Fourth Session - Developments of New Generation Seasonal Forecasting -**

(Chairs: K. Takahashi and H. Rautenbach)

08:40	W. Landman (CSIR, South Africa)
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## SATREPS SYMPOSIUM – AUGUST 2011

08:40	W. Landman (CSIR, South Africa) <i>"Optimizing AGCMs for operational seasonal forecasting for southern Africa"</i>
09:00	A. Beraki (SAWS, South Africa) <i>"SAWS operational ensemble prediction system: improvement and uncertainty"</i>
09:20	J. Luo (JAMSTEC, Japan) <i>"Impact of global ocean surface warming on seasonal-to-interannual climate prediction"</i>
09:40	M. Lazenby (U. Pretoria, South Africa) & Willem Landman (CSIR, South Africa) <i>"Seasonal maximum temperature prediction skill over southern Africa:"</i>

10:00-10:20 Coffee Break

10:20	T. Tozuka (U. Tokyo, Japan) <i>"Seasonal Prediction by the University of Tokyo Coupled General Circulation Model (UTCM)"</i>
10:40	F. Engelbrecht (CSIR, South Africa) <i>"Verification of CCAM simulations over southern Africa: Reanalysis and AMIP-style runs"</i>
11:00	H. Aiki (JAMSTEC, Japan) <i>"Development of a coupled atmospheric and oceanic nonhydrostatic model for typhoon simulations"</i>
11:20	W. Sasaki (JAMSTEC, Japan) <i>"Role of vertical mixing originating from small vertical scale structures within the equatorial thermocline in an OGCM"</i>

11:40-13:00 Lunch Break

### **7. Fifth Session - Climate Informatics and Societal Applications**

(Chairs: P. Johnston & H. Sakuma)

13:00	N. Sweijd (ACCESS, South Africa) <i>"Report on ACCESS / SAWS / SATREPS meeting in April on Seasonal climate Prediction Information dissemination"</i>
13:20	H. Sakuma (JAMSTEC, Japan) <i>"Development of a Climate Information and Application System for South Africa"</i>
13:40	A. Manhique (National Meteorological Service, Mozambique) <i>"Seasonal forecasting process and relevance in Mozambique"</i>
14:00	J. Olwoch (U. Pretoria, South Africa) <i>"Using Climate Information to Understand Malaria Dynamics in Limpopo Province, South Africa"</i>
14:20	G. Zuma-Netshiukhwi (ARC, South Africa)

**SATREPS SYMPOSIUM – AUGUST 2011**

	<i>“Dissemination of agrometeorological information for improved decision-making”</i>
14:40	S. Varlamov (JAMSTEC, Japan) <i>“Web applications and tools for climate services”</i>

15:00 -15:20 Tea Break

15:20	Discussion
16:45	Concluding Remarks: T. Yamagata / H. Rautenbach / J. Adegoke