

SA-YSSP Final Colloquium Program, 29-30 January 2015
CR Swart Auditorium

29 January 2015

8:50 - Welcome and introduction to proceedings

Prof Martin Ntwaeaborwa

Research Theme and Supervisors	Time	Presenter	Project Title
THEME 12. Water futures and solutions: Developing sustained solutions to improve urban water security in South Africa			
Supervisors Dr Thokozani Kanyerere <i>Water Program, Department of Earth Sciences, University of the Western Cape, Cape Town, South Africa</i>	9:00	Mr Mayank Prakash , Department of Population Policies and Program, International Institute for Population Science, Mumbai, India	Understanding Domestic Water Consumption, Management and its Socio-economic Implication on the Informal Urban Settlements in Mumbai, India
Dr. Sylvia Tramberend <i>Water Program, IIASA, Laxenburg, Austria</i>	9:20	Ms Portia Mokoena , Department of Earth Science, University of the Western Cape, Bellville, South Africa	Application of Electrical Resistivity method to identify suitable areas for drilling shallow wells in coastal areas
Dr. David Wiberg <i>Water Program, IIASA, Laxenburg, Austria</i>			

THEME 11. Water futures and solutions: Climate change and water security in Africa

<p>Supervisors: Prof Yali Woyessa <i>Department of Civil Engineering, Central University of Technology, Bloemfontein, South Africa</i></p>	9:40	<p>Mr Alois Katiti, Department of Geography and Environmental Science, University of Fort Hare, South Africa</p>	<p>Satellite-based estimation of evapotranspiration of the Green Scheme Irrigation Projects in Namibia</p>
<p>Dr David Wiberg <i>Water Program, IIASA, Laxenburg, Austria</i></p>	10:00	<p>Ms Shelly Borga, Department of Energy & Environment, TERI University, India</p>	<p>A systemic analysis of the food-water-energy nexus for Free State, South Africa using dynamic modeling approach</p>

THEME 10. Stability and Complexity of Adaptive Ecological Networks

<p>Supervisors: Prof Cang Hui <i>Centre for Invasion Biology, Department of Botany and Zoology, Stellenbosch University, South Africa</i></p>	10:20	<p>Mr Alan de Barros, Applied Ecology – Conservation Biology, Forestry Department University of Sao Paulo -USP, Sao Paulo, Brazil</p>	<p>Individual Based Movement Models as a tool to assess statistical estimation methods applied to animal movements</p>
<p>Dr Ulf Dieckman <i>Evolution and Ecology Program, IIASA, Laxenburg, Austria</i></p>	10:40	<p>Mr Emmanuel Sweke, Marine Bioresource and Environmental Science/Fisheries Science, Hokkaido University, Japan</p>	<p>Allocation of fishing effort among different target species in North-Eastern Hokkaido, Japan</p>

TEA 11:00 - 11:20

THEME 9. Resilience Measures in Ecosystems and Socio-Economic Networks

<p>Supervisors: Dr Ursula Scharler <i>School of Life Sciences, University of KwaZulu-Natal, Durban, South Africa</i></p> <p>Prof Brian Fath <i>Department of Biological Sciences, Towson University, Towson, Maryland, USA Advanced Systems Analysis Program, IIASA, Laxenburg, Austria</i></p>	<p>11:20</p> <p>11:40</p>	<p>Ms Linlin Xia, School of Environment, Beijing Normal University, China</p> <p>Mr Arnab Banerjee, Department of Zoology, Visva-Bharati University, India</p>	<p>Development of a spatially explicit network model of urban carbon metabolism and analysis of the distribution of ecological relationships between system components: model development and a case study of Beijing, China</p> <p>Assessment of Ecosystem in Response to Fluctuations at the Producer Level Using Network Analysis</p>
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THEME 4. (GAINS) model for integrated local and regional air quality and climate modelling in Southern Africa

<p>Supervisors: Prof Harold Annegarn <i>Department of Geography, Environmental Management and Energy Studies, University of Johannesburg, South Africa</i></p> <p>Dr Peter Rafaj <i>Mitigation of Air Pollution & Greenhouse Gases Programme, IIASA, Laxenburg, Austria</i></p>	<p>12:00</p> <p>12:20</p>	<p>Mr Lucas Henneman, Department of Environmental Engineering, Georgia Institute of Technology, USA</p> <p>Ms Carmen Klausbruckner, Faculty of Law, Johannes Kepler University Linz, Austria</p>	<p>Assessing emissions levels and costs associated with climate and air pollution policies in South Africa</p> <p>Policy and legal aspects of the implementation of the GAINS-model for a GHG and air quality strategy for South Africa</p>
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THEME 3. Sustainable cities – Cities as forces for good in the environment

Supervisors:

Dr Dillip Das

*Department of Civil Engineering, Central University of
Technology, Bloemfontein, South Africa*

12:40 **Mr Tejas Rawal**, Department of
Architecture and Planning, Indian
Institute of Technology-Roorkee,
Uttarakhand State, India

Sustainable road transportation system in
Kanyakumari district, Tamil Nadu, India

Prof Michael Thompson

*Risk, Policy and Vulnerability Program, IIASA, Laxenburg,
Austria*

13:00 **Mr Serge Kubanza**, School of
Geography, Archaeology and
Environmental Studies, Wits
University, South Africa

Some Happy, Others Sad: Exploring
Environmental Justice in Solid Waste
Management in Kinshasa, the DR-Congo

LUNCH 13:20 – 14:00

THEME 13. Demographic differential vulnerability to environmental change and climate variability in sub-Saharan Africa

Supervisors:

Prof Andre Pelser

*Department of Sociology, University of the Free State,
Bloemfontein, South Africa*

14:00 **Mr Martin Flatøe**, Department of
Economics, Faculty of Social Sciences,
University of Oslo, Norway

Women, Weather, and Woes: The Triangular
Dynamics of Female-Headed Households,
Economic Vulnerability, and Climate Variability in
South Africa

Dr Raya Mutarak

World Population Programme, IIASA, Laxenburg, Austria

14:20 **Mrs Moipone Letsie**, School of
Geography, Archaeology &
Environmental Studies, Wits
University, Johannesburg, South Africa

Climate variability, impacts and coping strategies
in south-western Lesotho

THEME 5. Mitigation of air pollution and greenhouse gases

Supervisors:

Prof Charles Mbohwa

Department of Quality and Operations Management, Faculty of Engineering and Built Environment, University of Johannesburg, South Africa

Dr Manfred Strubegger

Energy Program, IIASA, Laxenburg, Austria

Prof Holger Rogner

Energy Program, IIASA, Laxenburg, Austria

14:40	Mr Leonard Azimoh , School of Business, Society and Engineering, Malardalen University, Sweden	Assessment of green mini grid as an alternative energy source to SHS for rural development in South Africa
15:00	Mr Shingirirai Mutanga , Department of Industrial Engineering, University of Pretoria, South Africa	Optimizing the electricity value of sugarcane production systems in Mauritius
15:20	Mr Munsu Lee , Department of Energy Science Sungkyunkwan University, Republic of Korea	Energy access and rural development in Southern Africa

THEME 7. Dynamical Systems in Ecology: Models, Analysis and Simulations

Supervisors:

Prof. Jacek Banasiak

*School of Mathematics, Statistics and Computer Sciences,
University of KwaZulu-Natal, Durban, South Africa*

Prof. Alexey Davydov

*Advanced Systems Analysis Program, International Institute for
Applied Systems Analysis (IIASA), Laxenburg, Austria / Steklov
Institute, Russia*

15:40

Ms Aleksandra Falkiewicz, Faculty
of Technical Physics, Informatics,
Applied Mathematics, Institute of
Mathematics, Lodz University of
Technology, Lodz, Poland

Asymptotic behavior of generalized transport
models on networks

INVITED LECTURE: Strategic positioning of systems analysis research in response to evolving global challenges, Dr Gansen Pillay, Deputy CEO, National Research Foundation, Pretoria South Africa

CLOSING REMARKS

16:30

Prof Martin Ntwaeaborwa

30 January 2015

08:50 – Welcome Prof Martin Ntwaeaborwa

09:00 – INVITED LECTURE: World population trends and adaptive capacity to climate change, Prof Wolfgang Lutz, Director: World Population Program, IIASA

Research Theme and Supervisors	Time	Presenter	Project title
THEME 8. STABILITY AND COMPLEXITY OF ADAPTIVE ECOLOGICAL NETWORKS			
Supervisors: Prof Wijnand Swart <i>Department of Plant Sciences, University of the Free State, Bloemfontein, South Africa</i>	10:00	Mrs Anette Alleman , Department of Plant Sciences, University of the Free State, Bloemfontein, South Africa	Can symbionts in soya beans reduce the incidence and severity of disease
Dr Gergely Boza <i>Evolution and Ecology Program, IIASA, Laxenburg, Austria</i>	10:20	Mr Michael Chung , Department of Plant Sciences, University of the Free State, Bloemfontein, South Africa	The influence of sorghum root physiology on rhizosphere interactions and their effect on incidence of root disease
Dr. Ulf Dieckmann <i>Evolution and Ecology Program, IIASA, Laxenburg, Austria</i>			

THEME 2. Social acceptance of land use requirements for renewable energy in South Africa: Critical considerations

<p>Supervisors: Dr Vain Jarbandhan <i>Department of Public Governance, University of Johannesburg; South Africa</i></p> <p>Dr Nadejda Komendantova <i>Risk, Policy and Vulnerability Programme, International IIASA, Laxenburg, Austria</i></p>	<p>10:40</p>	<p>Mr Elvis Nkoana, Institute for Environment and Sustainable Development, University of Antwerp, Belgium</p>	<p>"How does climate change awareness impact perceptions of major risks in rural and township areas of Limpopo Province, South Africa?"</p>
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TEA 11:00-11:20

THEME 1. Extract of Africa: Towards the equitable and ecologically-sound governance of mining and drilling

<p>Supervisors: Dr Ikechukwu Umejesi <i>Department of Sociology, University of South Africa, Pretoria, South Africa</i></p> <p>Prof Michael Thompson <i>Risk, Policy and Vulnerability Program, IIASA, Laxenburg, Austria</i></p>	<p>11:20</p> <p>11:40</p>	<p>Ms Maria Rivera, Department of Geography, University of Maryland, USA</p> <p>Mr Emmanuel Vellemu, Institute for Water Research, Rhodes University, South Africa</p>	<p>To REDD or not to REDD? Arriving at 'clumsy' solutions to reform the governance of Reducing Emissions from Deforestation and Forest Degradation (REDD)...BUT ALSO is it appropriate for the Virunga Park, DRC?</p> <p>The enemy at the Gate: Can the cultural theory approach save the day? The case of acid mine drainage in Mpumalanga, South Africa</p>
<p>CLOSING REMARKS</p>	<p>12:00</p>	<p>Prof David Katerere</p>	

LUNCH 12:30 – 13:30