

UFS-DiMTEC Symposium on climate resilience and water

Facilitated by:

Disaster Management Training and Education Centre for Africa (DiMTEC), University of the Free State,

Venue: University of the Free State, Bloemfontein, South Africa

| Time | Wednesday 22 February 2017: Climate Resilience | |
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| 08h30 – 09h00 | Arrival And Registrations (GvC) | Facilitator |
| 09h00 – 09h10 | Symposium Orientation. (Prof AJ Jordaan: Disaster Management Training and Education Centre for Africa (DiMTEC), University of the Free State) | AJJ |
| 09h10 – 09h20 | Welcome address. (Prof Corli Withunn. Vice Rector: Research. UFS) | AJJ |
| 09h20 – 10h00 | Space activities in support to climate change mitigation and climate resilience Keynote address (Cosmonaut Dr. Dumitru Prunario, President World Cosmonaut Society,) | AJJ |
| 10h00 – 10h30 | Building a climate resilient society through disaster risk reduction; Strategies from Government. (Dr Mmaphaka Tau, Head: National Disaster Management Centre, South Africa) | AJJ |
| 10h30 – 11h00 | Refreshments / Building linkages | |
| 11h00 – 11h30 | Building a Climate Resilient Society in Africa; International trends in Inter- and Trans Disciplinary Research. (Prof AJ Jordaan: Disaster Management Training and Education Centre for Africa (DiMTEC), University of the Free State) | JB |
| 11h30 – 11h55 | Building social resilience under climate shocks (Prof Kees Boersma, Vrije Universiteit Amsterdam, Nederland) | JB |
| 11h55 – 12h20 | Improving Crop Water Productivity and Food Security of irrigation systems under Limited Water Resources (Dr. J. Grundmann, TUD, Germany) | JB |
| 12h20 – 12h45 | Future Climate Change and its Effect on Yield in Selected Semi-arid Areas of Southern Africa (SADC). Dr. Weldemichael Tesfahuney. Soil- and Crop- and Climate Sciences | JB |
| 13h00 – 14h00 | Lunch | |
| 14h00 – 14h25 | The use of UAV's for resilience building (Prof. Agoston Restas. Head: Institute of Disaster Management, Department of Fire Prevention and Rescue Control, National University of Public Service, Budapest, Hungary) | DJ |
| 14h25 – 14h50 | Climate Resilience and Emergency Response Preparedness in the Pacific region. (Dr Joerg Szarzynski, United Nations University, Bonn, Germany) | DJ |
| 14h40 – 15h10 | Climate Resilience and NATECH Catastrophes; Exploring the Link. (Prof Z Torok. Research Institute for Sustainability and Disaster Management ISUMADECIP, Faculty of Environmental Engineering, University Babeş-Bolyai, Cluj Napoca, Romania) | DJ |

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| 15h10 – 15h30 | Coffee/break | |
| 15h30 – 15h50 | Wetland management for DRR. (Mr J. Belle. DiMTEC. University of the Free State.) | OK |
| 15h50 – 16h15 | Regenerative development strategies for water use to mitigate the impact of climate change on small towns in South Africa. (Anita Venter. IGS & Centre for development support (CDS)) | OK |
| 16h15 – 16h30 | Summary (Prof Maitland Seaman) | |
| 19h00 | Conference dinner. Centenary hall. | |

| Thursday 23 February 2017: Water | | Facilitator |
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| 08h30 – 09h00 | Arrival And Registrations (GvC) | |
| 09h00 – 09h20 | Welcome address (Prof Danie Vermeulen: Dean; Faculty of Natural & Agricultural Science, University of the Free State) | AJJ |
| 09h20 – 09h50 | Challenges of Water Management in South Africa: From the Present into the Future (Prof Roland E. Schulze, Professor Emeritus of Hydrology. Centre for Water Resources Research, School of Agricultural, Earth and Environmental Sciences, University of KwaZulu-Natal, Pietermaritzburg) | AJJ |
| 09h50 – 10h20 | High resolution monitoring for integrated assessment of water management impacts. (Dr. Dirk Jungmann Inst. of Hydrobiology, Technical University Dresden (TUD), Germany) | AJJ |
| 10h20 – 10h50 | Refreshments / Building linkages | |
| 10h50 – 11h15 | Drinking water relevance of compounds released from cyanobacteria, (Dr. H. Börnick, H. et al Inst. of Water Chemistry, TUD, Germany) | JS |
| 11h15 – 11h40 | An inverse modeling approach to support the characterization of karst conduit networks by evaluating multiple spring signals. (Prof. Dr. R. Liedl, Inst. of Groundwater Management, TUD, Germany) | JS |
| 11h40 – 12h30 | Managing water shortages during extreme droughts: Case of 2015/2016 drought disaster in KZN (Mr J. Ndlazi. Head: KZN Provincial Disaster Management Centre, Pietermaritzburg) | JS |
| 12h30 – 12h45 | TBA (Prof. Dr. Stefan, C. et al. Institute of Waste Management Circular Economy, TUD, Germany) | JS |
| 13h00 – 14h00 | Lunch | |
| 14h00 – 14h25 | Water quality classification and catchment modeling of the Goreangab Dam in Windhoek (J. Seegert, Inst. Of Urban Water Management, TUD, Germany). | ZT |
| 14h25 – 14h50 | Water Footprint Assessment to inform sustainable water use for food production. (MP Mohlotsane, M Scheepers, P Nkhousa, Y Mahlati, E Owusu-Sekyere, H Jordaan. Dept. Agric Economics, University of the Free State). | ZT |
| 14h40 – 15h10 | Mine Water Management in a Game Reserve. (Anton Lukas. Institute for Groundwater Studies (IGS)) | ZT |
| 15h10 – 15h30 | Refreshments / building linkages | |
| 15h30 – 15h50 | Agricultural water scenarios 2030 (Prof AJ Jordaan: Disaster Management Training and Education Centre for Africa (DiMTEC) and Dr Abioden Ogundeji, Department Agriculture Economics, University of the Free State) | MS |
| 15h45 – 16h00 | Conference Summary (Prof Maitland Seaman) | MS |

About our keynote speakers:

Cosmonaut Dumitriu Dorin Prunariu holds a degree in Aerospace Engineering. He participated in the Soviet Unions' IINTERCOSMOS program and completed an eight day mission on board Soyuz 40 and Salyut 6 space laboratory where he and Leonid Popov completed scientific experiments in the fields of astrophysics, space radiation, space technology, space medicine and biology. Prunariu was the 103rd human being in Outer Space.



Prunariu hold the Air Force rank of Lt. Gen (ret). Prunario was Deputy Minister of Transportation and Chief of Civil Aviation in Romania. Since 2000 he is an Associate Professor in Geo-politics at the Academy for Economic studies in Bucharest. Prunariu was also chairman of the Technical and Scientific sub committee to UN COPUOS from 2010 to 2012. He was Director of the Romanian Office for Science and Technology to European Union in Brussels and he was one of 15 experts appointed by the United Nations Secretary General to implement outer space transparency and confidence building measures.

Prunario is a founding member of the Association of Space Explorers (ESA). Between 1993 and 2004 he has been the permanent representative of ASE at the United Nations Committee on the Peaceful Uses of Outer Space activities. He organised international workshops of the ASE International Panel on Asteroid Threat Mitigation and was the main facilitator in promoting the ASE International Panel's Report "*Asteroid Threats: A Call For Global Response*". He was elected President of ASE International in 2011. Prunario received the following awards:

- In 1981, after completing the Soyuz 40 mission, Prunariu received the awards of Hero of Romania and Hero of the Soviet Union.
- In 1982 Prunariu was awarded the *Yuri Gagarin* medal of the International Astronautic Federation.
- In 1984 he was awarded the *Hermann Oberth Gold Medal* by the German Rocket Society *Hermann Oberth - Wernher von Braun*.
- On 1 December 2000, Prunariu was appointed a Grand Officer of the Order of the Star of Romania.
- On December 1st 2010 he was awarded by the President of Romania the Order *Aeronautical virtue*.
- On April 12 2011 Prunariu was awarded by the President of the Russian Federation the *Medal for Merits in Space Exploration*.
- On November 15 2011, Prunariu was elected as an Honorary Member of the Romanian Academy.
- Prunariu is a Doctor Honoris Causa of several universities from Romania, Republic of Moldova and USA.
- Prunariu is a Honorary Citizen of several cities in Romania.

Prof. Roland Schulze (PhD, University of Natal), is a Fellow of the Royal Society of South Africa and Member of the Academy of Science of South Africa. Retired Professor of Hydrology at the University of KwaZulu-Natal, he is now a Senior Research Associate at that University and a mentor / consultant to Government and the South African and international water and agricultural industries. Originally a hydrological model developer, his main focus nowadays is on climate change issues (vulnerability, impacts, adaptation as well as policy) in the water and agricultural sectors, on hydro-climatic mapping and integrated water resource management. In the climate change field he has lead numerous multi-institutional research projects with national and international funding. Author of over 500 scientific publications, he also has wide international lecturing and collaborative research experience. Prof Schulze until recently served on the Minister's National Water Advisory Council.

