

Topics and Speakers for specific Faculties and Interest Groups

International Conference "Freedom – Our Responsibility" 26 – 30 Sept. 2014 UFS Bloemfontein

Content Page

2 Science, Engineering & Technology 1

Faculties and Fields of Interest

2 Science, Engineering & Technology

Arun Sam Amirtham, Switzerland, India
 The Significance of Solar Photovoltaics and other Forms of Renewable Energies in the Transformation to a Sustainable Society

The widespread use of electricity through the deployment of the electrical grid has failed over 1.5 billion people world-wide. Many of them reside in sub-Saharan Africa. Luckily, the region is blessed with abundant sunshine, which makes the use of solar electricity extremely viable. Society sees a paradigm shift with renewable energies, particularly solar. **Energy generation becomes perfectly scalable**, customers are turned into entrepreneurs and the remotest regions can be reached since everyone is connected to the sun! A combination of appropriate technology, capacity building and affordable financial models are necessary to leverage the technology in the interest of local communities worldwide. Arun Amirtham is the Executive Director of swissmango gmbh

- Still in negotiation is a very innovative way of **storing energy**, either in smaller units or in big units that can supply even hospitals in times of power breakdowns. Its origin lies in South Africa. We will soon be able to tell more.
- Hans Rudolf Herren, Kenya, Switzerland, USA
 Sustainable Ecological Development in Agriculture

Plant protection, Food Security & Land

Winner of the Right Livelihood Award 2013 and Winner of the World Food Prize Founder and President of *Biovision - Foundation for Ecological Development*

President of the Millennium Institute in Washington DC (USA)

Herren was honored with the prize due to his success in combating the cassava mealy bug, a pest rampant in all of Africa, with wasps and ladybirds – a chemical-free method which incurred no costs to farmers. The "**Push-Pull-Method**" as an integrated, sustainable way of farming that dramatically improves maize yields and soil fertility.

In this way Herren prevented mass famine in Africa and South America.

At the Institute for Insect Physiology and Ecology (ICIPE) in Nairobi Herren subsequently



made sure that intensive research was undertaken to find **new methods to control pests** that infest plants, destroy crops, kill animals and spread hunger and disease.

He developed the *ICIPE* into a world-leading centre of excellence - particularly in the area of **malaria mosquito control**.

Herren co-chaired the *International Assessment of Agricultural Knowledge Science and Technology (IAASTD)* with Prof. Judi Wakhungu and is currently involved in making sure that a Change in Course of Global Agriculture is reflected in the *Sustainable Development Goals (SDGs)* currently being defined to replace the *Millennium Development Goals* after 2015.

For other faculties and fields of interest & more information about the speakers please check http://zafor.org/contributors/speakers on www.zafor.org

1 Natural, Agricultural & Building Sciences

- 1.1 Agriculture & Food Security
- 1.2 Water Retention System & Reclamation of Land
- 1.3 Architecture & Town Planning

2 Science, Engineering & Technology

3 Economic & Management Sciences

- 3.1 Leadership & Ethics
- 3.2 Economy & Management
- 3.3 Community Building, Empowerment, Micro-Financing, ...

4 Law, Constitution & Conflict Resolution

- 4.1 Law & Conflict Resolution
- 4.2 Constitution

5 Human Sciences & Theology

- 5.1 History & Policy Studies
- 5.2 Psychology, Philosophy, Theology, Sociology
- 6 Education
- 7 Health Sciences
- 8 Film & Arts