



CHALLENGES OF THE
BIOECONOMY

MESSAGES
 FROM THE 2017 CAETS
CONVOCATION

presented by Felix Reinders

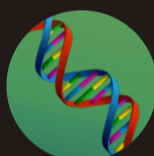
**4 September 2018 | 17h00 for 17h30 | Lecture Hall I,
 Engineering 3, University of Pretoria**

The urgent need for the sustainable use of natural resources and the notable advances in the field of biology have paved the way for the expansion of a bio-based economy. The bioeconomy addresses the use of renewable biological resources and their conversion into products, ranging from food and feed to other bio-based products and bio-energy. It demands innovative techniques for the production, processing, storage, consumption, recycling and disposal of natural resources. Thus, bioeconomy brings together the various sectors of the economy that are related to biological resources (agriculture, forestry, fisheries, food, bio-based chemicals & materials and bio-energy). The presentation will touch on:



THE FUTURE OF FOOD – issues relating to the successful and reliable production of sufficient, nutritious food for meeting the future needs of communities locally and world-wide.

GENETIC ENGINEERING – development of the historic, natural genetic modification of plants and animals to meet the needs of and enable the growth of ancient civilizations in a new era of genetic engineering that extends this process beyond single traits of species to “rewire” complex metabolic, sensorial and developmental circuits of species, and even the engineering of new genes.



THE BLUE BIOECONOMY – increasing the sustainable utilisation of the oceans and inland waters to make a significant contribution to food security for a growing global population.

ENERGY – world-wide responses to climate change include deep and widespread changes in the energy sector, including the rapid expansion of electricity production from naturally occurring sun and wind, and increasing interest in the energy potential of biomass.



This lecture is open to the public, and will be followed by light refreshments (courtesy of the South African Academy of Engineering - SAAE)

Please RSVP (for catering purposes) to Ms Heleen Duffey by 30 August 2018 at office@saae.co.za

Presented with the support of the University of Pretoria and NSTF/proSET:



Felix Reinders PrEng SAAE was a member of the SAAE delegation to the CAETS meetings in Madrid, Spain, in November 2017. He is the President of the International Commission on Irrigation & Drainage (ICID) and manages the Irrigation & Drainage Engineering Division at the Agricultural Research Council's Institute for Agricultural Engineering in Pretoria. He is a Past President of the SA Institute of Agricultural Engineers (SAIAE) and of the SA Irrigation Institute (SABI).

Directions to the Lecture Hall I, Engineering 3, University of Pretoria:

Hatfield Campus / Hatfieldkampus / Khamphase ya Hatfield S 25° 45' 21" E 28° 13' 51"



- Enter the UP Campus via University Road
- Park at Visitors' parking Engineering 3 (building 31)
- Use the lifts to the 6th level
- Use the stairs to the 5th level to find lecture halls 3.1 - 3.7

Map updated December 2015. Disclaimer: While every effort has been made to ensure that the information provided on this map is current and accurate, users should not assume that this is a warranty of any kind. The University of Pretoria makes no representation or warranty of any kind, whether expressed or implied, regarding the accuracy of the map. The University of Pretoria, its employees, officials, suppliers, agents and/or representatives shall not be liable for any loss or damage suffered by the user, whether direct, indirect or consequential. For any opinions of employees and/or representatives please contact the relevant department. Kaart 1000 bygewerk Desember 2015. Byvoornemende verskoning: Terwyl elke poging gemaak is om te verseker dat die inligting wat op hierdie kaart verskyn betrek tot die akkurate inligting, behoort geleesers nie te aanvaar dat dit dwarsdeur die dwars is. Die Universiteit van Pretoria aanvaar geen aanspreeklikheid vir enige verlies of skade wat voortvloeit uit die gebruik van hierdie kaart. Die Universiteit van Pretoria, sy werknemers, ambagsaamstellers, agente en/of verteenwoordigers aanvaar geen aanspreeklikheid vir enige verlies of skade wat voortvloeit uit die gebruik van hierdie kaart. Die Universiteit van Pretoria, sy werknemers, ambagsaamstellers, agente en/of verteenwoordigers aanvaar geen aanspreeklikheid vir enige verlies of skade wat voortvloeit uit die gebruik van hierdie kaart.