



## INVITATION

### 12<sup>th</sup> IPHE Education & Outreach Event

December 4, 2018



science  
& technology

Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA

SANLAM Auditorium, University of Pretoria

The International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE, [www.iphe.net](http://www.iphe.net)) is an international inter-governmental partnership whose objective is to accelerate the transition to clean and efficient energy and mobility systems using fuel cells and hydrogen (FCH) technologies. It provides a forum for sharing information on policies and technology status, as well as on initiatives, codes, and standards to accelerate the cost-effective transition to the use of FCH globally.

IPHE also informs stakeholders and the public on the benefits of, and challenges to, establishing widespread commercial FCH systems in the economy. The IPHE's 18 country and 1 regional (EU) partners have committed to collaborating to advance the commercialization FCH technologies in an effort to enhance the security and efficiency of their energy systems, to help address environmental objectives, and, to grow their economies.

An IPHE *Education & Outreach Event* is organized in conjunction with the semi-annual meeting of the IPHE Steering Committee. This half-day event provides an opportunity for students to meet international experts and IPHE delegates, and, to exchange views and information on the developments in FCH technologies including an overview of the current technical and market status of FCH in different countries. It also offers the opportunity to learn about research and potential employment perspectives. The event language will be English.

<b>Date:</b>	Tuesday, December 4 <sup>th</sup> , 2018
<b>Time:</b>	Poster Exhibition 11:00 – 16:00 IPHE Student Outreach Event 13:30 – 18:00
<b>Venue:</b>	SANLAM Auditorium, Hatfield Campus of the University of Pretoria

Please register by Nov 27<sup>th</sup>, 2018, <https://www.hysa-padep.co.za/registration/> if you wish to attend.

We are looking forward seeing you at the University of Pretoria.

Dr. Cosmas Chiteme  
Dept of Science & Technology  
Government of South Africa

Dr. Jürgen Garche  
Eric Barker  
Greg Kleen  
Co- Chairs, IPHE Education &  
Outreach Working Group



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## Overview

The IPHE welcomes students to meet international delegates, learn about the latest developments in fuel cells and hydrogen (FCH), exchange views, and ask questions about FCH developments. The event will provide insights from leading countries, and the latest progress in South Africa.

## Agenda

### 13:00 Registration and Coffee

### 13:30 Welcome

- Dr. Rebecca MASERUMULE, Chief Director, Hydrogen and Energy, Department of Science and Technology
- Dr. Sunita SATYAPAL, Chair of the IPHE

### 13:45 Session 1: Perspective on Fuel Cells and Hydrogen (FCH) Developments in South Africa

- Dr Dmitri BESSARABOV, Director, HySA Infrastructure: *Renewable hydrogen production, compression and storage*
- Dr Sharon BLAIR, Director, HySA Catalysis: *Progress on catalyst and MEA development*
- Dr Sivakumar PASUPATHI, HySA Systems: *Integration and validation of niche fuel cell powered vehicles*

### 15:00 Coffee Break

### 15:15 Session 2: International Overview on FCH Developments

- Professor Paulo Emilio de MIRANDA, Federal University of Rio de Janeiro, COPPE/UFRJ, Brazil: *Hydrogen and Fuel Cell Research Activities in Brazil*
- Professor Jürgen GARCHE, University of Ulm, Germany: *Ways to Increase Efficiencies of Fuel Cells and Electrolysers*
- Professor Cunman ZHANG, Institute of Fuel Cell Composite Sources, School of Automotive Studies, Clean Energy Automotive Engineering Center, Tongji University, China: *The R&D Activities of Hydrogen Technology in Tongji University*
- Dr. Laurent ANTONI, President, Research Grouping of the FCH Joint Undertaking: *European Research in Hydrogen & Fuel Cells: Hydrogen as Enabler for a Zero-Emission Society*
- Dr. Christopher HEBLING, Director, Hydrogen Technologies Division, Fraunhofer Institute for Solar Energy Systems, Freiburg, Germany: *Hydrogen as Part of an Integrated Energy System in Germany*
- Greg KLEEN, Fuel Cell Technologies Office, United States Department of Energy: *U.S. Department of Energy Hydrogen and Fuel Cell Technology Overview*
- Eiji OHIRA, Director, Advanced Energy Systems and Structure Division, New Energy and Industrial Technology Development Organization: *Japan's Current Policy and Activity Toward Realizing Hydrogen Based Society*

### 17:30 Session 3: Poster Awards Ceremony

- Award ceremony for top Doctoral Student posters
- Award ceremony for top Masters Student posters

### 17:50 Summary and Closing Remarks: Professor Kjell Hugo BENDIKSEN, Chair of the HySA Programme Advisory Board

### 18:00 Adjourn – Drinks and Snacks Served