

## KEYNOTE SPEAKERS

Selected international keynote speakers provide comprehensive overviews of recent developments. The speakers come from fields of civil engineering, architecture, materials technology, environment, sustainability, education, politics, and social sciences. The keynotes provide the basis for the workshop discussions.

**Dr. Andreas Rogge** | *BAM, Germany*

Future challenges of construction engineering and perspectives for Africa

**Delphina Namata Musisi** | *The Griot Introspect, Ghana*  
Democratisation of form

**Prof. Karen Scrivener** | *EPFL, Switzerland*

Eco-efficient carbon free cement and concrete industries

**Prof. John Provis** | *University of Sheffield, UK*

The right material for each job – the need for a toolkit of cements

**Dr. Wolfram Schmidt** | *BAM, Germany*

Engineering skill requirements to cope with the local and global challenges of the future

**Prof. Ghada Bassioni** | *Ain Shams University, Egypt*

The blue-sky research – applied science and engineering interrelationship in an African context

**Prof. Mark Alexander** | *University of Cape Town, South Africa*

International research networking and the role of Africa within the international research community

**Prof. Daman Panesar** | *University of Toronto, Canada*

Engineering design: an approach towards sustainable site-specific solutions with global considerations

**Tina Nyamache** | *Village Capital's Associate, Operations - Partnerships Africa, Kenya*

The discipline to pursue less (but better)

**Murray Metcalfe** | *University of Toronto, Canada*

Crossroads: sustainable infrastructure + entrepreneurship + online engineering education in 21<sup>st</sup> Century Africa

**Busisiwe Legodi** | *Former CIMERWA Ltd CEO, South Africa*  
Laid back mentality

**Dr. Kolawole Adisa Olonade** | *University of Lagos, Nigeria*  
Fostering innovation through research and education for infrastructure development: a call for synergy between town and gown

**Prof. Yunus Ballim** | *Sol Plaatje University, South Africa*  
Reflections on the civil engineering curriculum for engaged social development in the 21<sup>st</sup> century

**Prof. Ole Mejlhede Jensen** | *Danmarks Tekniske Universitet, Denmark*

Knowledge transfer from universities: to students and to practice

**Prof. Funso Falade** | *University of Lagos, Nigeria*  
Educational tools and curricula development for the advancement of engineering education in Africa

**Prof. Robert Tchitnga** | *Université de Dschang, Cameroon*  
Appropriate high level physics solutions in developing countries – a cooperative approach to bridge scientific education and engineering

**Prof. Mammo Muchie** | *Tshwane University of Technology, South Africa*

Networked and unified innovation system roadmap for African smart, green and integrated development in the 4<sup>th</sup> Industrial Revolution

## REGISTRATION

### Who should attend?

There is no restriction. Every person, who thinks can contribute towards the objectives of the conference, regardless of age, title, gender, or origin is invited to attend. Attendance is free, but the number of participants is limited. Please register with a short statement about your interest in the conference.

### How to apply?

Please register via the registration form that can be found on the website: <http://isee-africa.com/registration>

### Dates:

30 January 2019 to 1 February 2019

### Venue:

Ole-Sereni Hotel  
Off Mombasa Road, Nairobi, KENYA  
Conference room rate: 160 USD

### Contact:

Dr. Wolfram Schmidt  
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### Under the patronage of:

Dir. and Prof. Andreas Rogge | *BAM*  
Prof. Funso Falade | *University of Lagos and AEEA*  
Prof. Robert Tchitnga | *Université de Dschang, University of Ulm*

### With support of:



# INNOVATION – SCIENCE ENGINEERING – EDUCATION

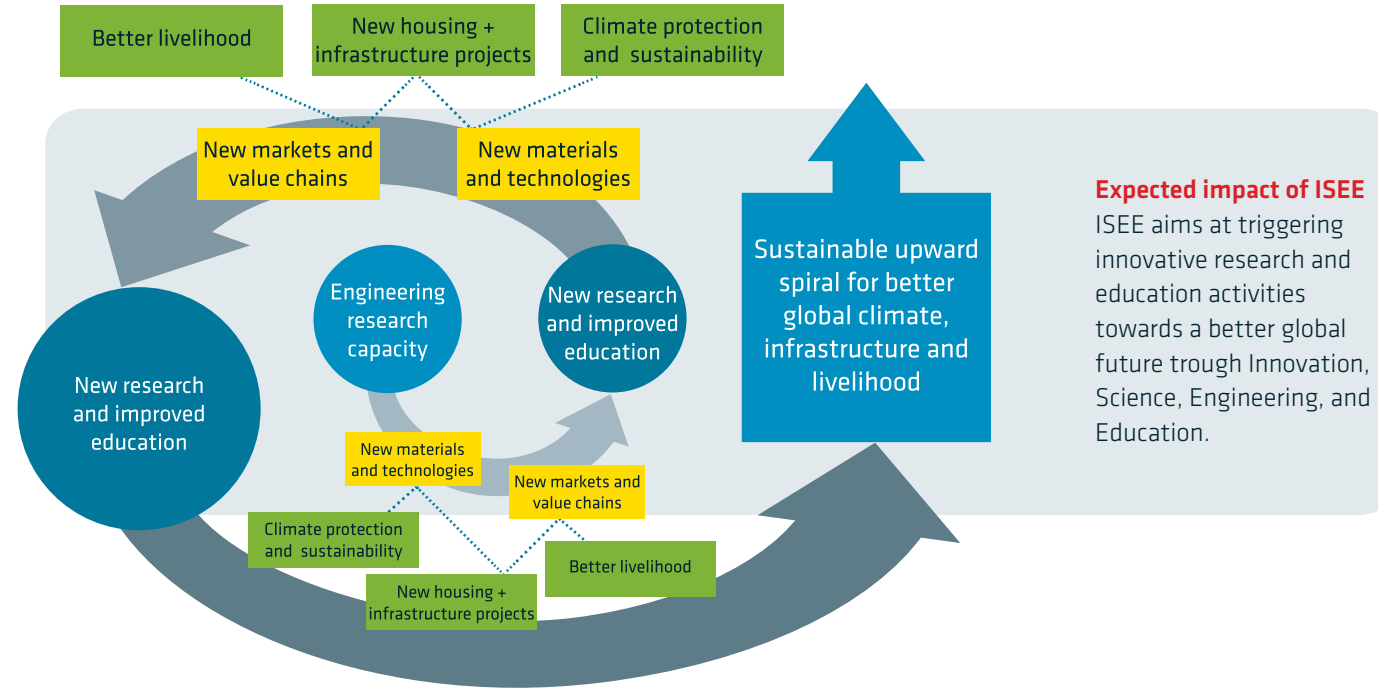
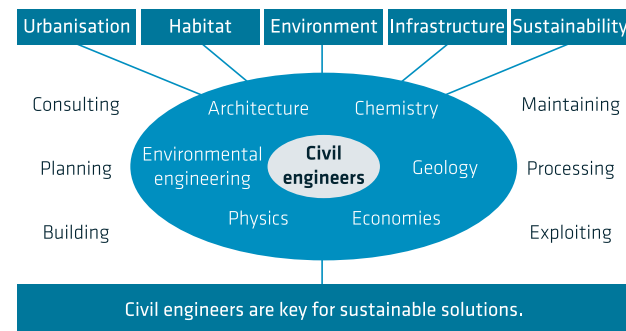
30 January to 1 February 2019  
Nairobi, Kenya

# OBJECTIVES OF THE ISEE CONFERENCE

ISEE stands for Innovation, Science, Engineering and Education. The conference aims at connecting multiple experts and change drivers linked to construction technology, society, and education. Topics of construction and sustainable materials will be linked to educational challenges and discussed jointly. The specific objective is to deliver credible solution strategies for enhanced education for a new generation of decision makers with higher awareness of global and environmental challenges as well as innovation potentials.

## Challenges for civil engineers and architects in the future

By exploiting resources and defining the shapes and function of our structures and infrastructures, civil engineers and architects have been highly responsible for the global challenges of the 21<sup>st</sup> century. Conscious planning and responsible use of global resources is therefore key to a sustainable global future.



## Importance of education for a sustainable future

Civil engineers and architects today are exposed to a rapidly changing world. Due to the digital transformation, global value and supply chains, and the urgent need to build environmentally friendly, their professional specifications have little in common with their profiles in the past, and the future will bring additional and different challenges. Contemporary teaching content and educational tools are therefore the only way to adequately educate the next generation of engineers, architects and decision makers to the benefit of the entire world.

## Africa's potentials

Africa is emerging rapidly, and construction activities are at the onset of a rapid incline. Africa has potential to develop and implement best practice solutions, avoid earlier mistakes, and skip technologies of a past era – the starting position is better than for any other region in the world. Thus, construction innovation from Africa can spark innovation all over the world. However, for innovation driven and sustainable construction technologies to emerge, the next generation of civil engineers and architects need awareness of the challenges, alertness about innovative and sustainable technologies and deeper understanding of their fundamental backgrounds. Therefore, the ISEE conference aims at developing strategies for the education of more science driven, conscious engineers.

# WORKSHOP TOPICS

## Topics to be addressed in the workshops:

All participants are invited to actively contribute towards the conference topics. The workshops aim at creating a variety of opinions and solution strategies. The objective is to obtain a vivid picture of the global situation from a large variety of attendants from all over the world.

-  Global and local challenges and/or potentials in construction
-  Potentials for sustainable construction based on education
-  Future skill requirements in civil engineering, architecture and materials
-  Global research and education requirements
-  African research and education requirements
-  Contemporary teaching methods
-  Gender issues in STEM education
-  Language and communication barriers