



Frontiers of Engineering for Development Symposium:

Sustainable Global Wellbeing

Welcome Pack

Date: 17-20 September 2017

Location: The Oxford Union, Oxford, UK

Welcome from the Chairs

As Chairs, we are delighted to welcome you to the second Royal Academy of Engineering *Frontiers of Engineering for Development* Symposium.

You have been invited to this event because you are amongst the future leaders in engineering. Your participation in this symposium will open doors to a global network of talented researchers and provide you with career opportunities. You are also joining a broader network of people who aim to make a real difference. We hope you will take this opportunity to talk, share ideas and explore interdisciplinary approaches to address grand challenges faced by our planet.

Engineering and technology can contribute to addressing the world's most pressing development challenges, from provision of essential water and energy services, to enhancing resilience to natural hazards and opening up opportunities for trade and growth. This symposium aims to promote international development, encourage collaborative work and facilitate cross-disciplinary thinking among the next generation of engineering leaders.

Challenge-led research at the frontiers of traditional disciplines is particularly likely to lead to real economic and social impacts. If we want to resolve these challenges, we need to connect the future leaders in engineering by building strong links between academia, business and government from all over the world. The Academy, through its *Frontiers of Engineering for Development symposia* and its *seed funding*, is proud to promote capacity building and pathways to impact for engineers who are tackling global challenges.

We hope that the symposium is enjoyable, exciting and productive, and we wish you every success.

David Clifton
University of Oxford

Jennifer Whyte
Imperial College London

Introduction to the Royal Academy of Engineering

As the UK's national academy for engineering, the Royal Academy of Engineering brings together the most successful and talented engineers from across the engineering sectors to advance and promote excellence in engineering.

The Academy is a delivery partner of the UK Government's *Global Challenges Research Fund* that supports cutting-edge research to address the challenges faced by developing countries. In this regard, the Academy has developed several programmes, including the *Frontiers of Engineering for Development*.

Introduction to Frontiers of Engineering for Development

Frontiers of Engineering Symposia aim to bring together 60 of the best early-career researchers from industry, academia, NGOs and the public sector in multidisciplinary workshops that address fundamental development challenges.

The objectives of these symposia are to encourage collaborative work which address international development challenges and promotes cross-disciplinary thinking among the next generation of engineering leaders. A competitively allocated Seed funding is available to strengthen the collaborations developed at the symposium.

Structure of the symposium

The symposium will consist of 3 sessions over 2.5 days interspersed with networking opportunities, receptions and dinners.

Themes

- **The Future of Global Health**
- **Sustainable Cities and Infrastructure**
- **Innovation for Sustainable Development**

The themes are described in more detail via [this link](#)

Networking opportunities

- Networking dinner
- Participant countdown
- Monday dinner
- Making connections
- Away afternoon – Boat tour
- Linking up
- Writing proposals – Seed funding

All the networking sessions will be described in more detail on page 7.

Funding opportunity - Frontiers of Engineering for Development – Seed fund 2017/2018

Participants are invited to apply for the Frontiers of Engineering for Development Seed fund, where £20,000 per award is available to help kick-start a new interdisciplinary collaboration.

You will find more details and via [this link](#), and in the guidance note, attached. If you think you will apply for the funding it is worth forewarning the relevant authorities before the event, as the timeline for gaining institutional approval for your application will be very tight.

IMPORTANT INFORMATION

Before you travel

Travel to UK

Your travel in or to the UK should be arranged by Key Travel. If it is not already arranged, please contact them directly referencing "MBUYUU". You can email eventtravel@keytravel.com or call +44 (0)161 819 6863.

Please note that if you are travelling from outside of the UK, you are responsible for arranging and paying for your own transport to and from your airport of origin.

On your arrival

Arrivals by air: if you have booked your travel with Key travel, they will arrange airport transfer to the accommodation for you, grouping you into taxis with other participants where possible. If you have booked air travel yourself and would like Key to arrange your airport transfer, please contact them directly with the details above.

Arrivals by train: please make your own way to the accommodation from the station – this is either a 20min walk (map on page 11) or a short bus ride on public transport.

Accommodation

Bookings for all participants have been made at [St Anthony's College](#). Please note that unless you specified otherwise in your registration form, you will only be booked in between 17-20 September. Please get in touch urgently if you require extra nights and have not already let us know. Note that breakfast will be served between 7.30 and 8.30 only, and only on 18-20 September. Participants arriving before or staying after the event, please keep any receipts for reimbursement.

What to Prepare

1-minute presentation (without slides)

On the first day, you are invited to present yourself and your work. Please make sure you have prepared this before you arrive.

What to expect

The symposium aims to develop capacity, encourage challenge-led interdisciplinary research and create the right conditions for future funding bids. To make the most of the event, make sure you:

- Check out the participant list (Page 8-9) and their bios
- We encourage you to leave your phone and emails behind during the day
- Participate fully
- Attend all sessions and activities

What to bring

Equipment

Please bring your personal laptop, and adaptor (for UK power sockets). **Please contact the Academy if you do not have access to your own laptop.** We hope for lovely weather, but sadly this can't be guaranteed. The British autumn can be **very cold and wet**, so please ensure you bring appropriate warm clothing as well as rain gear or a raincoat.

Business Cards

Please be sure to bring your business cards.

Documentation

Any material you might need about your research/innovation/technology during the symposium.

Personal belongings and dress code

Please do not forget your passport and visa if required. The dress code is business casual – you can leave your suit at home! You will have an external activity so please do bring cash to cover your personal costs.

AGENDA

SUNDAY		
From 15.00	Participants arrive and check-in	St Anthony's College
17.00	Registration and Reception	The Anchor
18.00	Ice breaker	The Anchor
19.00	<i>Welcome Dinner</i>	The Anchor
MONDAY		
09.00	Welcome	Oxford Union Debating Chamber (DC)
09.30	Participant Countdown	DC
11.00	<i>Tea and coffee break</i>	Goodman Library (GL)
11.30	Session 1: The Future of Global Health	DC
13.30	Lunch	GL
14.30	Session 2: Sustainable Cities and Infrastructure	DC
16.30	<i>Tea and coffee break</i>	GL
17.00	Free Time	
18.00	Dinner	Oxford Union Macmillan Room
TUESDAY		
09.00	Session 3: Innovation for Sustainable Development	DC
11.00	<i>Tea and coffee break</i>	GL
11.30	Making Connections	DC
13.00	Lunch	GL
14.30	Boat trip	Collection from outside the venue
17.00	Free time	
19.00	Dinner	St Peters College
WENDESDAY		
09.00	ODA Funding Landscape, and Seed funding opportunities	DC
10.30	<i>Tea and coffee break</i>	GL
11.00	Linking up – planning the proposals	DC
12.00	Writing Proposals – Seed Funding <i>Working lunch will be served from 13.00</i>	DC/GL
13.30	Closing Comments	DC
14.00	Departure	

THEMES

The event title, *Sustainable Global Wellbeing*, will be explored through the following themes:

The future of global health

Session co-chairs: Maoyi Tian, The George Institute for Global Health, China

Session co-chairs: Louise Thwaites, Oxford Clinical Research Unit, Ho Chi Minh City

Speaker: Ajay Vamadevan, CCDC India

Speaker: Li-Qun Xu, China Mobile Research Institute

Speaker: Million Mufata, University of Malawi

Speaker: Walter Karlen, ETH Zurich

Sustainable Cities and Infrastructure

Session co-chairs: Ana Mijic, Imperial College London

Session co-chairs: Rodrigo Velasco, U. Piloto de Colombia - F3D

Speaker: Brittany Harris, Buro Happold

Speaker: Neil Carhart, University of Bristol

Speaker: Priyanka Jamwal, Ashoka Trust

Speaker: Tse-Hui Teh, University College London

Innovation for Sustainable Development

Session co-chairs: Jim Watson, UK Energy Research Centre

Session co-chairs: Marialena Nikolopoulou, University of Kent

Speaker: Paolo Bombelli, University of Cambridge

Speaker: Martin Pauli, ARUP

Speaker: TBC

Speaker: TBC

Please follow [this link](#) to download the session abstracts and speaker bios

NETWORKING ACTIVITIES

To download all of the materials, please [follow this link](#) and scroll to the bottom of the page

Participant countdown

Participant countdown is the first networking activity, and provides a chance for all participants to introduce themselves and their work. The participants will be divided into four groups of 15 people. During the first 15 minutes, each member of group A will have 1 minute to introduce themselves to the rest of the symposium attendees. Then, after all 15 group A participants have spoken, there are 15 minutes when people are free to approach those who have just spoken to ask further questions. Rounds of 15 minutes of presentations and 15 minutes of discussions will follow for groups B, C and D until all the participants have introduced themselves.

Making connections

'Making connections' is a session for you to have more detailed conversations with a few other participants in order to investigate potential collaboration opportunities.

Each person will be given a card with six slots of ten minutes. Over the first day and second morning please arrange meetings in these slots with people who you may be interested to collaborate with. You can find the *making connections* slot card in your welcome pack or by following the link above.

Linking up

The 'linking up' session aims to provide you with the building blocks for interdisciplinary collaboration. During this session, you will work with the participant(s) you would like to start an interdisciplinary collaboration with to complete the *Linking up* sheet. This will help you to clarify your ideas, aims and start building a plan.

In this session, each collaboration will be given the opportunity to pitch their ideas to the rest of the room for feedback, and/or for other people working on a similar project to join forces.

You will find the *Linking up* sheet in your welcome pack or by following the link above.

Writing proposals – Seed funding

Frontiers of Engineering for Development – Seed funding will be launched during the symposium. The funding is addressed to all participants of the Frontiers of Engineering symposium, and supports a collaborative interdisciplinary pilot research project. You can find details of the scheme in your welcome pack or by following the link above.

To apply to the scheme (after 15.02.17) – please log in to our online portal by following [this link](#) and select "Frontiers of Engineering Seed Funding" on [this page](#).

Deadline: **2pm, Wednesday 27th September 2017.**

FULL ATTENDANCE LIST

Name	Organisation
Hein Badenhorst	University of Pretoria
Will Bateman	Zyba Ltd
Amadou Boly	African Development Bank
Paolo Bombelli	University of Cambridge
Helen Bridle	Heriot-Watt University
Qiong Cai	University of Surrey
Neil Carhart	University of Bristol
Vanesa Castanbroto	University College London
George Chagaluka	Queen Elizabeth Central Hospital
Suman Chakraborty	Indian Institute of Technology Kharagpur
Albert Chen	University of Exeter
Carlos A. Cifuentes	Colombian School of Engineering Julio Garavito
David Clifton	University of Oxford
Esther Colombini	Unicamp - Brazil
Nattapong Damrongwiriyanupap	University of Phayao
Samantha Frost	Royal Academy of Engineering
Kelvin Gacheru	MobiTech Water Solutions
Christina Giundy	Royal Academy of Engineering
Brittany Harris	Buro Happold
Priyanka Jamwal	ATREE
Katie Jones	Royal Academy of Engineering
Walter Karlen	ETH Zurich
Mante Kgaria	University of the Witwatersrand
Anil Kumar Parakka	Data Template Infotech
Russel Lamb	Royal Academy of Engineering
Mark Larsen	Black Dog Institute, University of New South Wales
Maria Fabiola Leyva-Mendivil	University of Southampton
Alison MacEwen	Department of Health, Global Health
Ali Maraci	University of Oxford
Alice Marks	Royal Academy of Engineering
Peter Mbiria Maina	Voltarent Engineering Ltd

Shane McHugh	Royal Academy of Engineering
Claudia Mejía Ortiz	Universidad de los Andes - Architecture Department
Dr Saim Memon FHEA	London South Bank University, School of Engineering
Ana Mijic	Imperial College London
Mehran Moasen	University College London
Million Mufata	University of Malawi - The Polytechnic
Hindu Nabulumba	Yaaka Digital Network
Nikos Nanos	University of Portsmouth
André Nel	Eco-V
Vinh-Chau Nguyen	Ho Chi Minh City Hospital for Tropical Diseases
Marialena Nikolopoulou	University of Kent
Sameer Rahatekar	Cranfield University
Sylvia Roberge	Engineers Without Borders UK
Eduardo Rocha Tamayo	Sociedad Colombiana de Arquitectos B y C
Paola Rojas Mateus	Camacol B&C
Vijayata Sengar	The Maharaja Sayajirao University of Baroda
Tse-Hui Teh	University College London
Louise Thwaites	Oxford Clinical Research Unit, Ho Chi Minh City
Maoyi Tian	The George Institute for Global Health, China
Phan Anh Tuan	Hanoi University of Science and Technology
Ajay Vamadevan	Centre for Chronic Disease Control (CCDC)
Wilfred G. van der Wiel	Global Young Academy/University off Twente
Rodrigo Velasco	U. Piloto de Colombia - F3D
Evi Viza	University of the West of Scotland
YanFang Wang	Peking University Clinical Research Institute
Jim Watson	UK Energy Research Centre
Timothy Whitehead	Aston University
Jennifer Whyte	Imperial College London
Li-Qun Xu	Research Institute of China Mobile
Tingting Zhu	University of Oxford

Key contact information

Symposium Venue: Oxford Union

Address: Frewin Court, Oxford, OX1 3JB

Phone: 01865 241353

Email: events@oxford-union.org

Webpage: <https://www.oxford-union.org/>

Accommodation: St Anthony's College

Address: 62 Woodstock Road, Oxford, OX2 6JF

Phone: 01865 284718

Email: conference@sant.ox.ac.uk

Webpage: <https://www.sant.ox.ac.uk/conferences/guest-rooms>

Royal Academy of Engineering

Address: Prince Philip House, 3 Carlton House Terrace, London SW1Y 5DG

Mobile: +44 (0) 7 54 293 6772 – Alice

+44 (0) 7 98 520 5939 – Katie (in case you can't reach Alice)

Phone: +44 (0) 20 7766 0600 – Ask for the International Team

Webpage: <http://www.raeng.org.uk/>

Email: alice.marks@raeng.org.uk

Taxi company:

Radio Taxis: 01865 242424 (please note, RAEng will only cover taxi costs where they are essential or necessary for the event, and individuals will be responsible for covering the cost for any non-essential taxi rides. Please discuss with Alice before booking the journey)

Emergency contacts:

If in an emergency, and you are in need of an emergency service (Fire brigade, Police, or ambulance) call: 999

If you are not in an emergency, but require healthcare service you may call: 111

Map of Oxford:

