Global Grand Challenges Summit
Tackling Global Challenges and Creating a Better Future
BEIJING, SEPTEMBER 15-16, 2015

PROGRAM

Tuesday, September 15

8.40am Participants sign-in
9.00am OPENING CEREMONY & PLENARY ADDRESSES
  Chair: ZHOU Ji, President of CAE
  9.04am Address by NAE leadership
  9.08am Address by RAE leadership
  9.12am Address by US Ambassador
  9.16am Address by UK Minister Counsellor

9.20am PLENARY ADDRESSES
  9.20am Jack Ma, Chairman of Alibaba
  9.40am Charles O. Holliday, Chairman of NAE, Chairman of Royal Dutch Shell
  10.00am Andrew Chan FREng, Chairman of Arup Group Trusts
  10.20am Break
  10.40am Short inspirational video clip

10.45am SESSION 1: SUSTAINABILITY
  Chair: CHEN Jining, Minister of the Ministry of Environmental Protection of China
  11.00am Same Challenges with Bigger Answers or a Different Question
    Keith Clarke CBE, Chair, Tidal Lagoon Swansea Bay plc
    Vice President, Institute of Civil Engineers
  11.15am Fitting on the Earth: Grand Challenges to Preserve the Habitability of the Planet
    Robert Socolow, Co-Director, the Carbon Mitigation Initiative;
    Director, Climate and Energy Challenge, Princeton
    Environmental Institute
  11.30am Sustainable Management of Urban Water Resources
    QIAN Yi, CAE Member
Global Grand Challenges Summit

Tackling Global Challenges and Creating a Better Future

11.45am  30-minute moderated discussion/response to audience questions
12.15pm  Lunch

1.30pm  Short inspirational video clip
1.35pm  SESSION 2: RESTORE AND IMPROVE URBAN INFRASTRUCTURE
Chair: XU Kuangdi, Honorary Chairman of the Governing Board of CAE, CAE Member

1.50pm  China’s Urban Infrastructure Challenges
PAN Yunhe, CAE Member

2.05pm  Restore and Improve Urban Infrastructure
Dervilla Mitchell CBE FREng, Director of Arup

2.20pm  Architecture Unplugged
Doris Sung, Principal DOSU Studio Architecture

2.35pm  30-minute moderated discussion/response to audience questions
3.05pm  Break

3.25pm  Short inspirational video clip
3.30pm  SESSION 3: HEALTH
Chair: Roderic Pettigrew, Director of the National Institute of Biomedical Imaging and Bioengineering, US National Institutes of Health

3.45pm  Informatics: the Frontier of Innovation in Health and Healthcare
Molly Coye, Chief Innovation Officer of the UCLA Health System

4.00pm  From Wearables to Smart Implants – Towards Pervasive and Personalised Healthcare
Guang-Zhong Yang, Director of the Hamlyn Centre at Imperial College

4.15pm  Health in the Aging World-What Should We Do?
WEN Yumei, CAE Member

4.30pm  30-minute moderated discussion/response to audience questions

6.00pm-8.00pm  Gala Reception & Dinner (East Dining Hall, BCC)
Chair: FAN Daiming, Vice President of CAE

6.00pm-6.05pm  Remarks by ZHOU Ji, President of CAE
6.05pm-6.10pm  Remarks by WANG Yupu, Chairman of Sinopec Group
6.10pm-6.15pm  Remarks by Keoki Jackson, CTO of Lockheed Martin
Global Grand Challenges Summit
Tackling Global Challenges and Creating a Better Future

6.40pm-7.00pm  Student Day Event Awarding Ceremony
(Chair: Yannis Yortsos, Dean of the USC Viterbi School of Engineering)
8.00pm  End of reception

Wednesday, September 16

8.30am  Short inspirational video clip
8.35am  SESSION 4: JOY OF LIVING
Chair: Wayne Clough, President Emeritus, Georgia Institute of Technology;
Former Secretary, Smithsonian Institution
8.50am  XXXXXXXX
Will.i.am, global music artist (front man for The Black Eyed Peas),
entrepreneur and philanthropist
9.05am  How to Combine the Old TCM Practice with Modern Technologies to Improve
the Quality of Our Life?
CHENG Jing, CAE Member
9.20am  The Potential of Consumer Virtual Reality
Jack Cohen, RAEng Enterprise Fellow, University of Warwick
9.35am  30-minute moderated discussion/response to audience questions
10.05am  Break
10.25am  Short inspirational video clip
10.30am  SESSION 5: ENERGY
Chair: FU Chengyu, former Chairman of Sinopec Group
10.45am  A New Industrial Revolution for a Sustainable Energy Future
Arun Majumdar, Professor, Stanford University
11.00am  XXXXXXXX
Alastair Borthwick RAEng, the Institute of Energy Systems in Edinburgh
11.15am  The Reliability of Comprehensive Energy
XUE Yusheng, CAE Member
11.30am  30-minute moderated discussion/response to audience questions
12.00pm  Lunch
1.30pm  Short inspirational video clip
### Global Grand Challenges Summit

**Tackling Global Challenges and Creating a Better Future**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker/Details</th>
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<tbody>
<tr>
<td>1.35pm</td>
<td><strong>SESSION 6: EDUCATION</strong></td>
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<td>Chair: Richard Miller, President of Olin College</td>
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<td>1.50pm</td>
<td>For a Better Future: China’s Engineer and Engineering Education</td>
<td>WU Qidi, former Vice Minister of the Ministry of Education of China</td>
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<td>2.05pm</td>
<td>Our Greatest Grand Challenge: Preparing the Next Generation for the Future</td>
<td>Dean Kamen, Founder &amp; President of DEKA Research &amp; Development Corporation</td>
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<td>2.20pm</td>
<td>The Beginnings of Wisdom: Challenges in Engineering Education</td>
<td>Helen Atkinson, Head of the Department of Engineering, University of Leicester</td>
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<td>2.35pm</td>
<td>30-minute moderated panel discussion/response to audience questions</td>
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<td>3.30pm</td>
<td><strong>SESSION 7: SECURITY AND RESILIENCE</strong></td>
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<td>Chair: Keoki Jackson, Chief Technology Officer, Lockheed Martin</td>
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<td>3.45pm</td>
<td>IoT Security</td>
<td>Maire O’Neill, Director of Research for Data Security Systems at the Centre for Secure Information Technologies (CSIT), Queen’s University Belfast</td>
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<td>4.00pm</td>
<td>Climate Intervention: Possible Impacts on Global Security and Resilience</td>
<td>Marcia McNutt, AAAS, Editor of Science magazine, Geophysicist</td>
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<td>4.15pm</td>
<td>Respond to Global Changes as a Community of Common Destiny</td>
<td>DU Xiangwan, CAE Member</td>
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<td>Student Day competition report</td>
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<td>5.25pm</td>
<td>Closing remarks</td>
<td>ZHOU Ji, President of CAE</td>
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<td>5.30pm</td>
<td>Summit adjourns</td>
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