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## **TWAS 12<sup>th</sup> General Conference & 23<sup>rd</sup> General Meeting**

18-21 September 2012, Tianjin, China

### **Detailed Programme**

*(as of 5 September)*

#### **Sunday, 16 September 2012**

Dark shade: closed sessions (for members only)

**Venue: Building No. 4 - Guest House Hotel**

19:00	<b>Nominations &amp; Selections Committee Meeting</b> <i>Huabin Hall, 1F</i>
20:00	<i>Dinner at Hotels</i> <i>Jinfeng Hall, Building No. 4, Guest House Hotel</i>

#### **Monday, 17 September 2012**

Dark shade: closed sessions (for members only)

**Venue: Building No. 6 - Guest House Hotel**

8:30-10:00	<b>TWAS Prizes Committee Meeting</b> <i>Interview Hall, 1F</i>	
10:00-10:15	<i>Refreshments</i>	
10:15-12:30	<b>TWAS Elections Committee Meeting</b> <i>Interview Hall, 1F</i>	
12:30-14:00	<i>Lunch</i>	
14:00-15:45	<b>TWAS Policy Development &amp; Future Action Committee</b> <i>Interview Hall, 1F</i>	
15:45-16:00	<i>Refreshments</i>	
16:00-18:00	<b>TWAS 32<sup>nd</sup> Council Meeting</b> <i>Jiabin Hall, 1F</i>	
18:00-19:00	<b>TWAS Regional Offices Annual Meeting</b> <i>Jiabin Hall, 1F</i>	<b>TWAS-OWSD Advisory Panel for Women in Science</b> <i>Interview Hall, 1F</i>
19:30-21:30	<i>Dinner at Hotels</i> <i>Siji Hall, 1F, Guest House Hotel</i>	

#### **Tuesday 18, September 2012**

Dark shade: closed sessions (for members only)

**Venue: Lakeview Hotel (before lunch)-Tianjin Great Hall (after lunch)**

08:00-09:30	<b>TWAS 23<sup>rd</sup> General Meeting</b> <i>Haihe Room, 2F</i>
09:30-09:45	<i>Refreshments</i>
09:45-11:15	<b>TWAS 23<sup>rd</sup> General Meeting (cont.)</b> <i>Haihe Room, 2F</i>

<b>11:15-12:45</b>	<b>Invited Lectures</b> <i>Haihe Room, 2F</i> <b>Chair: H. Ramkissoo</b>
11:15-11:45	<i>Science for development</i> S. Ting
11:45-12:15	<i>Synaptic plasticity and neurodegenerative diseases</i> N. Ip
12:15-12:45	<i>Science, technology and innovation for sustainable socio-economic development</i> Atta-ur-Rahman
12:45-13:45	<i>Lunch</i> <i>Grand Ballroom, 1F</i>
13:45-14:00	<i>Transfer to Tianjin Great Hall</i>
14:00-15:00	<i>Participants and guests to be seated</i>
<b>15:00-16:20</b>	<b>Opening Ceremony and Presentation of Prizes, Medals and Certificates</b>
	Opening Addresses
	Presentations of Prizes and Medals
	<i>Abdus Salam Medal to: M.H.A. Hassan</i>
	<i>Ernesto Illy Trieste Science Prize to: (To be announced)</i>
	<i>TWAS 2011 Prizes to:</i> <ul style="list-style-type: none"> <li>• S. Kelemu &amp; Z.R. Khan, Agricultural Sciences</li> <li>• A.B. Elgoyhen &amp; V. Nagaraja, Biology</li> <li>• J. Dupont &amp; Lei Jiang, Chemistry</li> <li>• S.K. Satheesh &amp; Fuyuan Wu, Earth Sciences</li> <li>• Yi-Bing Lin, Engineering Sciences</li> <li>• Shun-Jen Cheng &amp; P.L. Felmer, Mathematics</li> <li>• A.R. Kornblihtt, Medical Sciences</li> </ul>
	<i>TWAS 2012 Medals to:</i> <ul style="list-style-type: none"> <li>• B.M. Abegaz</li> <li>• Jinghai Li</li> <li>• R.N. Zare</li> </ul>
	<i>CNR Rao Prize to: W. Mammo Deneke</i>
	<i>TWAS Regional Prize to: Yin Li</i>
16:20-16:30	<i>Refreshments</i>
<b>16:30-17:50</b>	<b>Ministerial Session: STI for Economic Growth &amp; Poverty</b> <i>Tianjin Great Hall, 1F</i> <b>Chair: G. Kalonji</b>
16:30-16:40	<i>Title to be announced</i> M.A. Raupp, Minister of Science, Technology and Innovation, Brazil
16:40-16:50	<i>Title to be announced</i> Gang Wan, Minister of Science & Technology, China
16:50-17:00	<i>Title to be announced</i> V. Ravi, Minister for Science & Technology & Earth Sciences, India
17:00-17:10	<i>Science, technology and innovation for economic transformation</i> I.O. Bassey Ewa, Federal Minister of Science and Technology, Nigeria
17:10-17:20	<i>Capacity building in STI, the key for economic growth and poverty reduction in Rwanda</i> V. Biruta, Minister of Education, Rwanda

17:20-17:30	<i>Some challenges in science, technology and innovation (STI) development</i> H.A. Dzinotyiweyi, Minister for Science and Technology Development, Zimbabwe
17:30-17:40	<i>Science, technology and innovation for economic growth &amp; poverty: The argentine experience</i> R. Salvarezza, President, CONICET, Argentina – representing the Minister of Ciencia, Tecnología e Innovación Productiva
17:40-17:50	<i>Innovation as an input to social development: Some perspectives from South Africa</i> T. Auf der Heyde, Deputy Director-General, Human Capital and Knowledge Systems, Department of S&T, South Africa – representing the Minister of Science and Technology
17:50-18:00	<i>Refreshments</i>
18:00-19:40	<b>Forum on National Academies &amp; Open Innovation</b> <i>Tianjin Great Hall, 1F</i> <b>Chair: Jinghai Li</b>
18:00-18:10	<i>National academy with multiple roles in innovation</i> C. Bai (China)
18:10-18:20	<i>The role of the Australian Academy of Science in promoting innovation through science policy</i> S. Cory (Australia)
18:20-18:30	<i>Academy-enterprise: Towards a fruitful partnership</i> J. Palis (Brazil)
18:30-18:40	<i>At the interface of scientific discovery and technological innovation: Some recent projects of the German National Academy of Sciences Leopoldina</i> V. ter Meulen (Germany)
18:40-18:50	<i>INSA and its role in capacity building in science and technology in India</i> N Sathyamurthy (India)
18:50-19:00	<i>Title to be announced</i> O. Ibidapo-Obe (Nigeria)
19:00-19:10	<i>The role of ANSTS at national and regional levels in promoting a scientific culture</i> A. Lamine Ndiaye (Senegal)
19:10-19:20	<i>Building partnerships between policy makers and scientists in the path to economic growth and poverty alleviation</i> R. Crewe (South Africa)
19:20-19:30	<i>Innovation and entrepreneurship at the Royal Society</i> A. Cheetham (UK)
19:30-19:40	<i>Title to be announced</i> E. Dvorkin (Argentina)
19:40-20:00	<b>Discussions</b> <i>Tianjin Great Hall, 1F</i> <b>Chairs: G. Kalonji &amp; Jinghai Li</b>
20:00-20:10	<i>Transfer to Lakeview Hotel</i>
20:30	<i>Reception hosted by Prof. Chunli Bai, President, CAS</i> <i>Grand Ballroom, 1F, Lakeview Hotel</i>

**Wednesday, 19 September 2012**

**Venue: Lakeview Hotel**

<b>08:30-10:30</b>	<b>Symposium 1: Lectures on S&amp;T Development in China</b> <i>Haihe Room, 2F</i> <b>Convener: Yaping Zhang</b>	
08:30-08:50	<i>Advances in China's lunar exploration</i> Zi-Yuan Ouyang	
08:50-09:10	<i>Luminescent metal-based molecular materials: From design to assembly and functions</i> Vivian Wing-Wah Yam	
09:10-09:30	<i>Observation of electron-antineutrino disappearance at Daya Bay</i> Yi-Fang Wang	
09:30-09:50	<i>Evolution, genomics and cancer</i> Chung-I Wu	
09:50-10:10	<i>Scalable quantum information processing</i> Jian-Wei Pan	
10:10-10:30	<i>Study of molecular interaction and dynamics in living cells: One at a time</i> Xiaohong Fang	
10:30-11:00	<i>Refreshments</i>	
<b>11:00-12:00</b>	<b>Abdus Salam Medal Lecture</b> <i>Haihe Room, 2F</i> <b>Chair: J. Palis</b> <i>TWAS and the future of science in the developing world</i> M.H.A. Hassan	
<b>12:00-12:05</b>	<i>My vision about the STS forum</i> Koji Omi – STS Forum <i>Haihe Room, 2F</i>	
12:05-13:15	<i>Lunch</i> <i>Grand Ballroom, 1F</i>	
<b>13:15-14:00</b>	<b>Ernesto Illy Trieste Science Prize Lecture (To be announced)</b> <i>Haihe Room, 2F</i> <b>Chair: J. Palis</b>	
<b>14:00-17:30</b>	<b>Lectures by Awardees of TWAS 2011 Prizes</b> Biological & Earth Sciences <i>Haihe Room, 2F</i> <b>Chair: M.I. Parker</b>	<b>Lectures by Awardees of TWAS 2011 Prizes</b> Physical Sciences <i>Lakeview Room, 1F</i> <b>Chair: R. Diab</b>
14:00-14:30	<i>Endophytes: One more defence for plants</i> S. Kelemu, Agricultural Sciences	<i>From molten salts to ionic liquids: A nano journey</i> J. Dupont, Chemistry
14:30-15:00	<i>Push-Pull technology: A pro-poor innovation for enhancing food security and environmental sustainability in Africa</i> Z.R. Khan, Agricultural Sciences	<i>Bio-inspired, smart, multiscale interfacial materials</i> Lei Jiang, Chemistry
15:00-15:30	<i>The medial olivocochlear system and protection from acoustic trauma</i> A.B. Elgoyhen, Biology	<i>Mobile telecommunication and its applications</i> Yi-Bing Lin, Engineering Sciences

15:30-16:00	<i>Mechanistic and functional insights into various cellular DNA transactions</i> V. Nagaraja, Biology	<i>Lie algebras, lie superalgebras, and super duality</i> Shun-Jen Cheng, Mathematics
16:00-16:30	<i>Climate impacts of elevated absorbing aerosol layers</i> S.K. Satheesh, Earth Sciences	<i>Contributions to non-linear fractional elliptic equations</i> P.L. Felmer, Mathematics
16:30-17:00	<i>In situ Sr-Nd-Hf isotopic analyses and their applications in geology</i> Fuyuan Wu, Earth Sciences	
17:00-17:30	<i>Regulation of alternative splicing: How each gene makes many proteins</i> A.R. Kornblihtt, Medical Sciences	
17:30-18:00	<i>Refreshments</i>	
18:00-18:30	<b>CNR Rao Prize Lecture</b> <b>Chair: K.E. Mshigeni</b> <i>Haihe Room, 2F</i> <i>The synthesis of conjugated polymers: A contribution from Ethiopia</i> W. Mammo Deneke	
18:30-19:30	<b>Induction of new TWAS Members and Young Affiliates</b> <i>Haihe Room, 2F</i> <b>Chair: J. Palis</b> <b>Presenter: D. Balasubramanian</b>	
20:00	<i>Dinner hosted by Xingguo Huang, Mayor of Tianjin</i> <i>Grand Ballroom, 1F, Lakeview Hotel</i>	

#### Thursday, 20 September 2012

##### Venue: Lakeview Hotel

08:30-10:00	<b>Symposium 2: Stem Cells and Genomics</b> <i>Haihe Room, 2F</i> <b>Convener: D. Balasubramanian</b>
08:30-08:50	<i>Stem cell and regenerative medicine</i> Q. Zhou
08:50-09:10	<i>From Sequencing to "the Century of Biology"</i> H. Yang
09:10-09:40	<i>Successful repairing of the damaged cornea using limbal stem cells</i> D. Balasubramanian
09:40-10:00	<i>Molecular and genetic basis of vision impairment in Pakistani population</i> S. Riazuddin
10:00-11:00	<i>Refreshments &amp; Poster Session</i>
11:00-13:00	<b>Symposium 3: Interdisciplinary</b> <i>Haihe Room, 2F</i> <b>Convener: G. Oliva</b>
11:00-11:30	<i>Innovation in global health: Grand Challenges Canada and its Rising Stars program</i> A.S.S. Daar
11:30-12:00	<i>Solar PV status and incentives in China</i> S. Wang

12:00-12:30	<i>Palaeobiological insights from fossil bone microstructure</i> A. Chinsamy-Turan	
12:30-13:00	<i>Unveiling the fundamental laws of Nature</i> I. Antoniadis	
13:00-14:00	<i>Lunch</i> <i>Grand Ballroom, 1F</i>	
14:00-16:15	<b>Medal 2012 lectures</b> <i>Haihe Room, 2F</i> <b>Chair: A. Sood</b>	
14:00-14:45	<i>Intra-African cooperation in chemical sciences: Highlights of achievements in the chemistry of natural products</i> B. Abegaz	
14:45-15:30	<i>Meso-scale science: Chemical engineering perspectives</i> J. Li	
15:30-16:15	<i>TB or not TB</i> R. Zare	
16:15-16:45	<i>Refreshments</i>	
16:45-18:15	<b>Presentations by Young Affiliates</b> Medicine <i>Haihe Room, 2F</i> <b>Chair: P. Berjak</b>	<b>Presentation by Young Affiliates</b> Chemistry – Earth Sciences <i>Lakeview Room, 1F</i> <b>Chair: L. Alvarez Diaz</b>
16:45-17:00	<i>Novel 4-(1H)-quinolones and tetra-hydroacridones prevent the transmission of malaria parasite P. falciparum to the mosquito vector</i> F. Saenz Calderon	<i>Metal-organic frameworks (MOFs): Interplay of structural tunability and functionality</i> T.K. Maji
17:00-17:15	<i>Cancer research in the developing world: Opportunities, challenges and can we make a difference?</i> S.C. Cheong	<i>Dye-sensitized solar cells</i> Peng Wang
17:15-17:30	<i>Evaluation of the efficiency of wastewater treatment process for the removal of microbial pathogen: Vibrio pathogens as a case study</i> E. Igbinosa	<i>Electronic and structural properties of covalent inorganic compounds studied by experimental and theoretical methods</i> M.F. Erben
17:30-17:45	<i>Clay mineral from Tunisian environment protects against zearalenone contaminated feed</i> S. Abbès	<i>Treatment of stabilized landfill leachate using an integrated H<sub>2</sub>O<sub>2</sub> oxidation and granular activated carbon (GAC) adsorption</i> T.A. Kurniawan
17:45-18:00	<i>Immunotoxicity and genotoxicity induced by zearalenone: possible protective effects by isothiocyanates extracted from Tunisian Raphanus sativus</i> J. Ben Salah-Abbès	<i>Combined effects of stereoisomeric and steric factors on electronic and photophysical properties of bis-cyclometalated Ir(III) complexes containing 2,5-diaryl-1,3,4-oxadiazole derivatives</i> G. Gahungu

18:00-18:15	<i>Monitoring water pollution from open solid waste dump sites in Sri Lanka</i> M. Vithanage	<i>Geoheritage and geotourism in Ethiopia: Implications for sustainable development</i> A. Asrat Kassaye
18:15-18:45	<b>TWAS-ROESEAP Prize Lecture</b> <i>Haihe Room, 2F</i> <b>Chair: Xin Fang</b> <i>Building up strength on biotechnological manufacturing: From concept to strategic emerging industry</i> Yin Li	
19:30	<i>Dinner hosted by Kechang Xie, Vice-President, Chinese Academy of Engineering</i> <i>Grand Ballroom, 1F, Lakeview Hotel</i>	

**Friday, 21 September 2012**

**Venue: Lakeview Hotel**

<b>09:00-10:00</b>	<b>Presentations by Young Affiliates</b> Molecular Biology  <i>Haihe Room, 2F</i> <b>Chair: V. Titanji</b>	<b>Presentation by Young Affiliates</b> Astrophysics – Mathematics  <i>Lakeview Room, 1F</i> <b>Chair: A.O. Kuku</b>
<b>09:00-09:15</b>	<i>Discovery of potent antidiabetic agents from the Mauritian flora</i> M.F. Mahomoodally	<i>Black holes in an accelerating universe</i> M. Jamil
<b>09:15-09:30</b>	<i>Calcium and ROS jointly contribute to the synaptic plasticity defects induced by amyloid-<math>\beta</math> peptide oligomers, the distinctive markers of Alzheimer's disease</i> A.C. Paula-Lima	<i>Nature-inspired optimization algorithms and their application in solving engineering problems</i> S. Talatahari
<b>09:30-09:45</b>	<i>The role of host genetic factors on the interplay between HIV and HBV co-infections</i> C. Dandara	<i>Dynamics of flows with singularities</i> A. Arbieto
<b>09:45-10:00</b>	<i>Mechanisms of glomerular injury in diabetes: Role of AMPK, mTOR and tuberlin</i> A. Eid	<i>A new family of random geometric graphs: Theory and applications</i> E. Ceyhan
<b>10:00-10:30</b>	<i>Refreshments</i>	
<b>10:30-11:30</b>	<b>Closing Ceremony</b> <i>Haihe Room, 2F</i>	
<b>11:30-13:30</b>	<b>Lunch</b> <i>Grand Ballroom, 1F</i>	
<b>13:45-14:00</b>	<i>Gather in the Lobby</i>	
<b>14:00-18:30</b>	<b>City Tour</b>	
<b>18:30-19:30</b>	<b>Dinner</b> <i>Banquet Hall&amp;Siji Hall, 1F, Guest House Hotel</i>	
<b>19:30-21:00</b>	<b>Haihe Tour</b>	

