



the academy of sciences for the developing world

ICTP Campus – 34151 Trieste – Italy

+39 040 2240-327 +39 040 224559 info@twas.org www.twas.org

TWAS 12th General Conference & 23rd General Meeting

18-21 September 2012, Tianjin, China

Detailed Programme

(as of 10 September)

Sunday, 16 September 2012

Dark shade: closed sessions (for members only)

Venue: Building No. 4 - Guest House Hotel

19:00	Nominations & Selections Committee Meeting <i>Huabin Hall, 2F, Building No. 4, Guest House Hotel</i>
20:00	<i>Dinner at Hotels</i> <i>Huabin Hall, 1F, Building No. 6, Guest House Hotel</i>

Monday, 17 September 2012

Dark shade: closed sessions (for members only)

Venue: Building No. 6 - Guest House Hotel

08:30-10:00	TWAS Prizes Committee Meeting <i>Interview Hall, 1F</i>	
10:00-10:15	<i>Refreshments</i>	
10:15-12:30	TWAS Elections Committee Meeting <i>Interview Hall, 1F</i>	
12:30-14:00	<i>Lunch</i>	
14:00-15:45	TWAS Policy Development & Future Action Committee <i>Interview Hall, 1F</i>	
15:45-16:00	<i>Refreshments</i>	
16:00-18:00	TWAS 32nd Council Meeting <i>Jiabin Hall, 1F</i>	
18:00-19:00	TWAS Regional Offices Annual Meeting <i>Jiabin Hall, 1F</i>	TWAS-OWSD Advisory Panel for Women in Science <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	TWAS 23rd General Meeting <i>Haihe Room, 2F</i>
09:30-09:45	<i>Refreshments</i>
09:45-11:15	TWAS 23rd General Meeting (cont.) <i>Haihe Room, 2F</i>

11:15-12:45	Invited Lectures <i>Haihe Room, 2F</i> Chair: H. Ramkissoon
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	Lunch <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>
15:00-16:20	Opening Ceremony and Presentation of Prizes, Medals and Certificates
	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"> • S. Kelemu & Z.R. Khan, Agricultural Sciences • A.B. Elgoyhen & V. Nagaraja, Biology • J. Dupont & Lei Jiang, Chemistry • S.K. Satheesh & Fuyuan Wu, Earth Sciences • Yi-Bing Lin, Engineering Sciences • Shun-Jen Cheng & P.L. Felmer, Mathematics • A.R. Kornblihtt, Medical Sciences
	<i>TWAS 2012 Medals to:</i> <ul style="list-style-type: none"> • B.M. Abegaz • Jinghai Li • R.N. Zare
	<i>CNR Rao Prize to: W. Mammo Deneke</i>
	<i>TWAS Regional Prize to: Yin Li</i>
16:20-16:40	<i>Refreshments</i>
16:40-18:10	Ministerial Session: STI for Economic Growth & Poverty <i>Tianjin Great Hall, 1F</i> Chair: G. Kalonji
16:40-16:50	<i>Title to be announced</i> M.A. Raupp, Minister of Science, Technology and Innovation, Brazil
16:50-17:00	<i>Building an innovative society</i> Gang Wan, Minister of Science & Technology, China
17:00-17:10	<i>Title to be announced</i> V. Ravi, Minister for Science & Technology & Earth Sciences, India
17:10-17:20	<i>Science, technology and innovation for economic transformation</i> I.O. Basse Ewa, Federal Minister of Science and Technology, Nigeria
17:20-17:30	<i>Capacity building in STI, the key for economic growth and poverty reduction in Rwanda</i> V. Biruta, Minister of Education, Rwanda

17:30-17:40	<i>Some challenges in science, technology and innovation (STI) development</i> H.A. Dzinotyiweyi, Minister for Science and Technology Development, Zimbabwe
17:40-17:50	<i>Science, technology and innovation for economic growth & poverty: The argentine experience</i> R. Salvarezza, President, CONICET, Argentina – representing the Minister of Ciencia, Tecnología e Innovación Productiva
17:50-18:00	<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
18:00-18:10	<i>Title to be announced</i> H. Rodríguez, Vice-Minister of Science, Technology and Innovation, Ecuador – representing the National Secretary of Higher Education, Science, Technology and Innovation
18:10-19:50	Forum on National Academies & Open Innovation <i>Tianjin Great Hall, 1F</i> Chair: Jinghai Li
18:10-18:20	<i>National academy with multiple roles in innovation</i> C. Bai (China)
18:20-18:30	<i>The role of the Australian Academy of Science in promoting innovation through science policy</i> S. Cory (Australia)
18:30-18:40	<i>Academy-enterprise: Towards a fruitful partnership</i> J. Palis (Brazil)
18:40-18:50	<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)
18:50-19:00	<i>INSA and its role in capacity building in science and technology in India</i> N Sathyamurthy (India)
19:00-19:10	<i>Title to be announced</i> O. Ibadapo-Obe (Nigeria)
19:10-19:20	<i>The role of ANSTS at national and regional levels in promoting a scientific culture</i> A. Lamine Ndiaye (Senegal)
19:20-19:30	<i>Building partnerships between policy makers and scientists in the path to economic growth and poverty alleviation</i> R. Crewe (South Africa)
19:30-19:40	<i>Innovation and entrepreneurship at the Royal Society</i> A. Cheetham (UK)
19:40-19:50	<i>Title to be announced</i> E. Dvorkin (Argentina)
19:50-20:00	Discussions <i>Tianjin Great Hall, 1F</i> Chairs: G. Kalonji & Jinghai Li
20:00-20:10	<i>Transfer to Lakeview Hotel</i>
20:30	<i>Reception hosted by Prof. Chunli Bai, President, CAS Grand Ballroom, 1F, Lakeview Hotel</i>

Wednesday, 19 September 2012

Venue: Lakeview Hotel

08:30-10:30	Symposium 1: Lectures on S&T Development in China <i>Haihe Room, 2F</i> Convener: Yaping Zhang	
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>	
11:00-12:00	Abdus Salam Medal Lecture <i>Haihe Room, 2F</i> Chair: J. Palis <i>TWAS and the future of science in the developing world</i> M.H.A. Hassan	
12:00-12:05	<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>	
13:15-14:00	Ernesto Illy Trieste Science Prize Lecture (To be announced) <i>Haihe Room, 2F</i> Chair: J. Palis	
14:00-17:30	Lectures by Awardees of TWAS 2011 Prizes Biological & Earth Sciences <i>Haihe Room, 2F</i> Chair: M.I. Parker	Lectures by Awardees of TWAS 2011 Prizes Physical Sciences <i>Lakeview Room, 1F</i> Chair: R. Diab
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	CNR Rao Prize Lecture <i>Haihe Room, 2F</i> Chair: K.E. Mshigeni <i>The synthesis of conjugated polymers: A contribution from Ethiopia</i> W. Mammo Deneke	
18:30-19:30	Induction of new TWAS Members and Young Affiliates <i>Haihe Room, 2F</i> Chair: J. Palis Presenter: D. Balasubramanian	
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	Symposium 2: Stem Cells and Genomics <i>Haihe Room, 2F</i> Convener: D. Balasubramanian
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 & Poster Session</i>
11:00-13:00	Symposium 3: Interdisciplinary <i>Haihe Room, 2F</i> Convener: G. Oliva
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	Lunch Grand Ballroom, 1F	
14:00-16:15	Medal 2012 lectures Haihe Room, 2F Chair: A. Sood	
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	Refreshments	
16:45-18:15	Presentations by Young Affiliates Medicine Haihe Room, 2F Chair: P. Berjak	Presentation by Young Affiliates Chemistry – Earth Sciences Lakeview Room, 1F Chair: L. Alvarez Diaz
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 H₂O₂ 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	TWAS-ROESEAP Prize Lecture <i>Haihe Room, 2F</i> Chair: Xin Fang <i>Building up strength on biotechnological manufacturing: From concept to strategic emerging industry</i> Yin Li	
19:30	<i>Dinner hosted by Yunhe Pan, Executive Vice President, Chinese Academy of Engineering</i> <i>Grand Ballroom, 1F, Lakeview Hotel</i>	

Friday, 21 September 2012

Venue: Lakeview Hotel

09:00-10:00	Presentations by Young Affiliates Molecular Biology <i>Haihe Room, 2F</i> Chair: V. Titanji	Presentation by Young Affiliates Astrophysics – Mathematics <i>Lakeview Room, 1F</i> Chair: A.O. Kuku
09:00-09:15	<i>Discovery of potent antidiabetic agents from the Mauritian flora</i> M.F. Mahomoodally	<i>Black holes in an accelerating universe</i> M. Jamil
09:15-09:30	<i>Calcium and ROS jointly contribute to the synaptic plasticity defects induced by amyloid-β 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
09:30-09:45	<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
09:45-10:00	<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
10:00-10:30	<i>Refreshments</i>	
10:30-11:30	Closing Ceremony <i>Haihe Room, 2F</i>	
11:30-13:30	<i>Lunch</i> <i>Grand Ballroom, 1F</i>	
13:45-14:00	<i>Gather in the Lobby</i>	
14:00-18:30	City Tour	
18:30-19:30	<i>Dinner</i> <i>Banquet Hall & Siji Hall, 1F, Guest House Hotel</i>	
19:30-21:00	Haihe Tour	