



27th General Meeting

14-17 November 2016 • Kigali, Rwanda



Final Programme

as of 17 November 2016

Venue: Kigali Convention Centre

Saturday, 12 November - Dark shade: closed sessions (for members only)

08:30-09:30	TWAS Overview Elections Committee Meeting AD 11	TWAS Overview Prizes Committee Meeting AD 6
09:30-10:00	TWAS Overview Committees joint meeting AD 11	
10:00-10:30	Refreshments	
10:30-12:30	TWAS Elections Committee Meeting	AD 11
12:30-13:30	Lunch (Committee members only)	Larder Restaurant
13:30-15:30	TWAS Prizes Committee Meeting	AD 11
15:30-16:00	Refreshments	
16:00-17:30	TWAS Fundraising Advisory Committee Meeting	AD 11
17:30-19:30	TWAS Policy Development and Future Action Committee	AD 11
19:30	Dinner in respective Hotels	

Sunday, 13 November - Dark shade: closed sessions (for members only)

08:30-11:00	TWAS 36th Council Meeting	AD 1	TWAS Young Affiliates Network (TYAN) Convener: Yin Li	AD 4	
11:00-11:30	Refreshments				
11:30-13:00	(cont.)		TWAS Young Affiliates Network (TYAN) (cont.)	AD 4	
13:00-14:00	Lunch (for all delegates)			Foyer	
14:00-16:00	Regional Meetings of TWAS Members, Young Affiliates and Vice Presidents (parallel sessions)				
	• Arab Region AD 2	• Central and South Asia AD 11	• Latin America and the Caribbean AD 4	• Sub-Saharan Africa AD 1	• East and South-East Asia and the Pacific AD 10
16:00-16:30	Refreshments				
16:30-18:30	TWAS Gender Advisory Panel Meeting AD 1	TWAS Regional Offices Coordinators Meeting AD 2	TWAS Young Affiliates Network (TYAN) Convener: Yin Li AD 4		
19:00	Dinner in respective Hotels				

Monday, 14 November

07:00-07:30	Participants and guests to be seated for Opening Ceremony	
08:30-09:00	Arrival of Guest of Honour	
09:00-10:45	Opening Ceremony and Presentation of Prizes, Medals and Certificates	MH 1 & 2
09:00-09:05	Welcome Address by Papias Malimba Musafiri, Minister of Education, Rwanda	
09:05-09:30	Opening Addresses	
	<ul style="list-style-type: none"> • Bai Chunli, President, TWAS • Claire Lyngå, Research Advisor, Unit for Research Cooperation, Swedish International Development Cooperation Agency, Sida • Stefano Salmaso, Representative of the Italian Government, Ministry of Foreign Affairs and International Cooperation, Italy 	
09:30-09:50	Presentations of Prizes and Medals <ul style="list-style-type: none"> • TWAS 2015 prizes to <ul style="list-style-type: none"> • Jagdish Ladha and • Li Feng-Min <i>Agricultural Sciences</i> • Maria Isabel Colombo, <i>Biology</i> • Chou Pi-Tai and • T. M. Lopez Goerne, <i>Chemistry</i> • Piao Shilong, <i>Earth Sciences</i> • Ramamurty Upadrasta, <i>Engineering Sciences</i> • Alicia Dickenstein, <i>Mathematics</i> • Ri-Li Ge and • Eduardo Arzt, <i>Medical Sciences</i> • Sandip Trivedi, and • Zhou Xingjiang, <i>Physics</i> • TWAS-Celso Furtado 2015 Prize in Social Sciences • Ayse Bugra, and • Zheng Xiaoying • C.N.R. Rao Prize: Mahouton Norbert Hounkonnou • Atta-ur-Rahman Prize: Bijay Singh • Fayzah M. Al-Kharafi Prize: Marian Nkansah • TWAS-ROSSA Regional Prize: Glenda Gray • TWAS Medals to: • Samira Omar Asem • Daan Frenkel • Jean Bosco Gahutu • TWAS-Lenovo Science Prize: Dongyuan Zhao 	
	TWAS President presents medal to the Guest of Honour	
09:55	Address by Guest of Honour	
10:50-11:00	Flavia Schlegel, Assistant-Director-General Natural Sciences, of UNESCO (recorded message)	
11:00-12:00	Invited Lecture: Chair: Daan Frenkel <i>Exciting story of chemical science (Glorious past and challenging future)</i> C.N.R. Rao	MH 1 & 2
12:00-14:00	Lunch	MH 3 & 4
14:00-18:00	Symposium 1: Ministerial session on Innovation for Sustainability Co-Chairs: H.E. Minister P. Malimba Musafiri, Minister of Education, Rwanda and Chunli Bai, President, TWAS	MH 1 & 2
	Papias Malimba Musafiri, Minister of Education, Rwanda	
	Joyce Ndalichako, Minister for Education, Science, Technology and Vocational Training, Tanzania	
	Elioda Tumwesigye, Minister for Science, Technology and Innovation, Uganda	

	Thomas Auf der Heyde, Deputy Director General, Ministry of Science and Technology, South Africa (representing Minister)	
	Yaye Ken Gassama, Vice President, National Academy of Sciences, ANSTS, Senegal (representing Minister of Higher Education and Research)	
	Tieniu Tan, Vice President, Chinese Academy of Sciences	
	Romain Murenzi, Division of Science Policy and Capacity Building, Natural Sciences Sector (SC/PCB), UNESCO, France	
	Vaughan Turekian, Science and Technology Adviser to the Secretary of State, USA	
15:30-16:00	<i>Refreshments</i>	<i>Foyer</i>
	<i>(cont.)</i>	
18:00-18:45	TWAS-Lenovo Science Prize Lecture Chair: Mohammad Qaiser <i>Interfacial Assembly of Functional Mesoporous Materials for Applications</i> Dongyuan Zhao	MH 1 & 2
19:00	<i>Gala Dinner</i>	<i>MH 3 & 4</i>

Tuesday, 15 November - Dark shade: closed sessions (for members only)

08:30-13:00	TWAS 27th General Meeting	AD 10 & 11
10:00-10:30	Refreshments	
	(cont.)	
13:00-14:00	Lunch	Foyer
14:00-16:05	Symposium 2: Facing global epidemics (Supported with a grant from the Elsevier Foundation) Convener: Wanderley de Souza	AD 10 & 11
14:00-14:05	Introduction by Convener	
14:05-14:35	<i>Battling against Leishmania: An old enemy</i> Hemanta Kumar Majumder	
14:35-15:05	<i>Scaling up group support psychotherapy in primary care for depression treatment in persons living with HIV: Implications for Sustainable Development Goals</i> Ethel Nakimuli-Mpungu	
15:05-15:35	<i>Facing Global Epidemics & Endemic Diseases: The View from an Information Solutions Provider</i> Mohamed Kamel	
15:35-16:05	<i>Global challenges of Arbovirus infections</i> Rodrigo Brindeiro	
16:05-16:30	Refreshments	
16:30-18:45	Medal Lectures Chair: Luiz Davidovich	AD 10 & 11
16:30-17:15	<i>Four decades in research and development, a learning experience in management and leadership: Kuwait</i> Samira Omar Asem	
17:15-18:00	<i>The puzzle of self-assembly and the self-assembly of puzzles</i> Daan Frenkel	
18:00-18:45	<i>Biofortification of beans to prevent iron deficiency</i> Jean Bosco Gahutu	
19:30	Dinner in respective Hotels	

Wednesday, 16 November - Dark shade: closed sessions (for members only)

08:00-10:00	Symposium 3: Science and technology in Rwanda Chair: Romain Murenzi		AD 10 & 11
08:00-08:05	<i>Introduction</i> Philip Cotton, Vice Chancellor, University of Rwanda		
<u>ICTS</u>			
08:05-08:15	<i>ICT Initiatives to promote research and innovation</i> Santhi Kumaran		
08:15-08:25	Q&A		
<u>PRESENTATIONS AND QUESTIONS AND ANSWER SESSIONS</u>			
08:25-08:35	<i>Rwanda Natural Capital Accounting: Application for sectors and policy uses</i> Claudine Uwera		
08:35-08:45	<i>Phytotechnologies as a sustainable tool for managing abandoned mining sites: preventing environmental and health risks</i> Florien Nsanganwimana		
08:45-08:55	Q&A		
08:55-09:05	<i>Increasing energy from waste through co-digestion of organic solid wastes in Rwanda</i> Sylvie Mucyo		
09:05-09:15	<i>Ecosystem function, wildlife behavior, and buffer zone interactions for biodiversity conservation in protected areas: Nyungwe National Park, Rwanda</i> Beth Kaplin		
09:15-09:25	Q&A		
09:25-09:35	<i>Biomedical Laboratory Sciences in Rwanda: The backbone of quality diagnostics</i> Pacifique Ndishimye		
09:35-09:45	<i>Efforts to reduce malaria during pregnancy in Rwanda</i> Stephen Rulisa		
09:45-09:55	Q&A		
09:55-10:00	<i>Concluding Remarks</i> Ignace Gatare, Director General, National Commission for Science and Technology		
10:00-10:30	<i>Refreshments</i>		
10:30-13:00	Lectures by Awardees of TWAS 2015 Prizes (parallel sessions)		
	• Biological and Earth Sciences Chair: Khatijah M. Yusoff	AD 12	• Physical Sciences Chair: Hala El-Khozondar AD 10 & 11
10:30-10:45	Agricultural Sciences <i>New paradigms of growing rice to address shortages of water and labor, and global warming potential</i> Jagdish Ladha		Physics <i>Accelerating universes and the emerging landscape of string theory</i> Sandip Trivedi
10:45-11:00	Agricultural Sciences <i>Mulched furrow-ridge technology promotes dryland farming sustainable development in Northwest China</i> Feng-Min Li		Engineering Sciences <i>Deformation and fracture in amorphous alloys</i> Ramamurty Upadrasta
11:00-11:15	Biology <i>Intracellular pathogens and autophagy: Friends or foes?</i> Maria Isabel Colombo		Mathematics <i>The beauty of discriminants</i> Alicia Dickenstein

11:15-11:30	Earth Sciences <i>The carbon balance of terrestrial ecosystems in China</i> Piao Shilong	Physics <i>VUV laser-based photoemission study on high temperature superconductors</i> Zhou Xingjiang
11:30-11:45	Medical Sciences <i>The genetic basis of high-altitude adaptation in Tibetan populations</i> Ri-Li-Ge	
11:45-12:15	C.N.R. Rao Prize (Winner to be announced) AD 12 Chair: Alfredo N. Iusem <i>From generalized deformed quantum algebras to nonassociative structures and related nonlinear systems</i> Mahouton Norbert Hounkonnou	TWAS-Celso Furtado 2015 Prize AD 10 & 11 In Social Sciences Chair: Anthony Clayton <i>Social policy and the problems of peaceful co-existence in contemporary societies: promises and challenges</i> Ayse Bugra
12:15-12:45	Atta-ur-Rahman Prize Chair: Dongyuan Zhao <i>Polymeric biomaterials for drug, gene and vaccine delivery</i> Bijay Singh	TWAS-Celso Furtado 2015 Prize in Social Sciences <i>The interaction of the environmental and social conditions of population health in China</i> Zheng Xiaoying
12:45-14:00	Lunch	Foyer
14:00-16:05	Symposium 4: Eyes and ears on the Universe using radio wave and gravitational wave astronomy Convener: Spenta Wadia AD 10 & 11	TWAS Young Affiliates Network (TYAN) Convener: Yin Li MH 1
14:00-14:05	<i>Introduction by Convener</i>	Presentation on TWAS Activities in and for Developing Countries <i>Presented by Max Paoli, Programme Coordinator, TWAS</i> MH 2
14:05-14:35	<i>The Square Kilometre Array telescope and the African Data Intensive Research Cloud: Big science in Africa</i> Bernard Fanaroff	
14:35-15:05	<i>Gas, dark matter and star formation in extremely faint dwarf galaxies</i> Jayaram Chengalur	
15:05-15:35	<i>The discovery of gravitational waves from a binary black hole: the beginning of gravitational wave astrophysics</i> Stanley E. Whitcomb	
15:35-16:05	<i>Exploring the new frontier of gravitational-wave astronomy</i> Frederick J. Raab	
16:05-16:30	Refreshments	
16:30-17:30	Invited Lectures on Social Sciences: AD 10 & 11 Science for a More Just World Chair: Ratna Ghosh <i>Education, Women & Development - Canada</i> Ratna Ghosh <i>Knowledge Management - China</i> Yong Shi <i>Environmental & Agricultural Economics – South Africa</i> Rashid Hassan	TWAS Young Affiliates Network (TYAN) MH 1

	<p><i>Forecasting Science – China</i> Shouyang Wang</p> <p><i>Sustainable Development – Jamaica</i> Anthony Clayton</p>	
17:30-18:00	<p>Fayzah M. Al-Kharafi Prize Chair: Salma M.Z. Al-Kindy</p> <p><i>The Ubiquity of heavy metals</i> Marian Nkansah</p>	AD 10 & 11
18:15-19:15	Induction of new TWAS Members and Young Affiliates	MH 1
19:30	<i>Dinner in respective Hotels</i>	

Thursday, 17 November

09:00-10:30	Presentations by TWAS Young Affiliates (parallel sessions)	
	<p>• Biological Sciences AD 10 & 11 Chair: Esther Orozco</p>	<p>• Physical Sciences MH 1 Chair: Wendimagegn Mammo Deneke</p>
09:00-09:15	<p><i>Study of avidity of antigen specific antibody for measurement of immunological memory in naturally infected typhoid fever patients and typhoid vaccines in Bangladesh</i> Farhana Khanam</p>	<p><i>A personal experience and some perspective on research and study at the National University of San Martín (UNSAM), Argentina</i> Franco Martin Cabrerizo</p>
09:15-09:30	<p><i>Contributions of Solanum macrocarpon Linn (Solanaceae) in human health and interest of the anaerobic bio-digestion of chicken manure used for its cultivation in Benin</i> Victorien T. Dougnon</p>	<p><i>Identification of key factors affecting the organic fouling on low-pressure ultrafiltration membranes</i> Feng Xiao</p>
09:30-09:45	<p><i>Tumor biology: targets and drugs</i> Patricia Zancan</p>	<p><i>Making every harvest count through value-addition: a cosmeceutical perspective</i> Olaniyi Fawole</p>
09:45-10:00	<p><i>Mechanical and functional studies of biomolecules at single molecule level</i> Christian Andrés M. Wilson Moya</p>	<p><i>New kid on the block: alien invasions to the Sub-Antarctic</i> Michelle Greve</p>
10:00-10:15	<p><i>Conservation of local chicken genetic resource for food security</i> Julius Kofi Hagan</p>	<p><i>Weakly-bound molecules obtained by laser-association of cold atoms, and the analysis by the vibrational quantum defect</i> Haikel Jelassi</p>
10:15-10:30	<p><i>Understanding the management practices of animal manure and associated risks of transference of bacterial pathogens to crop vegetables</i> Hudaa Neeto</p>	
10:30-11:00	<i>Refreshments</i>	
11:00-11:30	Closing Ceremony MH1	
12:30	<i>Lunch</i> Foyer	
	<i>Excursions</i>	