



TWAS 25th General Meeting

26–29 October 2014

Al Bandar Hotel, Muscat, Sultanate of Oman

Detailed Programme (as of 24 October)

Saturday, 25 October 2014

Dark shade: closed sessions (for members only)

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|-------------|---|---|---|--|---|---|------------------|
| 08:30-10:00 | TWAS Prizes Committee Meeting | | | | | | Majilis |
| 10:00-10:15 | Refreshments | | | | | | |
| 10:15-12:30 | TWAS Elections Committee Meeting | | | | | | Majilis |
| 12:30-14:00 | Lunch | | | | | | Ballroom Terrace |
| 14:00-15:45 | TWAS Policy Development & Future Action Committee Meeting | Regional Meetings of TWAS Members and Vice President (Arab) | Regional Meetings of TWAS Members and Vice President (Central and South Asia) | Regional Meetings of TWAS Members and Vice President (Latin America & Caribbean) | Regional Meetings of TWAS Members and Vice President (Sub-Saharan Africa) | Regional Meetings of TWAS Members and Vice President (East and South East Asia & Pacific) | |
| | Qalhat | Assifah | Ballroom A | Ballroom B | Majilis | Ballroom C | |
| 15:45-16:00 | Refreshments | | | | | | |
| 16:00-17:00 | TWAS Regional Offices Annual Meeting | | | TWAS-OWSD Advisory Panel for Women in Science Meeting | | | |
| | Sidab | | | Qurayat | | | |
| 17:00-19:00 | TWAS 34 th Council Meeting | | | | | | Majilis |
| 19:30 | Dinner | | | | | | |

Sunday 26 October 2014

Dark shade: closed sessions (for members only)

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|--------------|---|--|--|--|--|--|----------------|
| 08:00-09.30 | TWAS 25 th General Meeting | | | | | | Ballroom A/B/C |
| 09:30 -10:00 | Refreshments | | | | | | |
| 10:00-11:30 | TWAS 25 th General Meeting (cont.) | | | | | | |
| 11:30-11:45 | Participants and guests to be seated for Opening Ceremony | | | | | | Ballroom A/B/C |

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| 11:45-13:30 | Opening Ceremony and Presentation of Prizes, Medals and Certificates Chair: Chunli Bai | |
| | Opening Addresses | |
| | Presentations of Prizes and Medals | |
| | <i>TWAS-Lenovo Science Prize to: (To be announced)</i> | |
| | <i>TWAS 2014 Medals to:</i> | |
| | <ul style="list-style-type: none"> • S. Al-Kindy • S-J. Chen • J. Lubchenco | |
| | <i>TWAS 2013 prizes to:</i> | |
| | <ul style="list-style-type: none"> • Y. Zhu, <i>Agricultural Sciences</i> • S-D. Lin-Chao & G. Xu, <i>Biology</i> • A. Ajayaghosh & C-Y. Mou, <i>Chemistry</i> • X. Li, <i>Earth Sciences</i> • M. Al-Nimr & I. Manna, <i>Engineering Sciences</i> • M-H. Chang & T. Dalkara, <i>Medical Sciences</i> • R. Gopakumar & M. Pimenta, <i>Physics</i> | |
| | <i>TWAS Celso Furtado Prize to: L. Zhang</i> | |
| | <i>C.N.R. Rao Prize to: (To be announced)</i> | |
| | <i>Atta-ur-Rahman Prize to: (To be announced)</i> | |
| | <i>TWAS Regional Prize to: (To be announced)</i> | |
| 13:30-14:30 | Lunch | <i>Ballroom Terrace</i> |
| 14:30-15:15 | TWAS-Lenovo Science Prize Lecture (To be announced) Chair: A. Sood | <i>Ballroom A/B/C</i> |
| 15:15-16:50 | Symposium 1: Ministerial Session <i>Building the Future: Cultivating and supporting young scientific talent</i> Chair: R. Al Busaidi Co-Chair: Chunli Bai | <i>Ballroom A/B/C</i> |
| 15:15-15:35 | H. Al Hinai, Secretary General, The Research Council, Oman | |
| 15:35-15:55 | M.C. Pereira Teixeira , Minister of Science and Technology, Angola | |
| 15:55-16:10 | A.M. Abbasov, Minister of Communications and High Technologies, Azerbaijan | |
| 16:10-16:30 | A. El-Beltagy Minister of Agriculture and Land Reclamation, Egypt | |
| 16:30-16:50 | K. VijayRaghavan Krishnaswamy, Secretary, Department of Science and Technology, India, (representing J. Singh, Minister for Science & Technology & Earth Sciences) | |
| 16:50-17:15 | <i>Refreshments</i> | |
| 17:15-18:35 | Symposium 1: Ministerial Session (cont.) <i>Building the Future: Cultivating and supporting young scientific talent</i> | |
| 17:15-17:35 | V.Z. Magwaza-Msibi, Deputy Minister of Science and Technology, South Africa (representing N. Pandor, Minister) | |
| 17:35-17:55 | G. Oliva, President, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brazil (representing C. Campolina Diniz, Minister of State, Ministry of Science, Technology and Innovation) | |
| 17:55-18:15 | E. Micha Zaga, Deputy Director for Regional Development, CONACYT, Mexico (representing E. Cabrero Mendoza, Director General, CONACYT) | |
| 18:15-18:35 | Discussions | |
| 18:35-18:45 | DST-TWAS Programme of Cooperation – Signing Ceremony | <i>Ballroom A/B/C</i> |
| 18:45-19:00 | <i>Refreshments</i> | |
| 19:00-19:30 | C.N.R. Rao Prize Lecture (To be announced) Chair: A. Cheetham | TWAS-Celso Furtado Prize Lecture <i>Avoiding middle income trap through enhancing human capital: the case of China</i> L. Zhang Chair: R. Hassan |
| | <i>Ballroom A/B</i> | <i>Ballroom C</i> |
| 20:00 | Dinner (transfer arranged) | <i>Albustan Palace Hotel</i> |

Monday, 27 October 2014

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| 08:00-10:45 | Symposium 2: <i>Light: Unifying Theme (International Year of Light 2015)</i> Convener: A. Sood | | <i>Ballroom A/B/C</i> |
| 08:00-08:05 | Introduction by Convener, Ajay Sood | | |
| 08:05-08:45 | Quantum technology for a networked world P. Knight | | |
| 08:45-09:25 | Laser spectroscopy applied to environmental, ecological and medical research S. Svanberg | | |
| 09:25-10:05 | Gas, glass and light: 20 years of photonic crystal fibres P. Russell | | |
| 10:05-10:45 | Applications of laser spectroscopy to meet challenges in medicine K. Svanberg | | |
| 10:45-11:00 | Refreshments | | |
| 11:00-13:00 | Symposium 3: Presentations of the Oman National Research Award Winners | | <i>Ballroom A/B/C</i> |
| | Winner of Research Led by PhD | | |
| 11.00-11.10 | Winner of Energy and industry sector | | |
| 11.12-11.22 | Winner of Information Systems and Communication Technologies sector | | |
| 11.24-11.34 | Winner of Health and social services sector | | |
| 11.36-11.46 | Winner of Education and human resources sector | | |
| 11.48-11.58 | Winner of Culture, basic and social sciences sector | | |
| 12.00-12.10 | Environmental and Biological Resources sector | | |
| | Winner of Research Led by Non-PhD | | |
| 12.12-12.22 | Winner of Energy and industry sector | | |
| 12.24-12.34 | Winner of Health and social services sector | | |
| 12.36-12.46 | Winner of Education and human resources sector | | |
| 12.48-12.58 | Environmental and Biological Resources sector | | |
| 13.00-14.00 | Lunch | | <i>Ballroom Terrace</i> |
| 14:00-17:30 | Lectures by Awardees of TWAS 2013 Prizes Biological & Earth Sciences Chair: K. Mshigeni <i>Ballroom A/B</i> | Lectures by Awardees of TWAS 2013 Prizes Physical Sciences Chair: J. Urrutia-Fucugauchi <i>Ballroom C</i> | |
| 14:00-14:30 | <i>Arsenic in rice: A neglected threat to human health</i> Y. Zhu, Agricultural Sciences | <i>π-Gelators: a new class of soft functional materials</i> A. Ajayaghosh, Chemistry | |
| 14:30-15:00 | <i>Functional roles, importance, and complexity of the RNA degradation machinery in bacteria</i> S. Lin-Chao, Biology | <i>Mesoporous silica materials</i> C-Y. Mou, Chemistry | |
| 15:00-15:30 | <i>DNA oxidation regulates mammalian development and cell reprogramming</i> G. Xu, Biology | <i>Novel systems in utilizing the renewable energy</i> M. Al-Nimr, Engineering Sciences | |
| 15:30-16:00 | <i>Cellular automata and agent-based models for land use simulation and planning for sustainable land development in China</i> X. Li, Earth Sciences | <i>Development and characterization of new age hardenable amorphous matrix Al-alloys synthesized by mechanical alloying</i> I. Manna, Engineering Sciences | |
| 16:00-16:30 | <i>Liver cancer prevention – starting from fetal and neonatal period</i> M-H. Chang, Medical Sciences | <i>Simplifying string theory</i> R. Gopakumar, Physics | |
| 16:30-17:00 | <i>Creating the conditions to do cutting-edge basic research for understanding brain disorders</i> T. Dalkara, Medical Sciences | <i>Investigating the electronic and optical properties of graphene and carbon nanotubes by light scattering</i> M. Pimenta, Physics | |

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| 17:00-17:30 | Refreshments |
| 17:30-18:00 | Lecture by Atta-ur-Rahman: <i>The Amazing World of Innovation</i> <i>Ballroom A/B/C</i> |
| 18:00-18:15 | Break |
| 18:15-19:45 | Induction of new TWAS Members and Young Affiliates <i>Ballroom A/B/C</i> |
| 20:00 | Dinner |

Tuesday, 28 October 2014

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|-------------|--|---|---|---|
| 08:30-10:00 | Medal 2014 Lectures <i>Ballroom A/B/C</i> Chair: J. Palis | | | |
| 08:30-09:00 | <i>Microfluid-chemiluminescence, an emerging technique for pharmaceutical and biological analysis</i> S. Al-Kindy | | | |
| 09:00-09:30 | <i>Targeted therapy: the new lease on life for leukemia</i> S-J. Chen | | | |
| 09:30-10:00 | <i>Delivering on science's social contract</i> J. Lubchenco | | | |
| 10:00-11:30 | Invited Lectures <i>Ballroom A/B/C</i> Chair: I. Eltayeb | | | |
| 10:00-10:45 | <i>Grand challenges and solutions: How innovation can help reach sustainable development goals and create the post-2015 world</i> P.A. Singer | | | |
| 10:45-11:30 | <i>Cosmic Inflation, the Higgs Boson and the Future of Fundamental Physics</i> F. Quevedo | | | |
| 11:30-11:45 | Refreshments | | | |
| 11:45-12:30 | Atta-ur-Rahman Prize Lecture: (To be announced) Chair: Song Gao <i>Ballroom A/B</i> | | TWAS-ARO Prize Lecture: (To be announced) Chair: M. Najim <i>Ballroom C</i> | |
| 12:30-14:00 | Lunch <i>Ballroom Terrace</i> | | | |
| 14:00-16:00 | Presentations by Young Affiliates Medical Sciences Chair: A. Daar <i>Ballroom A</i> | Presentations by Young Affiliates Cell & Molecular Biology Chair: F. Barrantes <i>Ballroom B</i> | Presentations by Young Affiliates Physics and Mathematics Chair: A. Kuku <i>Ballroom C</i> | Presentations by Young Affiliates Chemistry and Earth Sciences Chair: S. Al Kindy <i>Majilis</i> |
| 14:00-14:15 | <i>Effects of elemental selenium nanoparticles delivered in liposome on oxidative stress and β-cell damage in streptozotocin-induced diabetic rats</i> A.E. Abdel Moneim | <i>Establishing a new model of prostate cancer using prostate stem/progenitor cells</i> W. Abou-Kheir | <i>Data protection using optical encryption and QR codes</i> J.F. Barrera Ramirez | <i>Phenolipids: New Generation of Novel Antioxidants</i> M.F.R. Hassanien |
| 14:15-14:30 | <i>Protection of disease/conditions induced memory impairment by novel pharmaceutical agents</i> K.H. Alzoubi | <i>Molecular Target 7SK snRNA in the Drug Designing</i> S.N. Khan | <i>Thermally-assisted-occupation density functional theory</i> Jeng-Da Chai | <i>Astaxanthin: Challenges, Opportunities, and Its Global Market</i> R.R. Ambati |
| 14:30-14:45 | <i>Traumatic Brain Injury Biomarkers: A Neuroproteomics</i> | <i>Dengue: apoptosis in tissues and apoptotic proteins in</i> | <i>Classification of low dimensional solvable Leibniz algebras</i> | <i>Use of Earth observation for the disaster risk</i> |

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| | Approach F.H. Kobaissy | plasma of cases D. Limonta | A. Khudoyberdiyev | reduction Fang Chen |
| 14:45-15:00 | A randomised trial of artemisinin-naphthoquine and artemether-lumefantrine therapy in Papua New Guinean children with falciparum and vivax malaria M. Laman | Conservation genetics for southern African marine environments: insights from molecular tools and implications for biodiversity planning in the region S. von der Heyden | On the constants of the Bohnenblust-Hille and Hardy Littlewood inequalities D. Pellegrino | Nanoelectronics and Nanomechanics with Graphene M.M. Deshmukh |
| 15:00-15:15 | Malaria vectors species diversity and malaria transmission in Malindi district along the Kenya coast J.M. Mwangangi | Understanding how the cells of our body recognize and kill threatening infectious parasites D. Zamboni | Engineering the chromatic dispersion and confinement losses of microstructure optical fibers S.M. Abdur Razzak | Stable carbon isotope analysis of the diets of West African bovids in Pendjari Biosphere Reserve (Northern Benin) C.A. Djagoun |
| 15:15-15:30 | Infertility intervention: The baboon as preclinical model for assisted reproductive technology (ART) A. Nyachio | Coumarins synthesis and applications: review A. Al-Amiery, CHEMISTRY | The formation of the supermassive stars our the Galaxy L.A. Zapata | Understanding the effect of selenium on structure–property relationship of donor-acceptor π -conjugated functional materials S.A. Patil |
| 15:30-15:45 | Automatic interaction among magnitude information in numbers, space, time, and action D.H. Wu | | Strategies for Climate-smart Rice Production M. Farooq, CHEMISTRY | Nano-Pores and Supramolecular Chemistry M.R. Shah |
| 15:45-16:00 | Treatment of Cutaneous Leishmaniasis - Nature's remedy based on Physalis minima S. Yousuf | | Photostability of Poly (vinyl chloride) -Still on the run E. Yousif, CHEMISTRY | Novel Organic Derivatives of Barbituric and Meldrum's Acids K. Sweidan |
| 16:00-16:30 | Refreshments | | | |
| 16:30-17:30 | Distribution of National Research Awards (TRC) | | | <i>Ballroom A/B/C</i> |
| 16:30-16:45 | Presentation by Dr. Saif AlHiddabi about the National Research Award | | | |
| 16:45-17:00 | Announcing Winners of FURAP program | | | |
| 17:00-17:15 | Announcing Winners of Researches Led by PhD | | | |
| 17:15-17:30 | Announcing Winners of Researches Led by Non-PhD | | | |
| 17:30-19:10 | Presentations of completed projects funded by TRC in all six research sectors | | | |
| 17:30-17:35 | Presentation of completed projects in Energy and industry sector | | | |
| 17:37-17:42 | Presentation of completed projects in Information Systems and Communication Technologies sector | | | |
| 17:44-17:49 | Presentation of completed projects in Health and social services sector | | | |
| 17:51-17:56 | Presentation of completed projects in Education and human resources sector | | | |
| 17:58-18:03 | Presentation of completed projects in Culture, basic and social sciences sector | | | |
| 18:05-18:10 | Presentation of completed projects in Health and social services sector | | | |
| 18:12-18:17 | Presentation of completed projects in Health and social services sector | | | |
| 18:19-18:24 | Presentation of completed projects in Information Systems and Communication Technologies sector | | | |
| 18:26-18:31 | Presentation of completed projects in Education and human resources sector | | | |

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| 18:33-18:38 | Presentation of completed projects in Culture, basic and social sciences sector |
| 18:40-18:45 | Presentation of completed projects in Health and social services sector |
| 18:47-18:52 | Presentation of completed projects in Health and social services sector |
| 18:54-19:01 | Presentation of completed projects in Health and social services sector |
| 19:15-19:45 | Closing Ceremony <i>Ballroom A/B/C</i> |
| 20:00 | <i>Dinner</i> |

Wednesday, 29 October 2014

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| Excursions | Details available upon arrival |
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