



TWAS 22nd General Meeting

21-23 November 2011, Trieste, Italy

Programme

SUNDAY, 20 NOVEMBER 2011

Venue: Adriatico Guest House.

08:30-09:50	TWAS Prizes Committee Meeting Lundqvist Room. Closed session, for committee members only.
09:50-10:00	REFRESHMENTS
10:00-12:50	TWAS Election Committee Meeting Lundqvist Room. Closed session, for committee members only.
12:50-14:00	LUNCH (AGH CAFETERIA) FOR GUESTS LODGING AT THE AGH AND COMMITTEE MEMBERS MEETING AT 10:00 AND 14:00 HOURS.
14:00-14:50	Joint Meeting of TWAS Development Committee and TWAS Policy, Planning and Future Action Committee Lundqvist Room. Closed session, for committee members only.
14:50-15:45	TWAS Regional Offices Annual Meeting Lundqvist Room. Closed session, for committee members only. Chair: Lu Yonglong
15:45-16:00	REFRESHMENTS
16:00-18:45	TWAS 31st Council Meeting Lundqvist Room. Closed session, for members only.
18:45-19:30	TWAS-OWSD Advisory Panel for Women in Science Lundqvist Room. Closed session, for members only.
19:30	DINNER (AT THE HOTELS)

MONDAY, 21 NOVEMBER 2011

Venue: Leonardo Building.

08:30-11:00	TWAS 22nd General Meeting Main Lecture Hall. Closed session, for TWAS Members and Young Affiliates only.
11:00-11:30	REFRESHMENTS (LOBBY)
11:30-12:00	Opening Addresses Main Lecture Hall. Master of Ceremonies: R. Murenzi, Executive Director, TWAS
11:35-11:40	Fernando Quevedo <i>Director, ICTP. Welcoming remarks.</i>
11:40-11:45	Gretchen Kalonji <i>Assistant Director General for Natural Sciences, UNESCO. Remarks</i>
11:45-11:50	Immacolata Pannone <i>Representative, Ministry of Foreign Affairs, Italy. Remarks</i>
11:50-12:00	Jacob Palis <i>President, TWAS. Opening address</i>
12:00-12:15	Award Ceremony: The Ernesto Illy Trieste Science Prize 2011 Main Lecture Hall. Master of Ceremonies: R. Murenzi The recipient will be announced at the session. The Prize will be presented by Anna Illy, Fondazione Ernesto Illy; Roberto Cosolini, Mayor of Trieste; Jacob Palis, President, TWAS.
12:15-13:00	Award Ceremony: TWAS Prizes 2010 Main Lecture Hall. Master of Ceremonies: R. Murenzi The Prizes will be presented by J. Palis.
13:00-13:15	Award Ceremony: TWAS Medals 2011 Main Lecture Hall. Master of Ceremonies: R. Murenzi The Medals will be presented by J. Palis.

13:15-14:30	LUNCH (CAFETERIA)
14:30-16:30	Symposium 1: Food Security Main Lecture Hall Convener: E.L. Rech
14:30-15:00	Paul Christou <i>Transgenic crops and better nutrition and health in the developing world versus political expediency and protectionism</i>
15:00-15:30	Roger Beachy <i>Advancing science and technology to enhance food production and sustainability of agriculture: A global challenge</i>
15:30-16:00	Tsetseg Baljinova <i>Threats and values of microbial diversity in Mongolia for food security</i>
16:00-16:30	Elibio Leopoldo Rech <i>Biotechnology and the sustainable use of biodiversity</i>
16:30-17:00	REFRESHMENTS (LOBBY)
17:00-18:45	Presentations by Young Affiliates – Physics, Chemical and Engineering Sciences 1 PARALLEL SESSION, Euler Lecture Hall Chair: L. Alvarez Diaz
17:00-17:15	Kok-Keong Chong <i>Optimization of nonimaging focusing heliostat</i>
17:15-17:30	Partha Sarathi Mukherjee <i>Self-selection in self-assembly of discrete molecular architectures and their functionalization</i>
17:30-17:45	Eduardo Teixeira <i>Diffusion systems and phase transition problems</i>
17:45-18:00	Sohail Nadeem <i>Peristaltic flows in an endoscope: Analytical and numerical solutions</i>
18:00-18:15	Sukit Limpijumnong <i>Understanding materials from the atomic scale</i>
18:15-18:30	Santi Maensiri <i>Fabrication and properties of magnetic and composite nanostructures</i>
18:30-18:45	Hassane Bouzahir <i>Existence of a global attractor for partial functional differential equations with infinite delay</i>
17:00-18:45	Presentations by Young Affiliates – Biological Sciences 1 PARALLEL SESSION, Main Lecture Hall Chair: F. Barrantes
17:00-17:15	Antonio Costa-Filho <i>Better alone than in bad company – An unpaired spin dance in a party of biomolecules</i>
17:15-17:30	Yin Li <i>Systems biotechnology for production of bio-based solvents</i>
17:30-17:45	Santiago Ron <i>Dramatic increase in Amazonian frog biodiversity uncovered by intensive sampling of focal clades</i>
17:45-18:00	Luis F. Larrondo <i>Functional genomics of a model organism: understanding how time takes control of a biological process</i>
18:00-18:15	Bahram Hemmateenejad <i>Application of proteochemometrics analysis to cancer detection</i>
18:15-18:30	Roula Abdel-Massih <i>Antimicrobial activity of selected Lebanese plants against extended spectrum beta-lactamases producing Escherichia coli and Klebsiella pneumonia</i>
18:30-18:45	Pimchai Chaiyen <i>Mechanistic studies of Flavin and PLP - dependent enzymes</i>
19:30-20:30	Induction of new Members and Young Affiliates Main Lecture Hall
20:30	INDUCTION DINNER (CAFETERIA AND COFFEE BAR)

TUESDAY, 22 NOVEMBER 2011

08:30-09:30	2011 Ernesto Illy Trieste Science Prize Lecture Main Lecture Hall Chair: Y.T. Lee
09:30-10:00	REFRESHMENTS (LOBBY)

10:00-11:30 TWAS 2011 Medal Lectures

Main Lecture Hall

Chair: Atta-ur-Rahman

10:00-10:45 Anthony K. **Cheetham** *Solid state lighting*

10:45-11:30 Mohamed **Najim** *New trends in model-based multidimensional signals (M-D)*

12:00-13:30 LUNCH (CAFETERIA)

13:30-17:00 TWAS 2010 Prize Lectures: Biological & Earth Sciences

PARALLEL SESSION, Main Lecture Hall

Chair: V.P.K. Titanji

13:30-14:00 Ibrokhim **Abdurakhmonov** *Understanding and exploiting molecular diversity in the cotton genome*

14:00-14:30 Alfonso **Larqué-Saavedra** *The effects of salicylic acid on the bioproductivity of cultivated plants*

14:30-15:00 Soo-Chen **Cheng** *Molecular mechanism of the pre-mRNA splicing reaction*

15:00-15:30 Satyajit **Mayor** *Understanding the mosaicism of components in living cell membranes*

15:30-16:00 Anil K. **Gupta** *Abrupt changes in the Indian summer monsoon since the last Glacial Maximum*

16:00-16:30 Alexander W.A. **Kellner** *A panorama of flying reptile studies: News from the front*

16:30-17:00 Gabriel **Rabinovich** *Turning 'sweet' on immunity: Endogenous lectins and glycans at the cross-roads of tolerance and inflammation*

13:30-17:00 TWAS 2010 Prize Lectures: Physical Sciences

PARALLEL SESSION, Euler Lecture Hall

Chair: F. Quevedo

13:30-14:00 Santanu **Bhattacharya** *Design and synthesis of DNA transporters*

14:00-14:30 Dan **Yang** *Inspiration from triptolide: New synthetic methods and probes*

14:30-15:00 Vivek **Borkar** *Ergodic control: Theory and algorithms*

15:00-15:30 Edgar **Zanotto** *Glass myths and marvels*

15:30-16:00 Manindra **Agrawal** *Polynomial identity testing*

16:00-16:30 Carlos Gustavo **Moreira** *Fractal geometry, dynamical bifurcations and diophantine approximations*

16:30-17:00 Qi-Kun **Xue** *Quantum size effects in low-dimensional nanostructures studied by molecular beam epitaxy-scanning tunneling microscopy*

17:00-17:30 REFRESHMENTS (LOBBY)

17:30-19:00 Invited Lectures

Main Lecture Hall

Chair: H. Ramkissoon

17:30-18:00 Michael **Klein** *Computer simulation in the physical & life sciences: From chemistry to materials & the nano-bio-med frontier*

18:00-18:30 Jean-Christophe **Yoccoz** *Mathematical billiards*

18:30-19:00 Abdallah Salim Said **Daar** *Global grand challenges in health*

19:30 DINNER (AT THE HOTELS)

WEDNESDAY, 23 NOVEMBER 2011

08:30-09:30 Presentations by Young Affiliates – Physics, Chemical and Engineering Sciences 2

PARALLEL SESSION, Euler Lecture Hall

Chair: X. Caicedo

08:30-08:45 Satit **Saejung** *Another look at Cesàro sequence spaces: A simple approach for some geometric properties and constants*

- 08:45-09:00 Karimbergen **Kudaybergenov** *Automorphisms of central extensions of Type I Von Neumann algebras*
- 09:00-09:15 Mohammad Ahmad **Al-Ghouti** *Extraction and separation of vanadium and nickel from fly ash produced in heavy fuel power plants*
- 09:15-09:30 Shendi Nada **Amal Amin Ibrahim** *Nano-structured polymeric materials, fine structures, new functionalities, for various applications*
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- 08:30-10:15 Presentations by Young Affiliates – Biological Sciences 2**
PARALLEL SESSION, Main Lecture Hall
Chair: S. Al-Kindy
- 08:30-08:45 Etinosa Ogbomoede **Igbinoza** *Surveillance of Vibrio species in discharged aqueous effluents of wastewater treatment plants in the Eastern Cape Province of South Africa*
- 08:45-09:00 Fogue Simeon **Kouam** *Bioactive natural compounds from Cameroonian plants used in traditional medicine*
- 09:00-09:15 Marcio **Rodrigues** *Unconventional secretion and virulence in fungal pathogens*
- 09:15-09:30 Jaime **Costales Cordero** *Parasite-host interaction: perspectives from Chagas disease studies in Ecuador and analysis of Ecuadorian Trypanosoma cruzi isolates*
- 09:30-09:45 Ilkay **Erdogan-Orhan** *Extensive studies on neurobiological effects of plants and plant molecules*
- 09:45-10:00 Joseph Mumo **Mwangangi** *Anopheles gambiae larval development and survivorship along the Kenyan coast*
- 10:00-10:15 Romain Lucas **Glele Kakaï** *On the efficiency of inventory plots patterns in the estimation of the density of recruitments in tropical dense forest*
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- 10:15-11:00 REFRESHMENTS (LOBBY)
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- 10:30-11:00 Poster Session**
Lobby and Poster Gallery
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- 11:00-13:30 Symposium 2: Materials Science**
Main Lecture Hall
Convener: A.K. Sood
- 11:00-11:30 Shoushan **Fan** *Carbon nanotubes: A road to applications*
- 11:30-12:00 Richard **Friend** *Electronics with organic semiconductors*
- 12:00-12:30 Dongyuan **Zhao** *Synthesis and applications of ordered mesoporous carbon materials*
- 12:30-13:00 José Luis **Morán López** *Recent studies on the magnetic properties of free and supported Mn nanostructures*
- 13:00-13:30 Ajay Kumar **Sood** *Incredible nanocarbon*
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- 13:30-14:30 LUNCH (CAFETERIA)
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- 14:30-16:30 Symposium 3: Chemistry in the Year of Chemistry**
Main Lecture Hall
Convener: R.J.R. Hwu
- 14:30-15:00 Leiv K **Sydnés** *Chemistry: An important science to improve the human condition*
- 15:00-15:30 Susan Shwu-Chen **Tsay** *Invention of eco-friendly green chemical products*
- 15:30-16:00 Krishnarajanagar Nagapa **Ganesh** *Molecules rule the world: Chemistry is everywhere*
- 16:00-16:30 Michael **Sheetz** *Mechanics and the physical chemistry of cell functions*
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- 16:30-16:45 REFRESHMENTS (LOBBY)
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- 16:45-17:15 Closing Session**
Chair: R. Murenzi
- 16:45-17:00 Chunli **Bai** *Announcement for the 23rd General Meeting and 12th General Conference; presentation by Yonglong Lu on the preparations for the 2012 TWAS Meeting in Tianjin, China*
- 17:00-17:15 Jacob **Palis** *Concluding remarks*

17:15-18:20 **Abdus Salam: The Dream of Symmetry**
Video screening

18:20-19:00 **Informal Regional Meetings of TWAS Members and Young Affiliates**

Closed parallel sessions, for TWAS Members and Young Affiliates only.

- Arab Region: Lecture Room D
- Sub-Saharan African Region: Luigi Stasi Seminar Room
- Central and South Asian Region: Main Lecture Hall
- East and South-East Asia and Pacific Region: Lecture Room B
- Latin America & Caribbean Region: Euler Lecture Hall

19:30

DINNER (AT THE HOTELS)