

TWAS ANNIVERSARY

TWAS 24th General Meeting

*Science, Technology and Productive Innovation for
Sustainable Economic Growth in Developing Countries*

1–4 October 2013*
Buenos Aires, Argentina

Second Circular

- General Information
- Tentative Programme
- Final Registration Form
- Visa Information Form

* Meetings of TWAS Committees and Council will be held on 30 September

About TWAS

TWAS is an autonomous international organization founded in 1983 in Trieste, Italy, by a distinguished group of scientists from the South led by the late Nobel laureate Abdus Salam of Pakistan. It was officially launched as the "Third World Academy of Sciences (TWAS)" by the secretary-general of the United Nations in 1985. At the Academy's 23rd General Meeting in 2012, members changed the name to "The World Academy of Sciences (TWAS) for the advancement of science in developing countries".

TWAS represents the best of science in developing countries. Its main mission is to promote scientific excellence and capacity in the South for science-based sustainable development.

The Academy strives to:

- Recognize, support and promote excellence in scientific research in the developing world;
- Respond to the needs of young scientists in developing countries lagging in science and technology;
- Promote South-South and South-North cooperation in science, technology and innovation;
- Encourage scientific research and sharing of experiences in solving major challenges facing developing countries.

For more information, please visit www.twas.org

About Ministerio de Ciencia, Tecnología e Innovación Productiva

The Ministry of Science, Technology and Innovation was created in December 2007 by President Cristina Fernandez de Kirchner, and was the first in Latin America that considered production innovation associated with science and technology. The ministry was created to incorporate science and technology for economic and social development of Argentina. This objective has required a number of innovations with respect to organizational structure and financing instruments so as to be able to implement policies through deliberate actions. Because of Argentina's long history of eclectic science funding, this meant a major change, as the funding of all disciplines was accompanied by actions to diversify the country's productive matrix and solve social problems.

The importance of its constitution:

The ministry has helped institutionalize policies on science, technology and innovation under the belief that these policies enhance Argentina's potential for sustainable development and social inclusion. The Action Plan emphasizes the transition from horizontal policies to policies targeted at sectors of nanotechnology, biotechnology and ICT and areas of strategic agribusiness, energy, health and social development, and outlined on national plans that support the guidelines for the scientific and technological system of Argentina. Its mission is to guide science, technology and innovation towards reinforcing a new production model that generates greater social inclusion and makes Argentina's economy more competitive, using a model of knowledge as the key to development.

For the first time, a significant increase in funding will allow the Ministry to award major grants to ensure the realization of projects in these areas. It is also continuing long-term planning through the *National Plan for Science, Technology and Innovation: Innovative Argentina 2020*, contrived with the participation of different stakeholders. (quoted from Dr. Lino Barañao, Minister)

For more information, please visit www.mincyt.gov.ar

About CONICET

The National Scientific and Technical Research Council (CONICET) is an independent body under the Ministry of Science, Technology and Innovation of Argentina.

CONICET is the leading scientific institution of the country, devoted to promoting scientific and technological research activities. Its mission is to promote and subsidize scientific and technological research and related activities. As the largest fundamental research organization in Argentina, CONICET is involved in all scientific fields: agriculture, materials, engineering, biology and health, physical and natural sciences, and social and human sciences.

CONICET is organized in Scientific and Technological Centers (CCTs) which act as regional offices that allow decentralization and direct management of the 187 research centers and institutes, 7,400 researchers, 9,000 fellows, and 2,500 technicians distributed throughout the country. Since 1996, CONICET has been ruled by a board of directors of eight members headed by a president. The scientific community in their respective disciplines elects four members. Industrial associations, agricultural organizations, the national universities and the ministries of science and technology of the provinces elect the other four members of the board. CONICET works in cooperation with universities and other science and technology organizations. The main science and technology institutions in Argentina are decentralized, usually reporting to different government areas: health, defense, economy, with interlinks connecting them. CONICET coordinates funding efforts with the main Argentine agency providing funds for science and technology: the National Agency for the Promotion of Science & Technology. For more information, please visit www.conicet.gov.ar

GENERAL INFORMATION

Date and Venue

The 24th General Meeting of TWAS will be held at the Sheraton Buenos Aires Hotel & Convention Center in Buenos Aires, Argentina, 1-4 October 2013. The meeting is being generously hosted by the *Ministerio de Ciencia, Tecnología e Innovación Productiva* and the *Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)*. The meetings of TWAS Committees and Council will be held on 30 September. The tentative programme is attached.

Participation

Invitation to attend the meeting is extended to all TWAS Members and a selected number of distinguished experts from developing and developed countries. Participation in the meeting is by invitation only.

Final Registration Form

The attached 'Final Registration Form' must be completed in all its parts and emailed to the TWAS Secretariat in Trieste to annualmeetings@twas.org by **15 August 2013**.

Travel

Participants should make their own travel plans to reach Buenos Aires International Airport as the final destination. The local hosts will arrange transfers from the airport to the Hotel in Buenos Aires. All participants should arrange to arrive in Buenos Aires on **30 September 2013**. TWAS Members involved in the Committee and Council Meetings on *30th September should arrive on 29 September*.

Visa Arrangements

Please check with the nearest embassy/consulate of Argentina to determine whether you require an entry visa. If so, please complete the attached 'Visa Information Form' (one per person travelling). The form must be emailed to the Secretariat of the TWAS Meeting in Argentina (coopint@conicet.gov.ar) by **31 July 2013**. The Secretariat in Buenos Aires will then issue a formal letter of invitation. With this invitation letter and the necessary documents, you may then contact the closest embassy/consulate for visa application to Argentina. Please note that visas cannot be obtained upon arrival in Argentina. If you arrive without a visa, you cannot enter the country.

Accommodation and Meals

Participants will be accommodated at the *Sheraton Hotel & Convention Center*, San Martin 1225, Buenos Aires, Argentina, Tel: +54-11-4318-9000; website: <http://bit.ly/cxNptB>

The hosts have generously agreed to provide accommodation and meals for a maximum of five nights (30 September-4 October) to all invited participants. This hospitality is also extended to a maximum of one registered accompanying person accommodated in the same room as the participant. Participants and accompanying persons will be responsible for all additional expenses (alcoholic beverages, room service, mini-bar, laundry, local and international phone calls, etc.). Guests with no credit card will be kindly requested to pay a deposit of US\$100 per night at the hotel front desk at the moment of check in.

For those participants extending their stay at the Sheraton Hotel for personal reasons, please contact **Clara Bakir** for a special rate:

Email: clara.bakir@starwoodhotels.com

Tel: (54-11) 4318-9145

Fax: (54-11) 4318-9389

Official Language

The official language of the meeting will be English.

Photographers during the TWAS Meeting

One or more photographers will be present at the TWAS Meeting. Any photographs or videos taken may be published by TWAS in the context of information and public relations work – for example, in the TWAS newsletter, on www.twas.org, or on TWAS's Facebook page. They will not be used for commercial purposes. If you are not in agreement with the publication of photographs in which you are featured, please inform us before the meeting by sending an email to annualmeetings@twas.org.

Liability

Neither TWAS nor the local hosts are liable for any losses, accidents or damages, irrespective of the cause. Participants take part in the TWAS Meeting and accompanying events at their own risk. We ask for your understanding that neither TWAS nor CONICET can be held liable for any personal injury or property damage suffered during travel to and from as well as during your stay in Buenos Aires.

Privacy policy

By registering for the TWAS Meeting you are agreeing to allow your personal data to be recorded and saved. Any personal data that you enter will only be used for the purposes of the TWAS Meeting and accompanying events which may require security-checks.

Tours

Full details of the post conference tour will be available in Buenos Aires.

Weather

In October, the temperature in Buenos Aires ranges between 16 and 22°C during the day, and may drop to 8-12°C at night.

Address for Correspondence and Further Information

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Local Organizers:

*Ministerio de Ciencia, Tecnología e Innovación Productiva
Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)*

TWAS 24th General Meeting
1 – 4 October 2013, Buenos Aires, Argentina

Tentative Programme

Monday, 30 September 2013

Dark shade: closed sessions (for members only)

08:30-10:00	TWAS Prizes Committee Meeting	
10:00-10:15	<i>Refreshments</i>	
10:15-12:30	TWAS Elections Committee Meeting	
12:30-14:00	<i>Lunch</i>	
14:00-15:45	TWAS Policy Development & Future Action Committee Meeting	
15:45-16:00	<i>Refreshments</i>	
16:00-17:00	TWAS Regional Offices Annual Meeting	TWAS-OWSD Advisory Panel for Women in Science Meeting
17:00-19:00	TWAS 33rd Council Meeting	
19:30	<i>Dinner in a restaurant near the Hotel</i>	

Tuesday 1 October 2013

Dark shade: closed sessions (for members only)

08:00-10:30	TWAS 24th General Meeting	
10:30 -11:00	<i>Refreshments</i>	
11:00-11:15	<i>Participants and guests to be seated</i>	
11:15-13:00	Opening Ceremony and Presentation of Prizes, Medals and Certificates	
	Opening Addresses	
	Presentations of Prizes and Medals	
	<i>30th Anniversary Presentation to TWAS Founding Fellows</i>	
	<i>Special awards for services to TWAS to:</i>	
	<ul style="list-style-type: none"> • I. Pannone • S. Fu 	
	<i>TWAS-Lenovo Science Prize to: (To be announced)</i>	
	<i>TWAS 2013 Medals to:</i>	
	<ul style="list-style-type: none"> • F.J. Barrantes • M.L. Klein • T. Nyokong 	
	<i>TWAS 2012 prizes to:</i>	
	<ul style="list-style-type: none"> • Jun Yu & D. Egamberdieva, Agricultural Sciences • A.S. Chiang, Biology • Q. Abdool Karim & G.F. Gao, Medical Sciences • Xiao-Ming Chen & S.K. Pati, Chemistry • A.L. Ahmad & K. Deb, Engineering Sciences • P.G. Eriksson, Earth Sciences • F.C. Marques, Mathematics • J.P. Paz, Physics 	
	<i>TWAS Celso Furtado Prize to: R. Paes de Barros</i>	
	<i>C.N.R. Rao Prize to: F. Qadri</i>	
	<i>Atta-ur-Rahman Prize to: (To be announced)</i>	
	<i>TWAS Regional Prize to: (To be announced)</i>	
13:00-14:30	<i>Lunch</i>	
14:30-15:15	TWAS-Lenovo Science Prize Lecture (To be announced)	

15:15-18:15	Ministerial Session: <i>Achievements & Challenges in STI for development</i> Chair: L. Baraño Co-Chair: C. Bai
15:15-15:30	<i>Introductory Keynote Address: C. Juma</i>
15:30-15:40	L. Baraño, Minister of Science, Technology and Innovation, Argentina
15:40-15:50	M.A. Raupp, Minister of Science, Technology and Innovation, Brazil (Tbc)
15:50-16:00	D. Dalkie, Minister of Science and Technology, Ethiopia (Tbc)
16:00-16:10	T. Ramasami, Secretary to Govt. of India, DST, (representing S.J. Reddy, Minister for S&T & Earth Sciences, India)
16:10-16:20	M.C. Carozza, Ministry of Education, University and Research, Italy (Tbc)
16:20-16:30	Elías Micha, Adjunct Director for Regional Development, CONACYT (representing E. Cabrero Mendoza, Director General, CONACYT, Mexico)
16:30-17:00	<i>Refreshments</i>
17:00-18:15	Ministerial Session: <i>Achievements & Challenges in STI for development (cont.)</i>
17:00-17:10	I.O. Basse Ewa, Federal Ministry of Science and Technology, Nigeria (Tbc)
17:10-17:20	D. Hanekom, Ministry of Science and Technology, South Africa
17:20-18:15	Discussions
18:15-19:15	Symposium 1: <i>Scientific and Technological Development in Argentina</i>
18:15-18:30	<i>National Plan for Science, Technology and Innovation. Initiatives to promote technological innovation in the agri-industrial sector</i> A. Mentaberry
18:30-18:45	<i>CONICET, Facts and Challenges</i> R. Salvarezza
18:45-19:00	<i>Title to be announced</i> E. Calvo
19:00-19:15	<i>Agrobiotechnology research in INTA (National Institute for Agricultural Research)</i> H. Esteban Hopp
20:00	<i>Welcome Reception</i>

Wednesday, 2 October 2013

08:30-10:30	Symposium 2: <i>Quantum Information and Quantum Computing</i> Co-Conveners: L. Davidovich & Jian-Wei Pan
08:30-09:00	<i>How to efficiently characterize a quantum process (theory and experiment)</i> J.P. Paz
09:00-09:30	<i>Quantum interferometry and quantum information as seen from Gdansk</i> M. Zukowski
09:30-10:00	<i>Coherence and entanglement by photon subtraction</i> G.S. Agarwal
10:00-10:30	<i>To be confirmed</i> Jiangfeng Du
10:30-11:00	<i>Refreshments</i>
11:00-11:30	C.N.R. Rao Prize Lecture <i>Infectious disease diagnosis, prevention and control using biomedical advances in science</i> F. Qadri
11:30-12:00	TWAS-Celso Furtado Prize Lecture <i>The dynamics of inequality in Brazil</i> R. Paes de Barros
12:00-13:00	Invited Lectures
12:00-12:30	<i>Quantitative simulations on the evolution of dune fields with a trans-scale model</i> Xiaojing Zheng
12:30-13:00	<i>Doing science in the developing world: The International Year of Crystallography as facilitator</i> G.R. Desiraju
13:00-14:00	<i>Lunch</i>

14:00-17:00	Lectures by Awardees of TWAS 2012 Prizes Biological & Earth Sciences	Lectures by Awardees of TWAS 2012 Prizes Physical Sciences
14:00-14:30	<i>Not all genes are created equal: Genes and their two-tracked actions</i> J. Yu, Agricultural Sciences	<i>Flexible porous metal-azolate frameworks for adsorption, separation and sensing</i> X.M. Chen, Chemistry
14:30-15:00	<i>Role of microorganisms in adaptation of crops to environmental stresses</i> D. Egamberdieva, Agricultural Sciences	<i>Transport, magnetic and optical properties of graphenes, decorated graphenes and graphene nanoribbons</i> S.K. Pati, Chemistry
15:00-15:30	<i>The Drosophila connectome project</i> A.S. Chiang, Biology	<i>Sustainable environmental protection and healthcare via membrane-based technology</i> A.L. Ahmad, Engineering Sciences
15:30-16:00	<i>The Neoarchaean-Palaeoproterozoic sedimentary (volcanic) record (Kaapvaal craton and others): more questions than answers?</i> P.G. Eriksson, Earth Sciences	<i>Innovization: Discovering innovative insights through multi-objective optimization</i> K. Deb, Engineering Sciences
16:00-16:30	<i>Preventing HIV infection in women: A global imperative</i> Q. Abdool Karim, Medical Sciences	<i>The Willmore Conjecture</i> F.C. Marques, Mathematics
16:30-17:00	<i>Influenza virus entry and release: From 2009 pandemic to bat-derived genome</i> G.F. Gao, Medical Sciences	<i>Decoherence and the transition from quantum to classical physics</i> J.P. Paz, Physics
17:00-17:30	<i>Refreshments</i>	
17:30-19:00	Induction of new TWAS Members and Young Affiliates	
19:30	<i>Dinner in a restaurant near the Hotel</i>	

Thursday, 3 October 2013

09:00-11:45	Medal 2013 Lectures		
09:00-09:45	<i>Exploring the nanoscale realm of the brain</i> F.J. Barrantes		
09:45-10:30	<i>Understanding Nature's voltage gated ion channels using molecular dynamics simulation</i> M.L. Klein		
10:30-11:00	<i>Refreshments</i>		
11:00-11:45	<i>Combination therapy, a solution to Africa's silent killer: cancer</i> T. Nyokong		
11:45-12:15	Atta-ur-Rahman Prize Lecture (To be announced)		
12:15-13:00	Screening of new TWAS Documentary		
13:00-14:30	<i>Lunch</i>		
14:30-16:30	Presentations by Young Affiliates Medicine	Presentations by Young Affiliates Chemistry – Earth Sciences	International Symposium on Chemistry <i>(Organized by the Royal Society of Chemistry)</i> Convener: A. Palermo
16:30-17:00	<i>Refreshments & Poster Session</i>		
19:30	<i>Gala dinner</i>		

Friday, 4 October 2013

09:00-10:00	Presentations by Young Affiliates Molecular Biology	Presentation by Young Affiliates Astrophysics – Mathematics
10:00-10:30	<i>Refreshments</i>	
10:30-11:00	TWAS-ROLAC Prize Lecture (To be announced)	
11:00-12:00	Closing Ceremony	
12:00	<i>Lunch</i>	