

# TWAS

# 18th General Meeting

hosted by  
The Abdus Salam International Centre for Theoretical Physics (ICTP)

## Programme

13 - 14 November 2007  
Trieste, Italy

TWAS would like to express its gratitude to:

- The Government of the Republic of Italy for providing financial support
- The United Nations Educational, Scientific and Cultural Organization (UNESCO) for providing administrative support
- The Abdus Salam International Centre for Theoretical Physics (ICTP) for hosting the TWAS Secretariat and this meeting.

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## Sunday, 11 November

ADRIATICO GUEST HOUSE (AGH)

### Parallel Committee Meetings

Dark shade: closed sessions (for committee members only)

16.00 – 19.00	TWAS Statutes & Bylaws Committee	LUNDQVIST	TWAS Regional Offices Meeting	ROOM A
19.30	DINNER			CAFETERIA

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## Monday, 12 November

ADRIATICO GUEST HOUSE (AGH)

### Special Committee Meetings (Committee Members Only)

Dark shade: closed sessions (for committee members only)

08.30 – 9.00	Registration			LOWER LEVEL 1
08.30 – 0.00	TWAS Prizes Committee Meeting			LUNDQVIST
10.00 – 10.15	REFRESHMENTS			
10.15 – 13.00	TWAS Elections Committee Meeting			LUNDQVIST
13.00 – 14.30	BUFFET LUNCH			CAFETERIA
14.30 – 16.30	TWAS 27 <sup>th</sup> Council Meeting (Council Members only)			LUNDQVIST
16.30 – 17.00	REFRESHMENTS			
17:00 – 19.00	TWAS 27 <sup>th</sup> Council Meeting [ <i>cont.</i> ] (Council Members only)			LUNDQVIST
19.30 -	DINNER			AT RESPECTIVE HOTELS

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## Tuesday, 13 November

MAIN BUILDING (MB)

08.30 – 11.30	Registration			LOBBY
08.30 – 11.00	TWAS 18 <sup>th</sup> General Meeting (TWAS Members only)			MAIN LECTURE HALL
11.00 – 11.30	REFRESHMENTS			

# Tuesday, 13 November (cont.)

MAIN BUILDING (MB)

11.30 – 12.30

Opening Ceremony and Presentation of Prizes, Medals & Certificates

MAIN LECTURE HALL

## Opening Addresses

### Presentation of TWAS Prizes to:

- K.L. Heong (Malaysia), *Agricultural Sciences*
- P. León-Azofeifa (Costa Rica), *Biology*
- R. Ramesh (India), *Earth Sciences*
- J. Convit (Venezuela), *Medical Sciences*
- C.Y. Chang (Taiwan, China), *Engineering Sciences*
- C. Landim (Brazil), *Mathematics*
- C.M. Che (China) *Chemistry*
- D.D. Sarma (India), *Physics*

### Presentation of TWAS Medal to:

- H. Chaimovich (Brazil)

### Presentation of TWAS-ROCASA Prize for Public Understanding of Science to:

- P.A. Hoodbhoy, Pakistan

### Presentation of TWAS Membership Certificates to:

Agricultural Sciences

Chatoo, B.B. (India); Clegg, M.T. (USA); Obi, T. (Nigeria); Siddiqui, K.A. (Pakistan)

Structural, Cell & Molecular Biology

Silva J.L. (Brazil)

Systems Biology

Deng, Z. (China); Raghavendra, A.S. (India)

Neurosciences

Ventura, D.F. (Brazil); Yang, X. (China)

Medical & Health Sciences

Kalil, J. (Brazil); Laurencin, C.T. (USA)

Chemical Sciences

Ganesh, K.N. (India); Yam, V.W.W. (China)

Earth Sciences

Nobre, C. (Brazil); Upreti, B.N. (Nepal)

Mathematical Sciences

Hans-Gill, R.J. (India)

Social & Economic Sciences

Reis, E. (Brazil); Zhang K. (China)

### Presentation of Certificates to TWAS Young Affiliates:

Biological Sciences:

Ramanitrahasimbola, D. (Madagascar); Beyene, N.W. (Ethiopia); Xu, T. (China); Mohyuddin, A. (Pakistan); De Ungria, M.C.A. (Philippines), Afshari, R. (Iran), Larrain, J. (Chile)

Physical Sciences:

Rozikov, U. (Uzbekistan); Mahdi, M.A. (Malaysia); Ngo, V.T. (Vietnam); Taelle, B. (Lesotho); Ramakrishna, S.A. (India); Pati, S.K. (India); Oguzie, E. (Nigeria); Osowole, A. (Nigeria)

12.30 – 14.30

LUNCH

CAFETERIA

# Tuesday, 13 November (cont.)

MAIN BUILDING (MB)

14.30 – 16.30	Trieste Science Prize Lectures Chair: CNR Rao, India      Rapporteur: EN Sabiti, Uganda	MAIN LECTURE HALL
14.30 – 15.30	<i>Transgenic plants: Development and applications in basic and applied research</i> L. Herrera-Estrella, Mexico (Agricultural Sciences)	
15.30 – 16.30	<i>Creativity in organic synthesis: Harnessing synergy with nature for human well-being</i> G. Mehta, India (Chemical Sciences)	
16.30 – 17.00	REFRESHMENTS	
17.00 – 19.30	Symposium: Status and Prospects of Science and Technology in Pakistan Convener: AU Rahman, Pakistan      Rapporteur: M.I. Choudhary, Pakistan	MAIN LECTURE HALL
17.00 – 17.30	<i>The current status and future prospects of science and technology and higher education in Pakistan</i> A.U. Rahman, Pakistan	
17.30 - 17.45	<i>Recent initiatives in S&amp;T and higher education</i> M.I. Choudhary, Pakistan	
17.45 – 18.00	<i>Information technology revolution in Pakistan</i> N. Malik. Pakistan	
18.00 – 18.15	<i>60 years of agriculture research in Pakistan</i> A. Muhammed, Pakistan	
18.15 – 18.30	<i>Biomedical research in Pakistan</i> S. Riazuddin, Pakistan	
18.30 – 18.45	<i>Mathematical sciences in Pakistan</i> T. Hussain, Pakistan	
18.45 – 19.00	<i>Human genome project – Pakistan's contribution</i> Q. Mehdi, Pakistan	
19.00 – 19.30	Conclusions	
20.00 -	DINNER	'LA MARINELLA' FISH RESTAURANT

# Wednesday, 14 November

ADRIATICO GUEST HOUSE (AGH)

08.30 – 09.30	TWAS 2007 Medal Lecture Chair: P. Berjak, South Africa      Rapporteur: Deng Z., China	KASTLER
08.30 – 09.30	<i>Functional and structural implications of the interfacial composition of association colloids: From catalysis to shape transitions</i> H. Chaimovich, Brazil	
09.30 – 10.30	TWAS-ROCASA Prize for the Public Understanding of Science Chair: V. Krishnan, India      Rapporteur: M. Shabat, Germany	KASTLER
09.30 – 10.30	<i>Teaching science badly - and well</i> P. Hoodbhoy, Pakistan	
10.30 – 11.00	REFRESHMENTS	
11.00 – 13.00	Lectures by Awardees of TWAS Prizes	
	<i>Biological Sciences</i> GIAMBIAGI <i>Physical Sciences</i> KASTLER	
	Chair: VP Titanji, Cameroon      Rapporteur: J. Chela Flores, Italy	Chair: Bai C., China      Rapporteur: A. Safavi, Iran
11.00 – 11.30	<i>Communicating agriculture to rural farmers</i> K.L. Heong (Malaysia), <i>Agriculture</i>	<i>Nano-bio physics and electronics</i> C.Y. Chang (Taiwan, China), <i>Engineering Sciences</i>
11.30 – 12.00	<i>Deafness in a large Costa Rican family linked to point-mutation in the gene for an actin regulatory protein (hDIA1) that repairs the actin cytoskeleton</i> P. León-Azofeifa (Costa Rica), <i>Biology</i>	<i>Stationary non-equilibrium states</i> C. Landim (Brazil), <i>Mathematics</i>
12.00 – 12.30	<i>High resolution reconstruction of Indian monsoon rainfall using oxygen isotopes in speleothems and marine sediments</i> R. Ramesh (India), <i>Earth Sciences</i>	<i>Reactive metal-ligand multiple bonded and phosphorescent transition metal complexes for catalysis and materials science applications</i> C.M. Che (China), <i>Chemistry</i>
12.30 – 13.00		<i>Sr<sub>2</sub>FeMoO<sub>6</sub> – A fascinating compound</i> D.D. Sarma (India), <i>Physics</i>
13.00 – 14.30	LUNCH	CAFETERIA

# Wednesday, 14 November (cont.)

ADRIATICO GUEST HOUSE (AGH)

14.30 – 16.35	Scientific Presentations by TWAS Young Affiliates		
	<i>Biological Sciences</i>	GIAMBIAGI	<i>Physical Sciences</i> KASTLER
	Chair: E. del Pino, Ecuador	Rapporteur: P. McGrath, UK	Chair: J. Palis, Brazil
14.30 – 14.55	<i>Popular medicine and its scientific reasons: Case of two plants</i>		Rapporteur: JL Moran-Lopez, Mexico
	D. Ramanitrahasimbola, Madagascar		<i>Gibbs measures on Cayley tree: Contour method</i>
14.55 – 15.20	<i>Could nanobiotechnology be the solution for the diagnosis of neglected tropical diseases?</i>		U. Rozikov, Uzbekistan
	N.W. Beyene, Ethiopia		<i>Brillouin-erbium fiber lasers for multiple wavelengths generation</i>
15.20 – 15.45	<i>Revealing the role of UNC-31 in dense core vesicle exocytosis using C.elegans model system</i>		M.A. Mahdi, Malaysia
	T. Xu, China		<i>Stacked triangular XY antiferromagnets: End of a controversial issue on the phase transition</i>
16.10 – 16.35	<i>Distribution of transplantation antigens (HLA) in ethnic groups from Pakistan</i>		V.T. Ngo, Vietnam
	A. Mohyuddin, Pakistan		<i>CdTe thin films solar cell structures: An overview on device and technology issues</i>
16.35 – 17.00	REFRESHMENTS		B. Taele, Lesotho
17.00 – 18.40	Scientific Presentations by TWAS Young Affiliates (cont.)		
	<i>Biological Sciences</i>	GIAMBIAGI	<i>Physical Sciences</i> KASTLER
	Chair: E. del Pino, Ecuador	Rapporteur: P. McGrath, UK	Chair: J. Palis, Brazil
17.00 – 17.25	<i>Impact of DNA evidence in the Philippine criminal justice system</i>		Rapporteur: JL Moran-Lopez, Mexico
	M.C.A. De Ungria, Philippines		<i>Design of metamaterials at optical frequencies</i>
17.25 – 17.50	<i>The effects of opioid analgesics: From epidemiology to molecular level</i>		S.A. Ramakrishna, India
	R. Afshari, Iran I.R.		<i>Structure and electronic properties of DNA base-pairs and modified DNA</i>
17.50 – 18.15	<i>From developmental biology to tissue regeneration</i>		S.K. Pati, India
	J. Larrain, Chile		<i>Challenges and experiences in organic corrosion inhibitor research</i>
18.15 – 18.40			E. Oguzie, Nigeria
			<i>The search for broad-spectrum inorganic antimicrobials</i>
			A. Osowole, Nigeria
18.40 – 19.30	Closing Ceremony		KASTLER
	Chair: J. Palis, Brazil	Rapporteur: D. Balasubramanian, India	
19.30 -	DINNER		CAFETERIA