



# PEOPLE, PLACES & EVENTS

## TWAS FELLOWS SHARE TYLER PRIZE

**Madhav Gadgil**, D.D. Kosambi visiting research professor of interdisciplinary studies at Goa University, and **Jane Lubchenco**, distinguished university professor in marine studies at Oregon State University, are the 2015 winners of the Tyler Prize for Environmental Achievement.

Both Gadgil and Lubchenco are TWAS Fellows (1991 and 2004 respectively). They received the prize for their commitment to the development of conservation and sustainability policies at local to international levels.

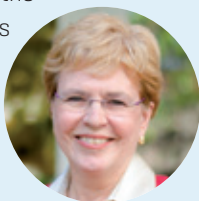
The Tyler Prize, established by John and Alice Tyler in 1973, acknowledges scientists who bring contributions to environmental science, environmental health and energy.

Madhav Gadgil is a retired professor of ecology at Indian Institute of Science.



He promoted one of the first censuses of India's wild elephant populations, engaging in the study of long-term monitoring of forested regions. This led to a policy-level reduction of incentives to forest-based industries in the country.

He shaped India's National Biodiversity Act, and chaired the "Gadgil Committee" to provide guidelines on the protection of the Indian Western Ghats mountain range, a UNESCO World Heritage site.



Lubchenco served from 2009 to 2013

as undersecretary of commerce for oceans and atmosphere and administrator of the National Oceanic

and Atmospheric Administration [NOAA]. She currently serves as the first-ever science envoy for the ocean, an appointment with the US Department of State.

She made fundamental discoveries on the ecological and evolutionary relationships among living organisms in complex coastal systems and has been dedicated to finding solutions that enable sustainable use of the ocean.

## AUTREY NAMED MAURITIUS CHANCELLOR

**Louis Jean Claude Autrey**, a 2004 TWAS Fellow, has been appointed Chancellor of the University of the Mauritius. The ceremony took place 20 April 2015, in the presence of the acting Mauritius President Monique Ohsan-Bellepeau, Prime Minister Anerood Jugnauth and other eminent personalities.



Autrey, a world-renowned authority on sugar cane research and development, earned a first degree in botany from the University of London, a master's degree in phytopathology and a doctorate in virology from the University of Exeter, UK. He was awarded the doctor of science degree by the University of Exeter.

He retired as director of the Mauritius Sugar Industry Research Institute in 2007, after 40 years of service. Today, he is the president of the Mauritius Academy of Sciences and Technology, the general secretary of the International Society of Sugar Cane Technologists, the Science & Technology coordinator of Omnicane

Group and he chairs the ACP Scientific Committee on Sugar, the ACP Scientific Advisory Group and the Research & Development Committee of the Mauritius Cane Industry Authority. Autrey has authored 150 scientific papers and carried out consultancies in more than 25 countries.

## SHARMA NEW INDIAN S&T SECRETARY

**Ashutosh Sharma**, a professor at the Indian Institute of Technology [IIT] and a 2010 TWAS Fellow, has been appointed secretary of India's Department of Science and Technology.



The January 2015 appointment has a five-year term.

He has a broad international experience built in academic institutions and has also served on the governing boards and councils of over 15 prominent scientific institutions in India. His scientific interests include nanotechnology, biomaterials and biosurfaces, nanocomposites in energy, health and environment. He is the recipient of many awards, including the TWAS Prize for scientific excellence in engineering, the Bhatnagar Prize and the Infosys Prize in Engineering and Computer Science.

Sharma obtained his MS from Pennsylvania State University (1984) and his PhD from the State University of New York, Buffalo (1988). He is currently Institute Chair Professor & C.V. Seshadri Chair Professor at IIT.

## FELLOW WINS L'ORÉAL-UNESCO AWARD

Brazilian physicist and astronomer **Thaïsa Storchi Bergmann**, a 2011

TWAS Fellow, is among the five winners of the 17th Annual L'Oréal-UNESCO for Women in Science Awards. By choosing five outstanding women for their scientific accomplishments, the prize aims at promoting gender balance in science, proving that women can make a difference.



This year the L'Oréal-UNESCO prize has acknowledged scientific excellence in the physical sciences. In addition to Storch Bergmann, the winners are: Rajaâ Cherkaoui El Moursli from Morocco, Yi Xie from China, Dame Carol Robinson from the United Kingdom and Molly S. Shoichet from Canada. Storch Bergmann is a professor at the Physics Institute of the Federal University of Rio Grande do Sul, Porto Alegre, Brazil, where she is the head of the Astrophysics Research Group. She also coordinates a project for the development of astrophysics in the south of Brazil. Her research focuses mainly on the study of supermassive black holes in the center of galaxies and how they influence the evolution of the universe. Storch Bergmann is a member of the Brazilian Academy of Sciences and participates as Brazilian representative in the board of the Gemini Observatory, an international partnership that includes the United States, Canada, Brazil, Argentina, Australia and Chile.

**IAP: CURRICULUM OF 'BIG IDEAS'**

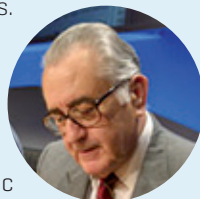
Science education should emphasize a small number of powerful ideas instead of overloading teachers and students with a curriculum obsessed with details, says a new publication issued by IAP, the global network of science academies. "Working with Big Ideas of Science Education" was developed by an international team of expert scientists,

and follows a previous document called "Principles and Big Ideas of Science Education" (2010).

A few big, powerful ideas – which explain a range of related phenomena and events – are best suited to convey to students the fundamentals of science, the authors conclude. And they suggest, in parallel, that curriculum content, teachers' professional training and teaching methods should be rejuvenated. In addition, reshaping small ideas to build bigger ones would propel students' creative thinking and the recognition that science and other subjects are intimately connected. This book addresses all the professional figures concerned with improving science education: from teachers and managers, to curriculum developers and policy-makers.

**IN MEMORIAM: RAIMUNDO VILLEGAS**

**Raimundo Villegas**, the founder of the *Instituto de Estudios Avanzados* (IDEA, 1979) in Caracas, Venezuela, passed away 21 October 2014. Villegas, a 1985 TWAS Fellow and a renowned neuroscientist, was the founder and chancellor of the Latin American Academy of Sciences.



From 1969 to 1974 he served as the director at the Venezuelan Institute for Scientific Research, or *Instituto Venezolano de Investigaciones Cientificas* (IVIC). In 1970 he founded the Center for Advanced Studies (CEA-IVIC). From 1979 to 1983 he served as Venezuela's minister for science and technology. Villegas helped to drive advances in the structure and function of the nervous system. In the field of biotechnology, he developed new techniques to ease the production of easily accessible food for the poorest. He authored more

than 80 scientific papers, most of them in international peer-reviewed journals.

**IN MEMORIAM: GUSTAVO RIVAS-MIJARES**

**Gustavo Rivas-Mijares**, a professor emeritus at *Universidad Central de Venezuela* (Central University of Venezuela, or UCV), and a 1988 TWAS Fellow, passed away 30 November 2014.



Rivas-Mijares earned his MSc in sanitary engineering (1950) from the University of Michigan and his DSc from the University of California (1962). He served as director of the department of sanitary engineering at UCV from 1958-62, 1964-69 and in 1972. Water was his field of investigation and his lifetime commitment. He addressed several issues linked to the efficient use of water, including wastewater treatment, water consumption for domestic use and origin of turbidity in natural surface waters. He authored three important textbooks on water treatment, as well as another eight books and 136 scientific papers. He was a member of the National Academy of Sciences, Venezuela, where he served as president from 1981-85; the National Academy of Engineering, USA; and the Royal Academy of Sciences, Spain.

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