



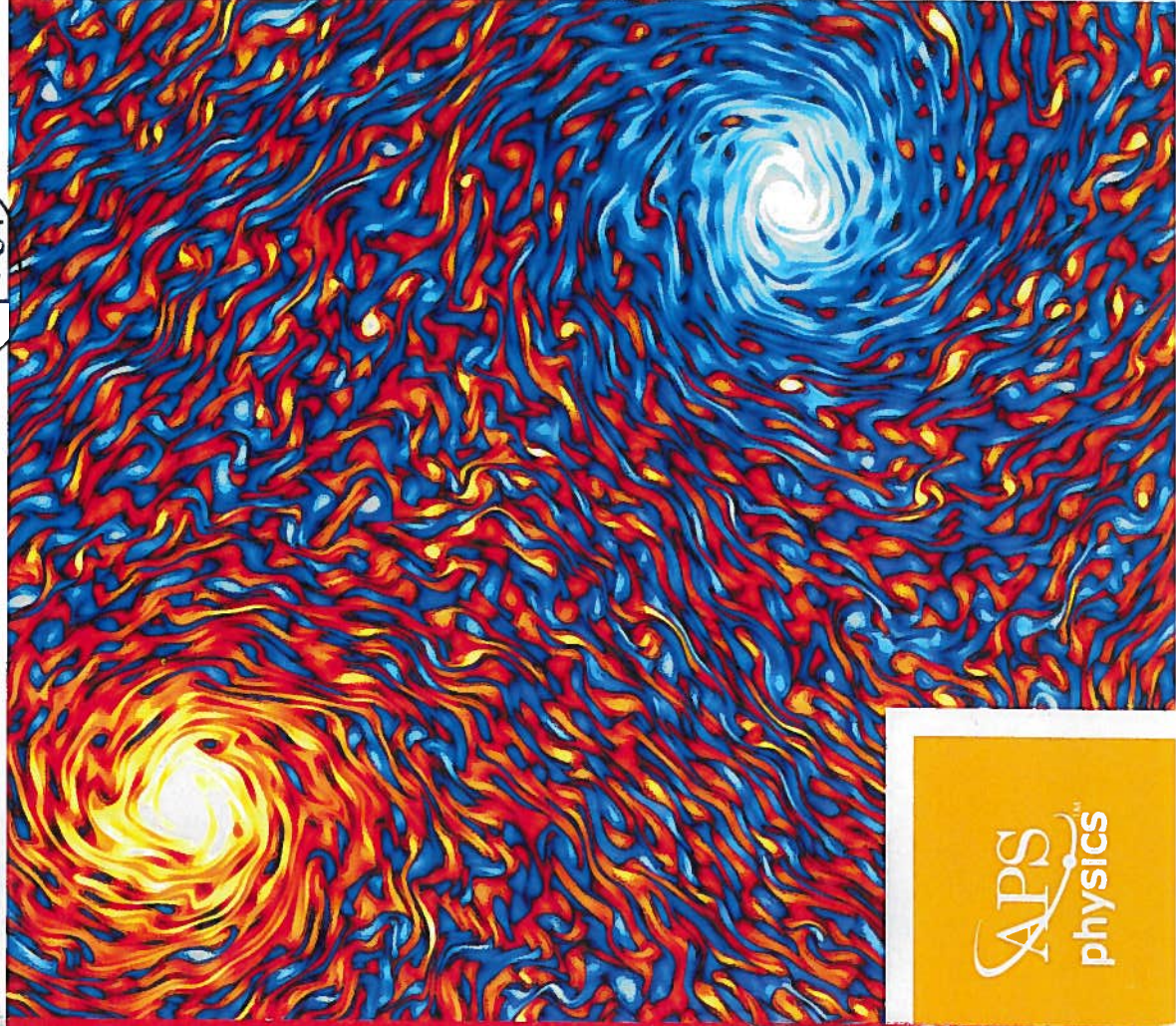
AMERICAN PHYSICAL SOCIETY

ONE PHYSICS ELLIPSE | COLLEGE PARK, MD 20740

2013

Prizes & Awards

AP
P-61



APS
physics

2013 LEO SZILARD LECTURESHIP AWARD

Geoffrey West
Santa Fe Institute

For path-breaking work on the origin of universal biological scaling laws and quantitative models for structural and functional design of organisms. For theoretical insights about the long-term sustainability of cities.

Geoffrey West is Distinguished Professor and former President of the Santa Fe Institute (2005–2009). Prior to SFI, he was leader of high energy physics at Los Alamos, where he remains a Senior Fellow. He received his BA from Cambridge (1961) and his PhD in physics from Stanford (1966). After spells at Cornell and Harvard, he joined the faculty at Stanford (1970). West is a theoretical physicist whose primary interests have been in fundamental questions, ranging from elementary particles and their interactions to universal scaling laws in biology and the development of a physics-inspired theory of cities, companies and long-term global sustainability. His research has included metabolic rate, growth, aging & death, sleep, cancer, and ecosystem dynamics and, more recently, rates of growth and innovation, the accelerating pace of life, and why companies die, yet cities survive. He is a Fellow of the American Physical Society. Recent awards include the Mercer Prize from the Ecological Society of America, the Weldon Prize for Mathematical Biology and the Glenn Award for Aging research. His work was selected as a breakthrough idea (2007) by *Harvard Business Review* and he was selected for Time's 2006 list of "100 Most Influential People in the World".

PURPOSE To recognize outstanding accomplishments by physicists in promoting the use of physics for the benefit of society in the environment, arms control, and science policy. **NATURE** The award consists of \$1,000, a certificate citing the contributions of the recipient, plus \$2,000 travel expenses for lectures given by the recipient at two or more educational institutions or research laboratories in the year following the award. The lectures should be especially aimed at physicists early in their careers. **ESTABLISHMENT & SUPPORT** This annual award was established in 1974 by the Forum on Physics and Society as a memorial to Leo Szilard in recognition of his concern for the social consequences of science. The award was endowed in 1998 by donations from the John D. and Catherine T. MacArthur Foundation, the Energy Foundation, the David and Lucille Packard Foundation and individuals. It was also expanded to a lectureship to promote awareness of the application of physics to social problems and to increase the visibility of those engaged in such activities.



2013 JOHN WHEATLEY AWARD

Sultana N. Nahar
The Ohio State University

For efforts to promote physics research and teaching through collaboration, mentoring, and philanthropy in several third-world countries, and in particular for her promotion, as both an advocate and role model, of Muslim women scientists.

Sultana Nurun Nahar, an atomic astrophysicist at the Ohio State University, received her BScHons in physics in 1977 and MSc in theoretical physics in 1979 from Dhaka University in Bangladesh, standing the first position in rank in both and holds the record for the first woman to achieve them. She received the Salekunnesa award for the best female student in BScHons examination. She received MA in quantum optics in 1984 and PhD in atomic theory in 1987 from Wayne State University. At Wayne State, she received Knoller Fellowship in physics, Thomas Rumble University Graduate Fellowship, and Daniel Gustafson memorial award for excellence in teaching by a graduate student. After a postdoctoral position at the Georgia State University, she moved to the Ohio State University with a fellowship from the college of physical and mathematical sciences in 1990. Her research is on atomic processes of photoionization, electron-ion recombination, photoexcitation, collision. Her contributions include development of the unified method for total electron-ion recombination, theoretical spectroscopy for Breit-Pauli R-matrix method, resonant nano-plasma theranostics (RNPT) method for cancer treatment. She has published about 140 scientific articles and is the co-author of the textbook *Atomic Astrophysics and Spectroscopy*. She has an on-line database, NORAD-Atomic-Data. She promotes physics research and education in a number of countries and is the founder of International Society of Muslim Women in Science. She is an APS Fellow, recipient of the highest honor gold medal from the Topical Society of Laser Sciences.

PURPOSE To honor and recognize the dedication of physicists who have made contributions to the development of physics in countries of the third world. **NATURE** The award will consist of a stipend of \$2,000, and a certificate citing the contributions made by the recipient. The award is presented biennially, every odd-numbered year, at the general meeting of the American Physics Society. **ESTABLISHMENT & SUPPORT** The award was established in 1991 with the support of the Forum on International Physics.