

RECOGNITION AND AWARDS

- **International Man of the Year Award and 20th Century Award for Achievement**, given by International Biographical Centre, Cambridge, England, 1997.
- **Distinguished Faculty Award**, Louisiana State University, April 1999.
- **The Brij Mohan Distinguished Professor Award** given by School of Social Work, Louisiana State University, Baton Rouge, Louisiana, May 1999.
- **The 2001 Honor Alumnus**, College of Engineering Award, CSU, April 2001.
- **Arid Lands Hydraulic Engineering Award**, ASCE, 2002.
- **Visiting Distinguished Professorship Award**, Mexican Academy of Science, 2004.
- **Sir Mokshagundam Visvesvaraya Memorial Lecture Award**, November 2004, G.B. Pant University of Agriculture and Technology, Pantnagar, India.
- **Advisory Professorship**, Hohai University, Nanjing, China, 2005.
- **Ven Te Chow Award**, given by American Society of Civil Engineers, 2005.
- **Ray K. Linsley Award**, given by American Institute of Hydrology, Atlanta, 2006.
- **Honorary Ph.D. in Env. and Terr. Eng.**, University of Basilicata, Potenza, Italy, 2006.
- **Honorary Diplomat**, American Academy of Water Resources Engineers, 2008.
- **Bharat Gaurav Award**, India International Fellowship Society, New Delhi, 2009.
- **Gold Medal**, given by Korean Society of Civil Engineers, 2009.
- **Founder's Award**, American Institute of Hydrology, October 2009.
- **Richard R. Torrens Award**, American Society of Civil Engineers, October 2009.
- **Norman Medal**, American Society of Civil Engineers, May 2010
- **Honorary Doctorate in Engineering**, University of Waterloo, Waterloo, Canada, 2010.
- **Honorary Member**, American Water Resources Association, July 2010.
- **Honorary Professor**, Sichuan University, Sichuan, China, April 2010.
- **14th Indian Geological Congress Lecture**, Indian Sch of Mines, Dhanbad, India, 2011.
- **2012 Bush Excellence Award for Faculty in International Research**, TAMU, 2012.
- **Academician**, Georgia Fazisi Academy, Republic of Georgia, 1997.
- **Member**, Russian Academy of Water Management, 2002.
- **Fellow**, Georgian Academy of Sciences, Republic of Georgia, 2002.
- **Member (Foreign)**, Mexican Academy of Engineering, Mexico, 2003
- **Member (Foreign)**, Mexican Academy of Sciences, Mexico, 2003
- **Member (Foreign)**, Engineering Academy of the Czech Republic, 2004
- **Member (Foreign)**, Polish Academy of Sciences, 2005.
- **Member**, Russian Academy of Ecological Sciences, 2006.
- **Member**, Portuguese Academy of Engineering, 2007.
- **Fellow (Foreign)**, National Academy of Agricultural Sciences (India), 2008
- **Fellow**, American Society of Civil Engineers, 1994-present
- **Fellow**, American Water Resources Association, 1986-present
- **Fellow**, Indian Association of Hydrologists, 1990-present
- **Fellow**, Institution of Engineers (India), 1986-present
- **Fellow**, Indian Water Resources Society, 1995- present
- **Fellow**, Indian Society of Agricultural Engineers, since 1999.
- **Fellow**, Indian Association of Soil and Water Conservationists, 2007-present

COMMITTEE MEMBERSHIP - SERVICE

- Held 9 offices and served on 11 national panels, 32 professional committees, and 4 community groups

WATER SECURITY UNDER CLIMATE CHANGE

HYDROLOGY DAYS AWARD LECTURE
COLORADO STATE UNIVERSITY
MARCH 26, 2013

VIJAY P. SINGH

Caroline and William N. Lehrer Distinguished Chair in Water Engineering
and Professor
Department of Biological and Agricultural Engineering
Texas A & M University

In recognition of outstanding contributions to hydrologic science and engineering in the areas of hydrodynamics, erosion and sediment transport, entropy-based hydrologic modeling, streamflow forecasting and stochastic analysis



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Abstract. We ask the question: What is water security and what systems can we engineer to ensure water security under the specter of global warming and the looming climate change? How is this security impacted by burgeoning population, rising standard of living, growing energy demands, and massive migration of people? To address these questions entails answering a number of other questions: (1) What is climate change? (2) Why is global warming occurring? (3) How do growing population and rising standard of living affect water security? (3) What is the relation of water security to food security, energy security, health security, and ecological security? (4) Is water security entirely a technical problem? (7) What is the role of engineers and hydrologists in enhancing and maintaining water security? (8) What systems need to be engineered to help ensure water security? These and related questions will be dealt with in this discussion. Finally, a personal perspective on water security and engineering solutions will be presented.

EDUCATION

- Ph.D., Colorado State University, Civil Engineering, 1974
- M.S., University of Guelph – Canada, Engineering, 1970
- B.S., U.P. Agricultural University – India, Engineering and Technology, 1967

POSITIONS HELD

- Caroline and William N. Lehrer Distinguished Chair in Water Engineering and Professor, Department of Biological and Agricultural Engineering, Texas A & M University, July 1, 2006-present.
- Professor of Civil and Environmental Engineering, Department of Civil and Environmental Engineering, Texas A & M University, July 1, 2006-present.
- Arthur K. Barton Endowed Professor Emeritus (June 2006-present); Arthur K. Barton Endowed Professor (from January 1999-June 2006), and Coordinator of Environmental and Water Resources Systems Engineering Program (March, 2001-June 2006), Department of Civil and Environmental Engineering, Louisiana State University
- Professor of Civil and Environmental Engineering (from August 1983 to present), and Coordinator of Water Resources Program (August 1983-1998).
- Adjunct Professor (from April 2004-June 2006), School of Renewable Natural Resources, Louisiana State University
- Associate Professor of Civil Engineering (July 1981-August, 1983).
- Director (Acting), Louisiana Water Resources Research Institute, College of Engineering, May 1984 - July 1986.
- Member, Graduate Faculty (1981-present), Louisiana State University, Baton Rouge, Louisiana.
- Associate Professor of Civil Engineering, and Member, Graduate Faculty (8/78 - 7/81), Department of Civil Engineering, Mississippi State University, Mississippi State, Mississippi.
- Associate Research Professor of Civil Engineering (7/77 - 7/78), School of Engineering and Applied Science, The George Washington University, Washington, D.C.
- Assistant Professor of Hydrology (8/74 - 6/77), Department of Geosciences, New Mexico Institute of Mining & Technology, Socorro, New Mexico.
- Postdoctoral Research Fellow (6/74 - 7/74), Department of Civil Engineering, Colorado State University, Fort Collins, Colorado.
- Graduate Research Assistant (6/70 - 5/74), Department of Civil Engineering, Colorado State University,
- Graduate Research Assistant (9/68 - 5/70), School of Engineering, The University of Guelph, Guelph, Ontario, Canada.
- Engineer and member of the Technical Staff (9/67 - 9/68), The Rockefeller Foundation, New Delhi office, India.

AUTHORSHIP

- Author and co-author of more than 653 publications in refereed journals.
- Author of 20 textbooks; editor of 54 books
- Author of 80 book chapters