

# Vijay Singh

Distinguished Professor and Regents Professor, Caroline & William N. Lehrer Distinguished Chair in Water Engineering

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## **Undergraduate Education**

B.S., U.P. Agricultural University – India, Engineering and Technology, 1967

#### **Graduate Education**

M.S., University of Guelph – Canada, Engineering, 1970 Ph.D., Colorado State University, Civil Engineering, 1974

#### **Awards**

- IASWC Lifetime Achievement Award, Indian Association of Soil and Water Conservationists, 2016.
- · Sigma Xi Outstanding Distinguished Scientist Award, 2016.
- USCID/Merriam Improved Irrigation Award, 2016.
- · Jiangsu Provincial Friendship Award, China, 2016.
- Outstanding Alumnus Award, College of Technology, G.P. Pant University of Agriculture & Technology, Pantnagar, India, November 2016.
- Outstanding Alumnus Award, G.P. Pant University of Agriculture & Technology, Pantnagar, India, November 2016.
- Distinguished Award, Chinese Academy of Science President's International Fellowship Initiative (PIFI), Beijing, China, 2017.
- ADS/Hancor Soil and Water Engineering Award, American Society of Agricultural and Biological Engineers, 2017.

- Ven Te Chow lecture and Award, International Water Resources Association, 2017.
- Engineering Medal of Achievement, University of Guelph, Guelph, Canada, 2017.

# **Research Interests**

Surface-water Hydrology, Groundwater Hydrology, Hydraulics, Irrigation Engineering, Environmental Quality and Water Resources. Principal research topics have encompassed: 1. Watershed modeling, 2. Erosion and Sediment Transport in Upland Watersheds, 3. Streamflow Forecasting, 4. Dam Break Analysis, 5. Entropy-Based Modeling, 6. Network Design, 7. Groundwater Modeling, and 8. Hydrologic Impacts of Climate Change.

#### · Google Scholar

## **Recent Publications**

- 1. Singh, V.P., Entropy Theory and its Applications in Environmental and Water Engineering. 642 pp., John Wiley, New York, 2013.
- 2. Singh, V.P., **Introduction to Entropy Theory in Hydraulic Engineering**. 784 pp., ASCE Press, Reston, Virginia, 2014.
- 3. Singh, V.P., **Entropy Theory in Hydrologic Science and Engineering**. McGraw-Hill Education, New York, 824 pp., 2015.
- 4. Singh, V.P., **Introduction to Tsallis Entropy in Water Engineering.** CRC Press/Taylor and Francis, Boca Raton, Florida, 434 pp., 2016.
- 5. Singh, V.P., editor, **Handbook of Applied Hydrology**, McGraw-Hill Education, New York, 1440 pp., 2017.
- 6. Singh, V.P., Kinematic Wave Theory of Overland Flow. <u>Water Resources</u> <u>Management</u>, Vol. 31, No. 10, pp. 3147-3160, DOI: 10.11007/s1269-017-1654-1, 2017.
- 7. Cui, H. and Singh, V.P., Application of Minimum Relative Entropy Theory for Streamflow Forecasting. Stochastic Environmental Research and Risk Assessment (SERRA), Vol. 31, No. 3, pp. 587-608, DOI: 10.1007/s00477-016-1306-7, 2017.
- 8. Zhang, Q., Zheng, Y., Singh, V.P., Luo, M. and Shi, P., Summer Extreme Precipitation in Eastern China: Mechanisms and impact. <u>Journal of Geophysical Research</u>, Vol. 122, No. 5, pp. 2766-2778, DOI: 10.1002/2016JD025913, 2017.
- 9. Baiamonte, G. and Singh, V.P., Modelling the Probability Distribution of Peak Discharge for Infiltrating Hillslopes. <u>Water Resources Research</u>, Vol. 53, doi: 10.1002/2016WR020109, pp. 1-15, 2017.
- Liu, Y., Zhu, Y., Ren, L., Singh, V.P., Yang, X. and Yuan, F., A Multi-scalar Palmer Drought Severity Index. <u>Geophysical Research Letters</u>, Vol. 44, 6850-6858, DOI: 10.1002/2017GL073871, 2017.