

## **2007 RAY K. LINSLEY AWARD**

### **Dr. Jacques W. Delleur, Recipient**

This award was established in 1986 to honor the first Vice President of AIH, Ray K. Linsley - one of the great leaders in the hydrological sciences. The award is presented annually, on the recommendation of the AIH Awards Committee, for a major contribution to the field of groundwater hydrology. The first Ray K. Linsley Award was presented to Peter O. Wolf at the AIH International Conference on Advances in Surface-Water Hydrology in Tampa on November 17, 1988.

#### **Citation: *Lindell Ormsbee, University of Kentucky***

The AIH enthusiastically supports the presentation of the Linsley Award to Dr. Jacques W. Delleur. Jack began his professional career as an assistant professor at Purdue University in 1955. In 1965 he helped create the hydrosystems engineering program at Purdue and served as its head from 1965-1976 and again from 1981-1992. While at Purdue, he directed over 20 PhD students as well as supervised 6 post-doctoral researchers. During his tenure at Purdue, he published 2 books on hydrologic time series analysis, over 60 refereed publications, 70 non-referenced publications, 60 reports, numerous books, and edited 7 handbooks and proceedings. Dr. Delleur has made significant contributions in stormwater hydrology, stochastic hydrology, groundwater hydrology, and sediment transport in drainage systems. Jack has received numerous awards, including the 2002 Ven Te Chow Award from the American Society of Civil Engineers for contributions in hydraulic time series and urban hydrology modeling and control and for his dedicated and unselfish services to the hydrology profession and education. A fellow of the Indiana Academy of Sciences, he has been the recipient of the Senior Scientist Exchange Award from the National Science Foundation and the Charles Harold Beckert Award from the Indiana Water Resources Association. Jack has continued to remain incredibly active since his appointment as a professor emeritus in 1996. From 2001-2003 he served as a guest editor for a special issue of the ASCE Journal of Hydraulic Engineering dealing with sediment movement in urban drainage systems. He continues to serve as an associate editor for the same journal and more recently served as the editor of the second edition of the Handbook of Groundwater Engineering which was just released this year.

AIH has followed Jack Delleur's professional career with admiration, and profound respect for his many accomplishments, and consider it an honor to provide him with the AIH Linsley Award for hydrologic excellence.

#### **2007 Ray K. Linsley Award Recipient: *Dr. Jacques W. Delleur, Purdue University***

I am very much honored to receive the Ray K. Linsley award of the American Institute of Hydrology. I am humbled when I see the list of distinguished previous nominees.

I first ran into the name of Ray K Linsley when I was a graduate student and a teaching assistant in the department of Civil Engineering and Engineering Mechanics at Columbia University in New York City. Normally I was teaching the undergraduate class in Hydraulics. But in 1954 the instructor in charge of the Hydrology course was unavailable and I was given the task of teaching the introductory course in hydrology. The text on *Applied Hydrology* that R K Linsley had published in 1949, just 5 years before, was my primary source of information. It saved my life!

By that time Ray Linsley already had had a brilliant career as an Engineer with the Tennessee Valley Authority, and later as Assistant chief of the Division of Climatological and Hydrologic Services of the U.S. Weather Bureau and by 1950 Dr. Linsley had launched an illustrious twenty-five-year career at Stanford University.

It was during his tenure at the Weather Bureau that he published his first book, *Applied Hydrology*, co-authored by M. A. Kohler and L. H. Paulhus that was so useful to me at Columbia University. Linsley's book became for me the source of motivation for further work in the field of hydrology. In my professional career at Purdue University I again relied on Ray Linsley's books for the courses I taught in Hydrology and in Hydraulic Engineering. His *Hydrology for Engineers*, co-authored by Max Kohler and Joseph Paulhus, his *Elements of Hydraulic Engineering*, co-authored with Joseph Franzini, and

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his *Water Resources Engineering*, also co-authored by Joseph Franzini, were my choice references and selected textbooks for many years.

Linsley's pioneering work in digital simulation in hydrology was an inspiration for my own research. In particular the *Stanford Watershed Model* that he developed with Norman Crawford was the leading model in hydrologic simulation.

I had the great pleasure of meeting Professor Linsley at several ASCE meetings and also met there his former student and colleague Dr. Norman Crawford. These always were exciting conversations about what is new in hydrology.

It is interesting to note that the two main themes of this conference would have been of great interest to Dr. Ray K. Linsley: *Integration in water resources planning and management* and the *Effects of urbanization and the research done to better define these effects*. The first one is of course in line with his book on Water Resources engineering. It was republished posthumously in 1992 by J. Franzini, D. Fryberg and G. Tchobanoglous. I found it a very valuable text and reference in my course on Design of Hydraulic Structures. There I could find everything I needed on reservoirs, dams, spillways, open channels, pressure conduits, hydraulic machinery, irrigation and drainage. The book integrated surface and groundwater hydrology with water resources planning, legal and management aspects. Linsley's work laid the foundation for interdisciplinary, integrated water resources planning and management as recommended, for example, in the United Nations World Water Development Report.

The development of the Stanford Hydrologic Model by Linsley and Crawford was the starting point of several detailed physical models of the hydrology of small watersheds used by my students. Both Dr. Linsley and I had a substantial interest in urban hydrology. In 1978 Linsley published his *Planning and modeling in urban water management* co-authored by Anthony Donigian. In this work, published through Hydrocomp, he emphasized the mathematical modeling of urban watersheds, including regional planning and water quality management. These were topics that were studied also by a number of my graduate students.

In conclusion, I am greatly appreciative for the Ray K. Linsley award and wish to thank the American Institute of Hydrology for this prestigious award, particularly because of the motivation and example that Professor Linsley provided to me in several aspects of hydrologic engineering.