



## **Yannis C. Yortsos,**

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Dr. Yannis C. Yortsos is Professor of Chemical Engineering and Petroleum Engineering at the University of Southern California (USC). Since June 2005, he has served as Dean of the Viterbi School of Engineering and held the Zohrab A. Kaprielian Chair in Engineering. Between 1991 and 1996, he also served as Chairman of the Department of Chemical Engineering at USC. Since January 1995, he has held the Chester F. Dolley Chair in Chemical and Petroleum Engineering.

Yortsos received a B.Sc. from the National Technical University, Athens, in 1973, and M.Sc. and Ph.D. degrees from the California Institute of Technology, in 1974 and 1979 respectively, all in chemical engineering. His professional experience includes Invited Professor appointments at the Universite Paris, Orsay, and Université Pierre et Marie Curie, Paris, and Associate Researcher at the Centre National de la Recherche Scientifique in France, and Visiting Professor appointments at the California Institute of Technology, Stanford University, and Clarkson University. In addition, he held student summer training appointments in Serlachius Oy Paper Factory, Mantta, Finland, and in Gaz de France, Strasbourg, France. His research and teaching interests are in the general areas of fluid flow, transport, and reaction processes in porous and fractured media.

He was elected to the National Academy of Engineering in 2008 and to the Academy of Athens, as an Associate Member, in 2013. He is the NAE Section 11 Liaison to the National Research Council and a Member of the Section 11 Peer Committee. He is also a Member of the Executive Committee of the Engineering Deans Council and of the Global Engineering Deans Council.

## **Abstract**

Using intelligent tutoring systems, virtual laboratories, simulations, and frequent opportunities for assessment and feedback, The Open Learning Initiative (OLI) has been creating and evaluating a collection of web-based open learning environments that foster and accelerate learning. The environments also serve as a laboratory for fundamental research on learning. In this talk I will discuss 1) how we make use of expertise from cognitive and learning sciences to produce high-quality learning environments; 2) the data collected from student use, because it is collected at a fine enough grain size and semantically tagged, can be used to improve the next iteration of the learning environment and refine and extend the underlying learning theory. 3) I will present examples from OLI courses and discuss how the work will now be extended at Stanford.