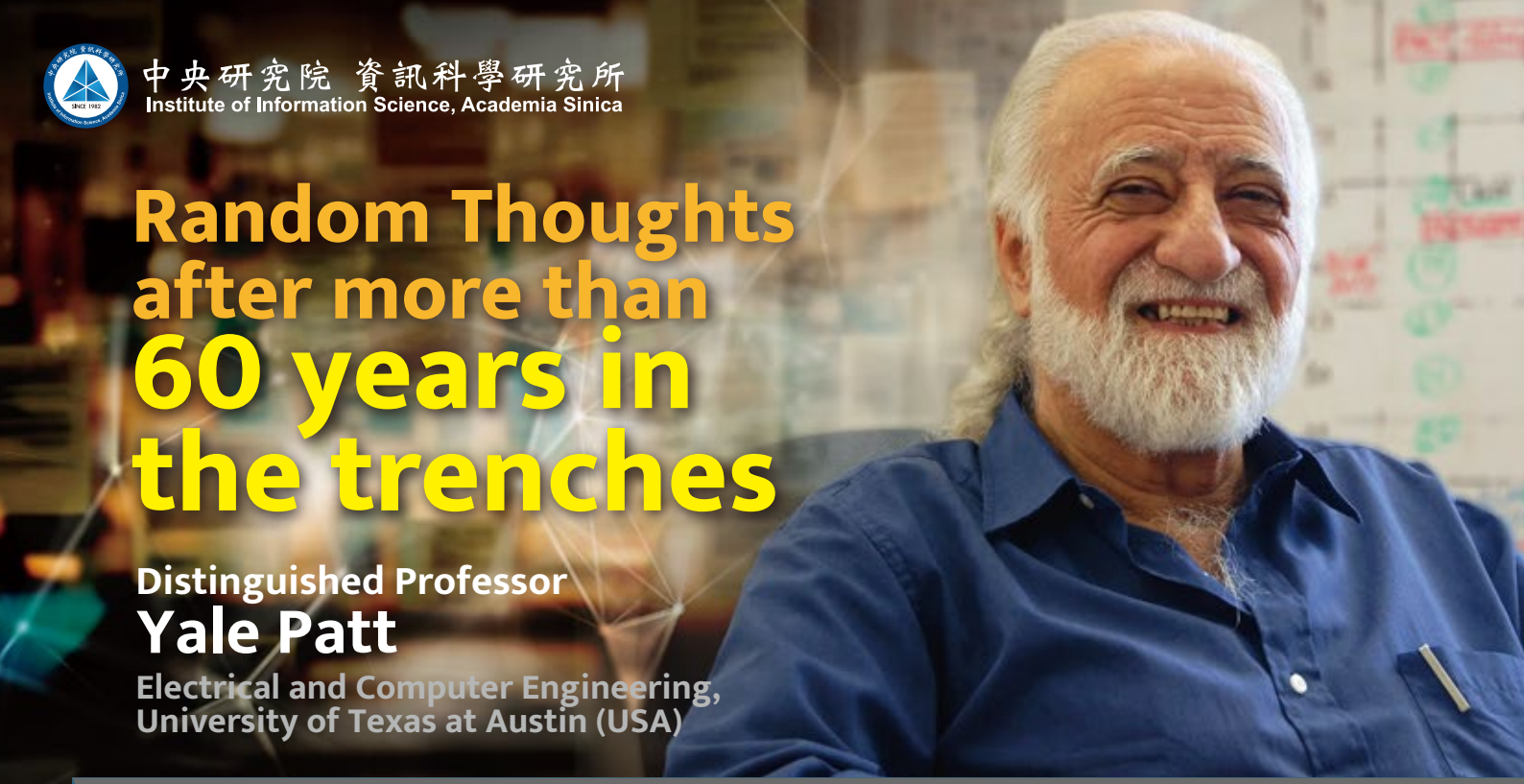
中央研究院 資訊科學研究所
Institute of Information Science, Academia Sinica

Random Thoughts after more than 60 years in the trenches



Distinguished Professor
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Abstract

I have been at it for more than 60 years and at this point have collected a fair number of thoughts and opinions that I think could be useful to share. The difference between scholarship and research (we in ECE have got it wrong}; heterogeneity, why it is the answer, why we must be careful, and what we can expect next; hardware and software and why both need to be part of your education; what is the correct first course in computing for serious freshmen; why some things should be done top down and other things should be done bottom up; what can we do to keep getting more and more performance now that Dennard Scaling is gone and Moore's Law is not far behind; what are we going to do about the two elephants in the room (Quantum and AI). My plan is to spend some time on several of these topics, and perhaps a few others as time permits.

Biography

Yale Patt is a teacher at The University of Texas at Austin where he teaches three different courses: the Introductory course in computing required of all freshman ECE majors, the senior course in Computer Architecture, and the graduate course in Microarchitecture where students in teams of three design a machine that implements a subset of the x86 ISA, including state machine, data path, microsequencer, memory, cache and I/O. He is also the Virginia Cockrell Centennial Chair in Engineering and Professor of ECE. His research, in particular HPS and branch prediction) has dramatically changed what microprocessors look like today. Yale Patt has earned obligatory degrees from reputable universities, and more than his share of awards for his research and teaching. For those interested, more is contained on his web page: users.ece.utexas.edu/~patt.

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