Title: The Microprocessor of 2020: Why you should care, and what you can do about it

Speaker:
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Abstract:
The microprocessor of the year 2020 will have 1000 cores on it, and unless you get involved, it will either just be an array of cores thrown over the transom for you to figure out what to do with, or it will be easy to use but run like a turtle, compared to what it could do. These two extremes are not unlikely, unless those with applications get involved. Most of the gurus of computer architecture insist that if they want their products to sell, all the cores better be identical and the programming model better be easy. Yet another example of computer technology providing enormous capability only to be done in by human frailty. In this talk, I hope to quickly explain what multi-core is, how it came about, and then point out in more detail some of the nonsense bandied about about multicore, and discuss what is possible, if we all get involved.

About the speaker:
Yale Patt is a teacher at The University of Texas at Austin, where he also directs the research of eight PhD students, while enjoying an active consulting practice with several microprocessor manufacturers. He regularly teaches the required Introduction to Computing course to more than 400+ freshmen and his advanced graduate course in Microarchitecture to those planning careers as cutting-edge computer architects. He holds the Ernest Cockrell, Jr. Centennial Chair in Engineering and is Professor of Electrical and Computer Engineering. Some of his research ideas have ended up on the cutting-edge chips of Intel, AMD, etc. and some of his teaching ideas have resulted in his motivated bottom-up approach for introducing computing to freshmen. He has received many of the highest honors in his field, including the 1996 IEEE/ACM Eckert-Mauchly Award and the 2000 ACM Karlstrom Outstanding Educator Award. He is a Fellow of the IEEE and of the ACM. More detail is available on his web site: www.ece.utexas.edu/~patt.