

UT VLSI SEMINAR SERIES

Real-World Signal Processing Skill-Set: Bridging the Gap Between Analog and Digital

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The digital signal processing paradigm is slowly shifting into a real-world signal processing paradigm. As analog signal processing and digital signal processing merge, there is a significant need for a unique skill-set that can transform analog/digital signal processing algorithms into functional silicon. Engineers who can transform algorithms into silicon are being valued very highly by the signal processing semiconductor industry, while engineers who cannot do so assume only support roles. Such a unique skill-set requires a combination of signal processing and communication theories, analog and digital design, testing and verification. Test and verification components additionally require DSP, statistics, electromagnetics and software skills. With focused MSEE and PhD programs, such skills can be acquired within approximately 3 years and this can result in very successful careers in the industry. Industry's main focus is not on training, so the burden is on the academic institutions.

The talk will shift into a number of real-world signal processing achievements made possible by individuals who possess the mentioned skill-set. If time permits, the talk will shift into the technical problem of how to remove sub-picosecond jitter effects from pipeline ADC S/N ratio measurements."

Bio:

Turker Kuyel holds a BSEE from METU, MSEE and Ph.D. from the University of Texas at Austin, in 1991, 1993 and 1997 respectively. His interests include signal processing, computer vision, data conversion system design and test. Kuyel has 24 refereed publications, and 6 patents (3 pending). He has worked on the VLSI designs and test solutions of over 20 data converter products and he currently is a data converter design manager at Texas Instruments. At Texas Instruments, Kuyel was elected Member Group Technical Staff (MGTS) in 1999, and Senior Member of Technical Staff (SMTS) in 2000. In 2003, Kuyel received Semiconductor Research Consortium's Mahboob Khan award.

Coffee and cookie will be served. For more information about the UT-Austin VLSI Seminar Series, please visit the web. <http://www.cerc.utexas.edu/vlsi-seminar/>