

Integrated Systems

Ultra-low Power Microsystems

Dr. Dennis Sylvester

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Abstract: This talk reviews recent and ongoing progress at Michigan in designing extremely low power and miniaturized sensing systems. One focus is on audio, including a 12nW always-on wakeup system triggered by specific objects in the environment, as well as extensions of this approach to voice activity. Low power imaging systems will also be touched on, as well as some discussion of supporting circuit technologies including energy harvesting and embedded memories.

Biography:



Dr. Dennis Sylvester is Professor of Electrical Engineering and Computer Science at the University of Michigan, Ann Arbor. He received a PhD from the University of California, Berkeley in Electrical Engineering and has published over 500 articles and holds 48 US patents. His research interests include the design of millimeter-scale computing systems and energy efficient near-threshold computing. He is co-founder of Ambiq Micro, a fabless semiconductor company developing ultra-low power mixed-signal solutions for compact wireless devices. He is an IEEE Fellow.