CURRICULUM VITAE

NAME: Dennis Sylvester

TITLE: Professor

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CURRENT POSITION: Full Professor at EECS Department, Faculty of Engineering, University of Michigan, Ann Arbor

EMPLOYMENT HISTORY
- Professor, University of Michigan, Ann Arbor (2000 – present)
- Co-founder, Ambiq Micro, Austin, TX (2010) - Board of Directors, 2010-2012
- Visiting Professor, Nanyang Technological University, Singapore 2013 – 2014
- Visiting Associate Professor, National University of Singapore 2006 – 2007
- Sr. R&D Engineer, Synopsys, Inc., Mountain View, CA 1999 –2000

ACADEMIC QUALIFICATIONS
- University of California, Berkeley, Berkeley, California
    - Ph.D. Electrical Engineering, 1999
    - M.S. Electrical Engineering, 1997
- University of Michigan, Ann Arbor, Ann Arbor, Michigan
    - B.S. Electrical Engineering, 1995 summa cum laude

RESEARCH INTERESTS:
- Low power integrated circuit design and design automation
- Variation-tolerant circuit design styles
- Near-threshold computing systems
- Millimeter-scale computing systems

LIST OF 5 MOST SIGNIFICANT PUBLICATIONS IN THE PAST 3 YEARS RELEVANT TO THE PROPOSAL

- G. Kim, Y. Lee, Z. Foo, P. Pannuto, Y-S. Kuo, B. Kempke, M.H. Ghaed, S. Bang, I. Lee, Y. Kim, S-H. Jeong, P. Dutta, D. Sylvester, and D. Blaauw, "A millimeter-scale wireless imaging system with continuous motion detection and energy harvesting," IEEE Symposium on VLSI Circuits, 2014.
- Z. Li, Q. Dong, M. Saligane, B. Kempke, L. Yao, Z. Zhang, R. Dreslinski, D. Sylvester, D. Blaauw, and H-S. Kim, "A 1920×1080 30fps 2.3TOPS/W stereo depth processor for energy-efficient autonomous navigation of micro aerial vehicles," accepted for publication in IEEE Journal of Solid-State Circuits.
- Wootaek Lim, Inhee Lee, Dennis Sylvester, David Blaauw, "Battery-Less, sub-nW Cortex M0+ Processor with Dynamic Leakage-Suppression Logic," IEEE International Solid-State Circuits Conference (ISSCC), February 2015
- S. Bang, J. Wang, Z. Li, C. Gao, Y. Kim, Q. Dong, Y-P. Chen, L. Fick, X. Sun, R. Dreslinski, T. Mudge, H. S. Kim, D. Blaauw, and D. Sylvester, "A 288µW Programmable Deep-Learning Processor with 270KB On-Chip Weight Storage Using Non-Uniform Memory Hierarchy for Mobile Intelligence," IEEE International Solid-State Circuits Conference, 2017.
- D. Jeon, M. Henry, Y. Kim, I. Lee, Z. Zhang, D. Blaauw, and D. Sylvester, "An energy efficient full-frame feature extraction accelerator with shift-latch FIFO in 28nm CMOS," IEEE Journal of Solid-State Circuits, pp. 1271-1284, May 2014.

PATENTS

38 patents issued, licensees include ARM, Ambiq Micro, Tela Innovations. Examples:

- Andrew B. Kahng, Puneet Gupta, Dennis Sylvester, and Jie Yang, "Method for correcting a mask layout," US patent 7,149,999, December 12, 2006.
- Mingoo Seok Dennis Sylvester, David Blaauw, Scott Hanson, and Gregory Chen, "Reference voltage generator having a two transistor design," US patent 8,564,275, October 22, 2013.

SCIENTIFIC AWARDS

- Top Contributing Authors, IEEE International Solid-State Circuits Conference, named in top 10 authors in 2004-2013 timeframe
- 2011 IEEE Fellow "for contributions to energy-efficient integrated circuits"
- Distinguished Paper Award, IEEE Security and Privacy Symposium, top overall paper among 413 submitted and 55 accepted papers, 2016
- 2005 Semiconductor Research Corporation Inventor Recognition Award
- 2000 Beatrice Winner Award at the International Solid-State Circuits Conference

SUMMARY OF MOST RELEVANT RESEARCH OUTCOMES FROM ALL PREVIOUS GRANTS

Prof. Sylvester is not affiliated with Singapore universities, hence there is no research outcome from previous grants awarded in Singapore.