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The first private university in the South to offer a degree in engineering, Vanderbilt provides both depth and breadth in engineering education and research.

**The School includes five departments:**

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- Electrical Engineering and Computer Science (BE Computer Engineering & Electrical Engineering, BS Computer Science, ME, MS, PhD)
- Mechanical Engineering (BE, ME, MS, PhD)

The School also offers programs in Engineering Science and Interdisciplinary Materials Science.

**NSF CAREER Award Program**

According to the National Science Foundation, CAREER awards support exceptionally promising college and university junior faculty who are committed to the integration of research and education. The awards recognize faculty members, new in their careers, who are most likely to become the academic leaders of the 21st century.



INSIGHT  
INNOVATION  
IMPACT

**William H. Robinson, Ph.D.**

Assistant Professor of Electrical Engineering and Computer Science

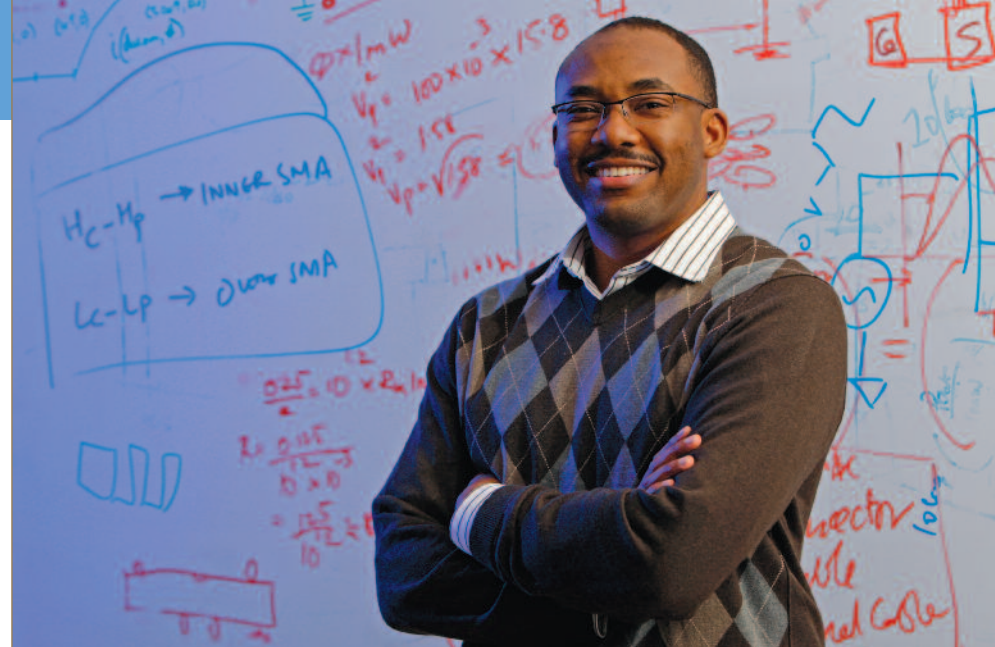
"An Integrated Approach to Soft Error Mitigation in CMOS Digital Systems"

# 2008 NSF CAREER Award

## “An Integrated Approach to Soft Error Mitigation in CMOS Digital Systems”

**William H. Robinson, Ph.D.**

*Assistant Professor of Electrical Engineering and Computer Science*



**D**r. William H. Robinson, assistant professor of electrical engineering and computer science, has received a prestigious National Science Foundation (NSF) Faculty Early Career Development (CAREER) Program Award. The award will support his work on improving the reliability of integrated circuits used not only in avionics and space applications but also in enterprise servers, network routers, and control systems.

“One of today’s most challenging design issues is the threat of radiation-induced soft errors in CMOS digital systems,” he says. “By identifying the fundamental char-

acteristics of soft errors, we can develop design principles to improve the starting point for reliability of all types of integrated circuits.”

CMOS refers to complementary metal oxide semiconductor, a technology used to fabricate integrated circuits like microprocessors.

The NSF grant will also support Dr. Robinson’s efforts to recruit and retain students in science and engineering from traditionally underrepresented groups. He participates in the Tennessee Louis Stokes Alliance for Minority Participation at Vanderbilt and also coordinates the Alfred P.

Sloan Foundation Minority PhD Program in the Department of Electrical Engineering and Computer Science.

Dr. Robinson received his bachelor of science degree in electrical engineering from the Florida Agricultural and Mechanical University in 1996 and his master’s degree in electrical engineering from the Georgia Institute of Technology in 1998. He received a doctorate in electrical and computer engineering from Georgia Tech in 2003 and joined the Vanderbilt engineering faculty in August of that year.

He is a member of the Radiation Effects and Reliability research group and collabo-

rates with both the Institute for Space and Defense Electronics and the Institute for Software Integrated Systems at Vanderbilt.

His research interests include multicore computer architectures, field-programmable gate arrays, and hardware design for secure and reliable computing platforms.

Dr. Robinson is a member of the Institute of Electrical and Electronics Engineers, the Association for Computing Machinery, the American Society of Engineering Educators, the National Society of Black Engineers, and SPIE, the international society for optical engineering.