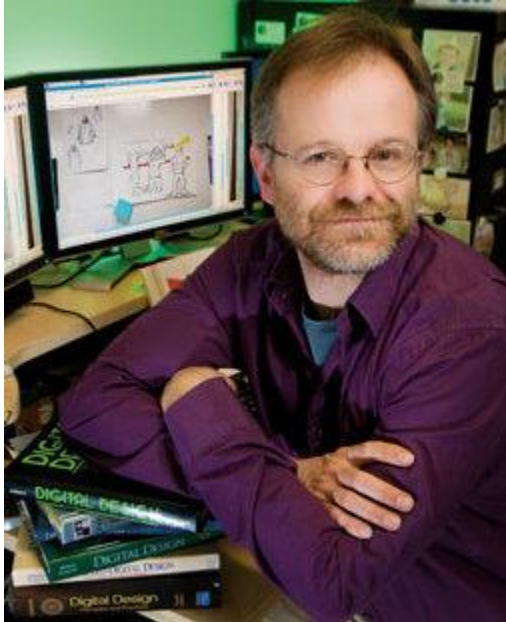# Tom Martin

Professor, Virginia Tech University
Department of Electrical and Computer Engineering, Director of Strategic & Creative Initiatives, the Institute for Creativity, Arts, and Technology

"Design Techniques for the Revolution"
Workshop: 9-11 AM, Suite 3071 Centennial Engineering Building, 3rd Floor, Dean's Conference Room

Having faculty participate in the design, development, and implementation of our grant's curriculum changes is important to achieving long-term success beyond the end of the grant's funding, particularly with respect to the goals of **shifting faculty perspectives about students, and attracting and retaining a broader pool of students and preparing them for a wider range of careers.** In this workshop, I will lead the participants through some of the **design exercises** we have used with our faculty, advisors, and industrial advisory board, including student personas and an evidence-based exploration of the program structures of aspirational peers.

"Radically Re-designing an Engineering Department"
Seminar: 4:00 – 5:00 PM, Auditorium, Centennial Engineering Building
The vision of the Virginia Tech Department of Electrical and Computer Engineering's RED grant is to transform from a department with two narrow curricular paths that attracts and produces a limited range of traditional engineers to one that draws and **retains a wider pool of students and prepares them to be holistic "T-shaped" professionals** for a broader range of careers. A large part of our effort has been on shifting faculty perspectives on student needs and professional aspirations, and on opening space in the curriculum for **multiple pathways to a degree** so that students have greater choice in their professional preparation. In this talk, I will describe the motivation for the grant, its goals, what we've accomplished so far, what remains to be done...and a couple of things that we just didn't see coming.

Biosketch
Tom Martin is a professor in the Bradley Department of Electrical and Computer Engineering at Virginia Tech, with courtesy appointments in the School of Architecture + Design, the Department of Computer Science, and the Department of Engineering Education. He is the deputy executive director of the Institute for Creativity, Arts, and Technology (ICAT). He received his Ph.D. in Electrical and Computer Engineering from Carnegie Mellon University and his B.S. in Electrical Engineering from the University of Cincinnati. His research and teaching

interests include wearable computing, electronic textiles, and interdisciplinary design teams for pervasive computing. In 2006 he was selected for the National Science Foundation's Presidential Early Career Award for Scientists and Engineers (PECASE) for his research in electronic textiles for wearable computing.