betr
Berkeley Emerging Technologies Research Center

Workforce Preparation: What Have You Gotten Yourselves Into? (Grad School Semiconductor Edition)

Dr. Reinaldo Vega
Advanced Technology Definition
IBM Research

Thursday, January 27, 2022
12:00-1:00 pm Pacific
Zoom: https://berkeley.zoom.us/j/96984819923

Abstract: Engineering curricula for undergraduate and graduate programs place a heavy focus on theoretical understanding and, in many cases, lab/tooling literacy. This is for good reason, as these are critical to engineering fundamentals. However, translating theory into practice and the realities/complexities of working professionally in large institutions is not something easily taught in school, and is furthermore not helped by the dearth of alumni feeding their industry experiences back to students. Thus, this learning is often "trial by fire" for graduating students moving fresh into an industry landscape, typically with little or no preparation in the way of soft skills and strategic thinking necessary to build a successful career. In this talk, we will focus on key concepts for career planning and development, learned from personal experience, including topics such as interview tips, understanding incentives, time horizons and adjusting expectations, short-circuiting eminence, planning your next move, managing information overload, and imposter syndrome. We will also briefly discuss logic scaling trends and some tips for graduate school.

Bio: Dr. Reinaldo Vega received his B.S. and M.S. degrees in Microelectronic Engineering from the Rochester Institute of Technology in 2004 and 2006, respectively, and his Ph.D. in Electrical Engineering from the University of California, Berkeley, in 2010, after which he joined the IBM Semiconductor Research and Development Center (SRDC) in East Fishkill, NY. He began his career as a CMOS device design engineer, working on CMOS technology development in 20LPM planar bulk technology in the International Semiconductor Development Alliance (ISDA) alongside semiconductor engineers from other companies such as GlobalFoundries, Samsung, ST Microelectronics, Infineon, Renesas, and Toshiba. He later worked on 10nm bulk FinFET technology in ISDA at IBM Albany Nanotech, which laid the groundwork for Samsung's foundry 10nm FinFET technology, and then on 14HP Silicon-on-Insulator (SOI) FinFET technology for IBM Systems in East Fishkill, which is featured in IBM's Z14, Z15, and P9 microprocessors. In 2015, after IBM divested its semiconductor development and manufacturing division, he moved to IBM Research, focusing on modeling, performance benchmarking, technology definition, and competitive analysis of next-generation CMOS architectures, including Nanosheet technology for which he is a key contributor. He is a Senior Engineer and IBM Master Inventor, with over 100 issued patents. He is also an avid radio-controlled car enthusiast and lives in Mahopac, NY with his wife (also a Berkeley EECS Ph.D.) and two kids.