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Introduction to the Design and Development of Mixed Signal Integrated Circuits

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Summary

The increasing growth of integrated systems has led to a growing demand for hardware based system-on-the-chip technology. The availability of new CAD and simulation resources, design tools, and fabrication techniques has enabled design engineers to successfully integrate CMOS circuits. This tutorial introduces the design methodology required to implement a mixed signal integrated system. It addresses various aspects, from design specification to system testing, and discusses the modeling of results at each level of abstraction. A standard design methodology, which produces designs for mixed technology that seamlessly integrate analog, digital and photonic devices into a single device design is introduced.

Biography

Prashant R. Bhadri is a doctoral candidate in the ECECS Department at the University of Cincinnati. Beginning in September 2005, he will be a Postdoctoral Fellow at the Doheny Eye Institute, Keck School of Medicine, University of Southern California. His research focuses on applying engineering solutions in medicine. His areas of interest include enhanced analog, digital, mixed signal domain circuits and FPGAs and product development of medical devices. He has published and presented 30 papers in journals, conferences, and magazines, including invention disclosures. He is a recipient of the prestigious Rindberg Fellowship and Society of Photo-Optical Instrumentation Engineers Student Travel Award. He holds an M.S. in Electrical Engineering from the University of Cincinnati and a B.S. in Electronics and Communication from the Birla Institute of Technology.