

Textbooks Lead Publisher Sales at ISSCC 2010

At four of six publisher booths, innovative textbooks sold best at ISSCC 2010, including a volume advertised as “a must read for students”:

- *Ultra Low Power Bioelectronics Fundamentals, Biomedical Applications, and Bio-Inspired Systems* by Rahul Sarpeshkar
- *Low Power Design Essentials*, by Jan Rabaey
- *All-Digital Frequency Synthesizer in Deep-Submicron CMOS*, by Robert B. Staszewski and Poras T. Balsara
- *Microelectronic Circuits* sixth edition, by Adel Sedra and Kenneth (KC) Smith.

There were also two nontextbooks that were best sellers at ISSCC in 2009:

- *CMOS: Mixed-Signal Circuit Design*, second edition by R. Jacob Baker

- *Analog IC Design with Low-Dropout Regulators (LDOs)* by Gabriel A. Rincon-Mora.

Unique Approach to Low Power Bioelectronics in New Textbook from Cambridge

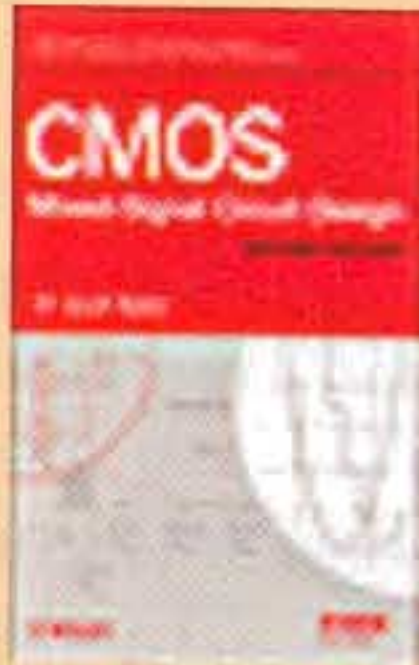
Ultra Low Power Bioelectronics “is meant to take even people who don’t know any electronics from scratch,” said author Rahul Sarpeshkar in an interview in the ISSCC book room. After Chapter 1, “you can go anywhere,” he said. As a result, the book can be used for reference, or as a textbook for senior and first-year graduate courses on ultra low power, analog, biomedical, and bio-inspired electronics, by “mixing and matching” chapters, he said.

The first ten chapters establish a solid foundation in the ultra-

energy-efficient, very-low-power subthreshold region of transistor operation that is crucial in biomedical applications; the following 12 chapters describe how the technology is used in applications such as cardiac noninvasive devices, wireless implants, wireless recharging, stimulation, and recording circuits, with Chapter 22 devoted to the ten “universal” principles of ultra-lower power design that apply to analog, digital, and even nature herself, he said.

Inspired by ten years of teaching experience at MIT, Prof. Sarpeshkar said the book “came pouring out of my head” and was finished in just two and a half years. According to Cambridge Engineer Publisher Dr. Julie Lancashire, “people have been asking for books on biological

Digital Object Identifier 10.1109/MSSC.2010.936617



CMOS: Mixed-Signal Circuit Design, second edition by R. Jacob Baker (Wiley-IEEE Press, 2008) US\$110.00, ISBN: 978-0-470-29026-2, hardcover, 330 pages. This book sold well for Wiley at the IEEE Registration Desk and in the ISSCC book room. In 2007, Dr. Baker received the prestigious Frederick Emmons Terman Award, which recognizes excellence in electrical and computer engineering textbooks by authors under the

age of 40, for *CMOS: Circuit Design, Layout, and Simulation*, second edition.



Analog IC Design with Low-Dropout Regulators (LDOs) by Gabriel A. Rincon-Mora (McGraw-Hill 2009) US\$99.95, ISBN 007160894X/9780071608947 e-book, 400 pages. This book is a “step-by-step coverage of system considerations, microelectronic devices, negative feedback, ac design, IC design, and SoC, SiP, and SoP design, using the example of a real-world design cycle in the analog IC industry to explain the art of analog IC design from a physical and electrical perspective, rather than a theoretical one,” said its publisher. The volume sold out at the conference.

