Sigma-Delta Converters: Practical Design Guide, 2nd Edition

Jose M. de la Rosa

E-Book	978-1-119-27576-3	August 2018	**£103.99**
Hardcover	978-1-119-27578-7	October 2018	**£115.50**
O-Book	978-1-119-27577-0	September 2018	**Available on Wiley Online Library**

📖 DESCRIPTION

Thoroughly revised and expanded to help readers systematically increase their knowledge and insight about Sigma-Delta Modulators

Sigma-Delta Modulators (SDMs) have become one of the best choices for the implementation of analog/digital interfaces of electronic systems integrated in CMOS technologies. Compared to other kinds of Analog-to-Digital Converters (ADCs), ##Ms cover one of the widest conversion regions of the resolution-versus-bandwidth plane, being the most efficient solution to digitize signals in an increasingly number of applications, which span from high-resolution low-bandwidth digital audio, sensor interfaces, and instrumentation, to ultra-low power biomedical systems and medium-resolution broadband wireless communications.

Following the spirit of its first edition, *Sigma-Delta Converters: Practical Design Guide, 2nd Edition* takes a comprehensive look at SDMs, their diverse types of architectures, circuit techniques, analysis synthesis methods, and CAD tools, as well as their practical design considerations. It compiles and updates the current research reported on the topic, and explains the multiple trade-offs involved in the whole design flow of Sigma-Delta Modulators—from specifications to chip implementation and characterization. The book follows a *top-down* approach in order to provide readers with the necessary understanding about recent advances, trends, and challenges in state-of-the-art ##Ms. It makes more emphasis on two key points, which were not treated so deeply in the first edition:

• It includes a more detailed explanation of ##Ms implemented using Continuous-Time (CT) circuits, going from system-level synthesis to practical circuit limitations.

• It provides more practical case studies and applications, as well as a deeper description of the synthesis methodologies and CAD tools employed in the design of ## converters.

Sigma-Delta Converters: Practical Design Guide, 2nd Edition serves as an excellent textbook for undergraduate and graduate students in electrical engineering as well as design engineers working on SD data-converters, who are looking for a uniform and self-contained reference in this hot topic. With this goal in mind, and based on the feedback received from readers, the contents have been revised and structured to make this new edition a unique monograph written in a didactical, pedagogical, and intuitive style.

⚠ ABOUT THE AUTHOR

José M. de la Rosa is a Professor at the Institute of Microelectronics of Seville, IMSE-CNM (CSIC, University of Seville, Spain). His main research interests are in the field of analog and mixed-signal integrated circuits, especially high-performance sigma-delta converters. He has worked in a number of international research and industrial projects and has co-authored over 200 peer-reviewed conference and journal papers dealing with sigma-delta ADCs. He served as Associated Editor of the IEEE Transactions on Circuits and Systems # I: Regular Papers, as Deputy Editor in Chief of the IEEE Transactions on Circuits and Systems # II: Express Briefs, and as Distinguished Lecturer of the IEEE Circuits and Systems Society.

📖 SERIES

Wiley - IEEE

To purchase this product, please visit https://www.wiley.com/en-gb/9781119275763