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	Nota di contenuto	Cover; Prelims; Contents; Preface; Acknowledgments; About the author; Chapter 1: Bridging the Gap Between Analog and Digital; Try to Measure Temperature Digitally; Road Blocks Abound; The Ultimate Key to Analog Success; How Analog and Digital Design Differ; Time and Its Inversion; Organizing Your Toolbox; Set Your Foundation and Move On, Out of the Box; Chapter 1 References; Chapter 2: The Basics Behind Analog-to-Digital Converters; The Key Specifications of Your ADC; Successive Approximation Register (SAR) Converters; Sigma-Delta (S-?) Converters; Conclusion; Chapter 2 References Chapter 3: The Right ADC for the Right ApplicationClasses of Input Signals; Using an RTD for Temperature Sensing: SAR Converter or Sigma-Delta Solution?; RTD Signal Conditioning Path Using the Sigma-Delta ADC; Measuring Pressure: SAR Converter or Sigma-Delta Solution?; The Pressure Sensor Signal Conditioning Path Using a SAR ADC; Pressure Sensor Signal Conditioning Path Using a Sigma-Delta ADC; Photodiode Applications; Photosensing Signal Conditioning Path Using a SAR ADC; Photosensing Signal Conditioning Path Using a Sigma-Delta ADC; Motor Control Solutions; Conclusion; Chapter 3 References Chapter 4: Do I Filter Now, Later or Never?Key Low-Pass Analog Filter Design Parameters; Anti-Aliasing Filter Theory; Analog Filter

Sommario/riassunto	This book has been written to help digital engineers who need a few basic analog tools in their toolbox. For practicing digital engineers, students, educators and hands-on managers who are looking for the analog foundation they need to handle their daily engineering problems, this will serve as a valuable reference to the nuts-and-bolts of system analog design in a digital world. This book is a hands-on designer's guide to the most important topics in analog electronics-such as Analog-to-Digital and Digital-to-Analog conversion, operational amplifiers, filters, and integrating analog