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Autore	Bartiromo Rosario
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Soggetti	Physical measurements Measurement Electronics Microelectronics Electronic circuits Measurement Science and Instrumentation Electronics and Microelectronics, Instrumentation Electronic Circuits and Devices
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Nota di contenuto	Electrical Circuits and components -- Direct current circuit analysis -- Uncertainty in electrical measurements -- Direct current measurements -- Alternating current circuit analysis -- Alternating current: special circuits -- Alternating current measurements -- The oscilloscope -- Circuit pulse response -- Transmission line -- App. A: Skin Effect -- App. B: Fourier Analysis.
Sommario/riassunto	This book covers the basic theory of electrical circuits, describes analog and digital instrumentation, and applies modern methods to evaluate uncertainties in electrical measurements. It is comprehensive in scope and is designed specifically to meet the needs of students in physics and electrical engineering who are attending laboratory classes in electrical measurements. The topics addressed in individual chapters include the analysis of continuous current circuits; sources of measurement uncertainty and their combined effect; direct current

measurements; analysis of alternating current circuits; special circuits including resonant circuits, frequency filters and impedance matching networks; alternating current measurements; analog and digital oscilloscopes; non-sinusoidal waveforms and circuit excitation by pulses; distributed parameter components and transmission lines. Each chapter is equipped with a number of problems. A special appendix describes a series of nine experiments, in each case providing a plan of action for students and guidance for tutors to assist in the preparation and illustration of the experiment.

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