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Titolo	Wireless Power Transfer and Data Communication for Intracranial Neural Recording Applications // by Kerim Türe, Catherine Dehollain, Franco Maloberti
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Descrizione fisica	1 online resource (XII, 112 p. 86 illus., 49 illus. in color.)
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Disciplina	617.95
Soggetti	Electronic circuits Computer engineering Internet of things Embedded computer systems Electronics Microelectronics Circuits and Systems Cyber-physical systems, IoT Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
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Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Implantable Monitoring System for Epilepsy -- Chapter 3. Powering of the Implanted Monitoring System -- Chapter 4. Wireless Data Communication -- Chapter 5. Experimental Validations -- Chapter 6. Conclusion.
Sommario/riassunto	This book describes new circuits and systems for implantable wireless neural monitoring systems and explains the design of a batteryless, remotely-powered implantable micro-system, designed for continuous neural monitoring. Following new trends in implantable biomedical applications, the authors demonstrate a system which is capable of efficient remote powering and reliable data communication. Novel architecture and design methodologies are used for low power and small area wireless communication link. Additionally, hermetically sealed packaging and in-vivo validation of the implantable device is

presented. Provides up-to-date summaries of remote powering and wireless communication methods; Describes methods for improving the efficiency of remote powering and wireless communication; Includes a new topology for an energy and area efficiency ultrawideband transmitter; Provides in-vivo validation of the proposed circuits.
