



River Publishers Series in Electronic Materials, Circuits and Devices

## Circuit Design Considerations for Implantable Devices

**Editor:** Peng Cong, Verily Life Science, USA

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### Description:

Implantable devices are a unique area for circuit designers. A comprehensive understanding of design trade-offs at the system level is important to ensure device success. Circuit Design Considerations for Implantable Devices provides knowledge to CMOS circuit designers with limited biomedical background to understand design challenges and trade-offs for implantable devices, especially neural interfacing.

Technical topics discussed in the book include:

- Neural interface
- Neural sensing amplifiers
- Electrical stimulation
- Embedded Signal Analysis
- Wireless Power Transmission to mm-Sized Free-Floating Distributed Implants
- Next Generation Neural Interface Electronics

**Keywords:** Implantable medical device, neural interface, interface circuit design, electrical stimulation, neuromodulation, brain machine interface

#### Denmark Head Office

Alsbergvej 10  
9260 Gistrup  
Denmark  
[www.riverpublishers.com](http://www.riverpublishers.com)  
Email: [info@riverpublishers.com](mailto:info@riverpublishers.com)

#### USA Office

Indianapolis, IN  
USA  
Tel.: +1-3176899634  
Email: [rajeev.prasad@riverpublishers.com](mailto:rajeev.prasad@riverpublishers.com)

#### UK Office

River Publishers  
Email: [philippa.jefferies@riverpublishers.com](mailto:philippa.jefferies@riverpublishers.com)