



1st ed. 2019, XVI, 609 p.

Printed book

Hardcover

64,99 € | £56.99 | \$79.99

^[1]69,54 € (D) | 71,49 € (A) | CHF

77,00

eBook

53,49 € | £44.99 | \$59.99

^[2]53,49 € (D) | 53,49 € (A) | CHF

61,50

Available from your library or

springer.com/shop

MyCopy ^[3]

Printed eBook for just

€ | \$ 24.99

springer.com/mycopy

[Error\[en_EN | Export.Bookseller. MediumType | SE\]](#)

£24.99 | \$24.99

CHF 24,99

Eugenijus Kaniusas

Biomedical Signals and Sensors III

Linking Electric Biosignals and Biomedical Sensors

Series: Biological and Medical Physics, Biomedical Engineering

- Offers a unique perspective on electric biosignals from their origin, to propagation and recording, and not limited to a certain application or specific use
- Written by the leading expert in the area of auricular vagus nerve stimulation
- Complements the books *Biomedical Signals and Sensors I and II from biophysics (vol. I)*, to *acoustic biosignals, to optic biosignals (vol. II)*, and finally to *electric biosignals (vol. III)*

As the third volume in the author's series on "Biomedical Signals and Sensors," this book explains in a highly instructive way how electric, magnetic and electromagnetic fields propagate and interact with biological tissues. The series provides a bridge between physiological mechanisms and theranostic human engineering. The first volume focuses on the interface between physiological mechanisms and the resultant biosignals that are commonplace in clinical practice. The physiologic mechanisms determining biosignals are described from the cellular level up to the mutual coordination at the organ level. In turn, the second volume considers the genesis of acoustic and optic biosignals and the associated sensing technology from a strategic point of view. This third volume addresses the interface between electric biosignals and biomedical sensors. Electric biosignals are considered, starting with the biosignal formation path to biosignal propagation in the body and finally to the biosignal sensing path and the recording of the signal. The series also emphasizes the common features of acoustic, optic and electric biosignals, which are ostensibly entirely different in terms of their physical nature. Readers will learn how these electric, magnetic and electromagnetic fields propagate and interact with biological tissues, are influenced by inhomogeneity effects, cause neuromuscular stimulation and thermal effects, and finally pass the electrode/tissue boundary to be recorded.

Order online at springer.com / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: customerservice@springernature.com. / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: customerservice@springernature.com.

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.

