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Electrical Impedance Tomography: Methods, History and Applications (Series in Medical Physics and Biomedical Engineering)

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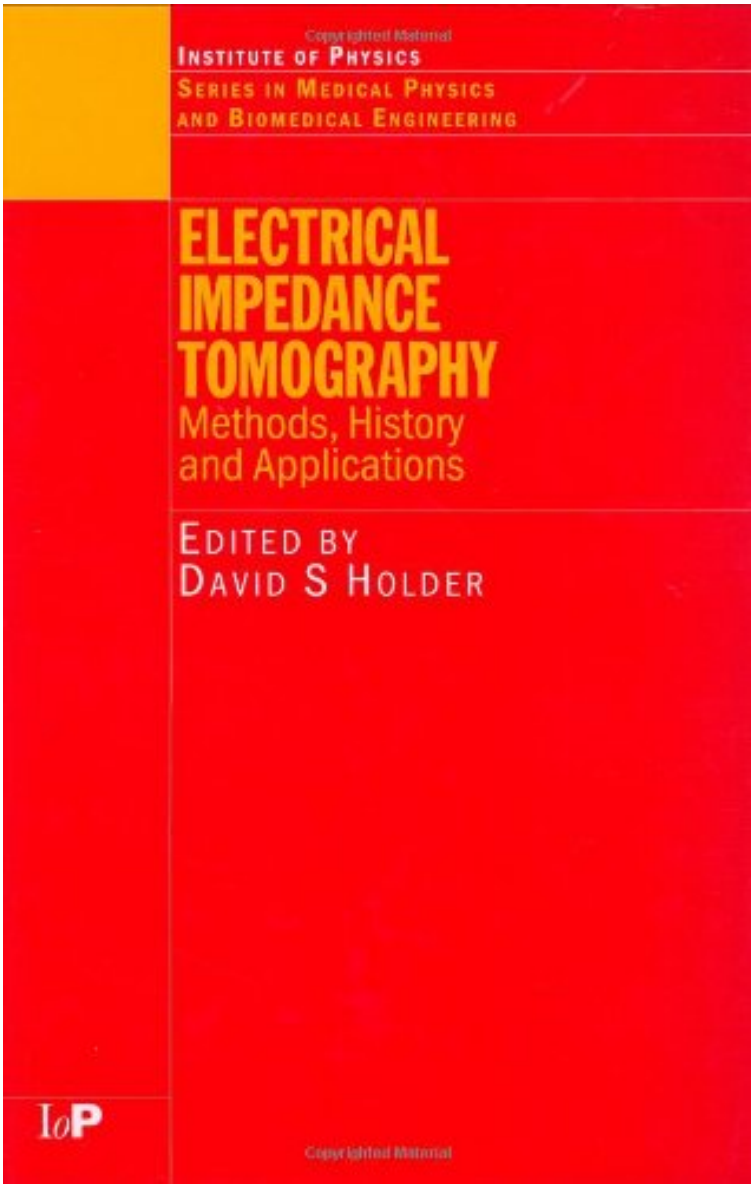

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before purchasing it in order to gage whether or not it would be worth my time, and all praised Electrical Impedance Tomography: Methods, History and Applications (Series in Medical Physics and Biomedical Engineering):

In recent years, there has been steady progress in the research of electrical impedance tomography (EIT), leading to important developments. These developments have excited interest in practitioners and researchers from a broad range of disciplines, including mathematicians devoted to uniqueness proofs and inverse problems, physicists dealing with bioimpedance, electronic engineerers involved in developing and extending its applications, and clinicians wishing to take advantage of this powerful new imaging method. With contributions from leading international researchers, Electrical Impedance Tomography: Methods, History and Applications provides an up-to-date review of the progress of EIT, the present state of knowledge, and a look at future advances and applications. Divided into four parts, the book presents an interdisciplinary approach. The first part discusses reconstruction algorithms while the second part describes the aspects of EIT instrumentation, including frequencies and electrodes. The third part features various EIT studies, such as breast cancer screening and artificial ventilation in intensive care units. The final part surveys new developments in magnetic induction tomography and magnetic resonance EIT (MREIT) as well as offers insight into three of the most productive and longstanding EIT research groups. The book also includes two nontechnical appendices that provide a brief and simple introduction to bioimpedance and the methods of EIT.Written in a style accessible to all related backgrounds, this reference will be helpful in establishing new methods and experiments of EIT, hopefully leading to radical breakthroughs in mainstream clinical practice.

All the chapters are well written by established authorities, whose opinions on the future directions are also included. There is no doubt that the book serves its purpose well, which I read with pleasure and satisfaction. Clearly, the book provides a solid foundation to understand the big picture, technical contents, and open problems of EIT and to prepare a mathematician, an engineer, or a technologist for research and development in various aspects of EIT, and a biomedical researcher or a clinician for applications of EIT techniques. I highly recommend this masterpiece for imaging scientists and engineers who are interested in EIT, and sincerely suggest that all those who are involved with tomographic imaging and noninvasive testing would benefit by reading such an excellent text . - Ge Wang, Biomedical Engineering OnlineHolder is held in very high regard by the EIT community. He has an international reputation for his work on brain imaging, and his research group has done all of the significant work in brain research. The author has assembled almost all of the experts in the field as chapter authors, and thus provides an excellent and appropriate coverage of the field. -Ron Smallwood, University of Sheffield, Royal Hallamshire Hospital, UK