Good Reads

★★★★☆

From Signals to Image

Azhari H, Kennedy JA, Weiss N, Volokh L

474 (R) (S) (N) (BD) (MR) (VI) (CT) (M) (CI)
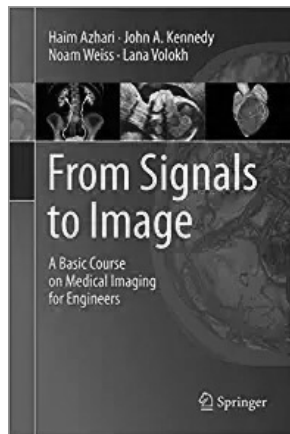
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> This textbook is intended to introduce medical imaging to engineers interested in furthering their study in this rapidly evolving field. It also serves as supplemental study material to technologists interested in detailed explanations of concepts typically not provided to medical imaging professionals.

From Signals to Image is a unique book that combines explanations of advanced biomedical engineering and basic image creation. From a technologist's perspective, it might be challenging to imagine these topics coexisting, but the authors have accomplished the feat. Although medical imaging professionals are not the intended audience, the explanations of basic imaging concepts for engineers serve as a great supplement for new and experienced technologists.

The 7 chapters read like an imaginary conversation between a skilled biomedical engineer, a physicist, and a clinical instructor. Although the passages from the physicist might be complex, the explanations from the instructor will be familiar to many technologists. According to the preface, the authors' goal was to familiarize senior and graduate engineering students to introductory medical imaging. Therefore, there are aspects of the text that might overreach the knowledge scope of medical imaging professionals. However, the discussion of the basic methods unique to several advanced modalities was profound. For additional support, 338 original black and white and colored illustrations complement the elaborate text descriptions.

This text alone is not intended to provide all the mathematical functions of medical imaging, nor is it meant to serve as a how-to guide for service engineers. What the textbook offers are explanations of concepts not discussed in detail to a technologist audience. Whereas complex reconstruction algorithms are simply defined in other advanced modality textbooks and certification review manuals, this book offers comprehensive explanations from a different perspective.

This textbook could be added to an educator's references because the perspective is unique. Technologists can appreciate the inclusion of basic and introductory explanations as well as the comparison of image reconstruction across modalities.

This book is recommended for technologists seeking advanced insight into image formation. This book also can be used as a supplement to other study material for postprimary certifications.

Allison Puente, MSRS, R.T.(R)(CT)
Clinical Assistant Professor
McNeese State University
Lake Charles, Louisiana