Fundamentals of Medical Imaging – 3rd edition
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Explanatory Guide to the Errata and Addenda

Thanks to attentive readers a few small changes were made to pages 23, 26, 53, 55, 95, and 141. Besides small syntactic corrections, (1) the definition of "focal spot", defined on p. 55 has been moved to p. 23, where the term is used for the first time, (2) "first order moment" on p. 95 should be "zeroth order moment", and (3) the full caption of Fig. 4.61 wrongly appeared in the text on p. 141 where it has been removed now.

A new section 7.5.2.2 about Convolutional Neural Networks (CNNs) was added, and, as a consequence, Sections 7.4.4.1 and 7.5 were slightly adapted. Recently, Deep Learning using CNNs caused a revolution in computer vision and this has also strong and instant consequences to medical image computing. This technology has rapidly left the stage of research and is not premature anymore for specific narrowly defined applications. Commercial products based on deep learning have entered clinical practice. Because this book is devoted to clinically used techniques, I felt obliged to update it with a section about deep learning and CNNs. It should provide the reader with insight into how this new paradigm fits into the diversity of problem-solving strategies for medical image computing and what can be expected realistically.

I have been regularly contacted by teachers and students to assist them with solving the exercises of Appendix B. A document with answers to most of the questions has been added.

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