Introduction to Medical Imaging
Physics, Engineering and Clinical Applications

Covering the basics of X-rays, CT, PET, nuclear medicine, ultrasound and MRI, this textbook provides senior undergraduate and beginning graduate students with a broad introduction to medical imaging. Over 130 end-of-chapter exercises are included, in addition to solved example problems, which enable students to master the theory as well as providing them with the tools needed to solve more difficult problems. The basic theory, instrumentation and state-of-the-art techniques and applications are covered, bringing students immediately up-to-date with recent developments, such as combined computed tomography/positron emission tomography, multi-slice CT, four-dimensional ultrasound and parallel imaging MR technology. Clinical examples provide practical applications of physics and engineering knowledge to medicine. Finally, helpful references to specialized texts, recent review articles and relevant scientific journals are provided at the end of each chapter, making this an ideal textbook for a one-semester course in medical imaging.

Nadine Barrie Smith is a faculty member in the Bioengineering Department and the Graduate Program in Acoustics at Pennsylvania State University. She also holds a visiting faculty position at the Leiden University Medical Center. She is a Senior Member of the IEEE, and of the American Institute of Ultrasound in Medicine where she is on both the Bioeffects and Technical Standards Committees. Her current research involves ultrasound transducer design, ultrasound imaging and therapeutic applications of ultrasound. She has taught undergraduate medical imaging and graduate ultrasound imaging courses for the past 10 years.

Andrew Webb is Professor of Radiology at the Leiden University Medical Center, and Director of the C.J. Gorter High Field Magnetic Resonance Imaging Center. He is a Senior Member of the IEEE, and a Fellow of the American Institute of Medical and Biological Engineering. His research involves many areas of high field magnetic resonance imaging. He has taught medical imaging classes for graduates and undergraduates both nationally and internationally for the past 15 years.

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Nadine Barrie Smith
Pennsylvania State University

Andrew Webb
Leiden University Medical Center

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