

Preface and Acknowledgments

We are pleased to bring “Principles and Advanced Methods in Medical Imaging and Image Analysis”, a volume of contributory chapters, to the scientific community. The book is a compilation of carefully crafted chapters written by leading researchers in the field of medical imaging they have put in a great deal of effort in contributing the various chapters. This book can be used as a research reference or a text book for graduate level courses in biomedical engineering and medical sciences.

The book is a unique combination of chapters describing the principles as well as state-of-the-art advanced methods in medical imaging and image analysis for selected applications. Though computerized medical imaging has a very wide spectrum of applications in diagnostic radiology and medical research, we have selected a subset of important imaging modalities with specific applications that are significant in medical sciences and clinical practice. The topics covered in the chapters have been developed with a natural progression of understanding, keeping in mind future technological advances that are expected to have a major impact in clinical practice and the understanding of complex pathologies. We hope that this book will provide a unique learning experience from theoretical concepts to advanced methods and applications to researchers, clinicians and students.

We are very grateful to our contributors who are internationally renowned experts and experienced researchers in their respective fields within the wide spectrum of medical imaging and computerized medical image analysis. We also gracefully acknowledge the support provided by the editorial board and staff members of World Scientific Publishing. Special thanks to Ms CT Ang for her guidance and patience in preparing this book.

We hope that readers will find this book useful in providing a concise version of important principles, advances, and applications in medical imaging and image analysis.

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