In the past decade, I have learned immensely from the work of my peers in the field of Quantitative Phase Imaging. In writing this book, it has been an extremely challenging task to go through thousands of publications and select the main developments to be discussed. While the book cites a combined number of 794 references, it is possible that some important work was overlooked, for which I apologize in advance.

I learned a great deal from my thesis advisor, Aristide Dogariu, and postdoctoral mentor, the late Michael Feld. I am especially thankful to Ramachandra Dasari for giving me a old microscope from Ali Javan’s laboratory, with which I obtained my first quantitative phase images (one makes the cover of this book).

I am indebted to Emil Wolf for generous encouragements and for reviewing Chapter 3 of this book. I am grateful to the current and previous colleagues with whom I have been privileged to work in the past ten years: Huafeng Ding, Zhuo Wang, Mustafa Mir, and Ru Wang (Quantitative Light Imaging Laboratory, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign); YoungKeun Park, Niyom Lue, Shahrooz Amin, Lauren Deflores, Seungeun Oh, Christopher Fang-Yen, Wonshik Choi, Kamran Badizadegan, and Ramachandra Dasari (Spectroscopy Laboratory, Massachusetts Institute of Technology); Takahiro Ikeda and Hidenao Iwai (Hamamatsu Photonics KK).

I would like to acknowledge contributions from my collaborators: Catherine Best-Popescu (College of Medicine, University of Illinois at Urbana-Champaign), Martha Gillette (Department of Cell and Developmental Biology, University of Illinois at Urbana-Champaign), Alex Levine (Department of Chemistry and Biochemistry, University of California at Los Angeles), Scott Carney (Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign), Dan Marks (Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign; current address Duke University), Krishna Tangella (Department of Pathology, Provena Covenant Medical Center), Supriya Prasanth (Department of Cell and
Developmental Biology, University of Illinois at Urbana-Champaign), Marni Boppart (Department of Kinesiology and Community Health, Beckman Institute for Advanced Science & Technology, University of Illinois at Urbana-Champaign), Stephen A. Boppart (Department of Electrical and Computer Engineering, Beckman Institute for Advanced Science & Technology, University of Illinois at Urbana-Champaign), Subra Suresh (Massachusetts Institute of Technology), Michael Laposata (Division of Laboratory Medicine and Clinical Laboratories, Vanderbilt University Medical Center), Carlo Brugnara (Department of Laboratory Medicine, Children’s Hospital Boston).

This book would not be possible without the generous support from the National Science Foundation (NSF). In particular, my proposal entitled *Quantitative phase imaging of cells and tissues* was funded as CAREER Award (CBET 08-46660) and allowed new progress in my laboratory in both research and education. The Network for Computational Nanoscience (NCN), an NSF-funded center, also supported undergraduate student activities toward the development of new education material. I am grateful to NCN’s Umberto Ravioli and Nahil Sobh for their enthusiasm toward such scholarly activities. Joe Leigh has been the main student supported by NCN to assist with preparing the material in a presentable form. I am extremely grateful to Julie McCartney for assisting me throughout the process.

I am indebted to the McGraw-Hill team, especially Michael Penn, David Fogarty, and Richard Ruzycka. Special thanks to Glyph International for carefully editing, illustrating, and typesetting the book.

GABRIEL POPESCU