

Career Development in Bioengineering and Biotechnology

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 Springer

Praise for *Career Development in Bioengineering and Biotechnology*

“The book offers those contemplating careers in bioengineering and biotechnology a *vade mecum* that should be of great help—a virtual career mentor outlining authoritatively the relevant terrain, values, and pathways to entry and accomplishment.”

—**Jeremiah Barondess, MD, President Emeritus, New York Academy of Medicine, USA**

“This excellent book admirably succeeds in its stated purpose of serving as a professional resource for career development, and goes well beyond it. It offers priceless insights into a fast-moving and far-reaching field that plays an important part in the development of economies and societies everywhere, and touches all our lives in many ways.”

—**Walter Truett Anderson, PhD, President Emeritus, World Academy of Art & Science, USA; Author of *Reality Isn't What It Used To Be: Theatrical Politics, Ready-to-Wear Religion, Global Myths, Primitive Chic, and Other Wonders of the Postmodern World* (HarperCollins) and *All Connected Now: Life in the First Global Civilization* (Westview Press)**

“. . . an invaluable reference. I have not seen any similar compendium of such important information in any other field. The editors are to be congratulated for making an outstanding contribution.”

—**Russell Lefevre, PhD, 2008 President and Member of the Board of Directors, IEEE-USA, USA**

“An outstanding resource for the community. . . .the book addresses (professional and social) issues important to individuals in a wide-array of scientific fields that we should all address as scientists and citizens of the world.”

—**Martin Frank, PhD, Executive Director, The American Physiological Society, USA**

“. . . a good book is supposed to educate as well as entertain. This book certainly manages to educate and to entertain by providing personal experiences shared by stalwarts of bioengineering. A good book is also supposed to evoke debate. By covering a broad international cross-section of opinions – conventional, contrarian, or, sometimes, opposing – this book is guaranteed to incite discussion, challenge *status quo* and help readers in their pursuit of career development in bioengineering and biotechnology.”

—**Dorin Panescu, PhD, Principal Staff Scientist, St. Jude Medical, USA**

“The material covered in *Career Development in Bioengineering and Biotechnology* is unlike any of the standard publications related to these fields of activity. I found the material to be very broad and appropriate for individuals interested in or already participating in these disciplines. It is clearly a good reference book, one that can be read and reread at different stages of one's career.”

—**Joseph Bronzino, PhD, PE, The Vernon Roosa Professor of Applied Science, Trinity College; President of Biomedical Engineering Alliance and Consortium; Editor-in-Chief of *The Biomedical Engineering Handbook* (CRC Press); Past-President, IEEE Engineering in Medicine and Biology Society, USA**

“I am impressed by the powerful group of authors and the very wide and pertinent range of subjects that this book covers.”

—**Ralph Benjamin, CB, PhD, DSc, DEng, Professor, Imperial College London and University of Bristol; Past Director of Science and Technology, British Government Communications Headquarters, United Kingdom**

“An outstanding contribution! This book not only describes the spectrum of topics in bioengineering but also provides important advice for career development. The field is put into perspective by framing it in terms of the reach of bioengineering beyond the profession. It is an impressive work that will be useful for students considering bioengineering as a career, practicing engineers, and the general public.”

—**Donna Hudson, PhD, President, IEEE Engineering in Medicine and Biology Society; Professor and Director of Academic Research and Technology, University of California, San Francisco; Past-President, International Society for Computers and Their Applications; Co-Author of *Neural Networks and Artificial Intelligence for Biomedical Engineering* (Wiley-IEEE Press), USA**

“This book will be essential reading for all those seeking career guidance in bioengineering and biotechnology.”

—**Tony Bradshaw, PhD, Director bioProcessUK – BioIndustry Association (BIA); Chairman, The Royal Academy of Engineering/BIA Life Scientists' Career Seminars, United Kingdom**

“This book fills a void in the availability of realistic career advice for students looking at potential careers and older professionals seeking new opportunities in bioengineering and biotechnology. Its comprehensive chapters are filled with practical advice on curricula, case studies and inspiring stories by experienced professionals who share their knowledge and recommendations for creating successful and fulfilling careers in these domains.”

—**Edward Perkins, 2008 Chair IEEE-USA Career and Workforce Policy Committee, USA**

“. . . the general understanding of the nature of bioengineering and biotechnology, and the notions about what the related professionals actually do, as well as ideas on potential careers one could expect to develop, have all been unclear. The wide variety of the terminology used has not helped in presenting a clear picture of the subject area. Questions that I have personally encountered from students and the general public indicate the real need for authentic and authoritative information to clarify these important issues. *Career Development in Bioengineering and Biotechnology* addresses this pressing need. I admire the collective knowledge and experience that has gone into the writing of this book.”

—**Rangaraj Rangayyan, PhD, PE, University Professor; Professor of Electrical and Computer Engineering, and Adjunct Professor of Radiology and Surgery, University of Calgary, Alberta, Canada; Author of *Biomedical Signal Analysis: A Case-Study Approach* (Wiley-IEEE Press) and *Biomedical Image Analysis* (CRC Press)**

“. . . once I started reading [the book], I could not put it down. In less than three days, I read it all, absorbing the stories and details as if I was consumed by watching a high action movie. Reading the book felt like sitting with your best friend, or your favorite professor, listening to the voice of wisdom answering all the questions that you may have about entering a professional life and positioning yourself for great success. The breadth and depth of the wisdom is phenomenal, and the stories shared by the writers are moving, inspiring, and shine of intelligence in seizing one’s own passion and talents and turning them into stellar professional careers. What I valued best was the candidness about the reality of entering bioengineering and biotechnology as a profession and the demands it places on agility of mind, highest level of ethics, need to research the field thoroughly for sound decision making, the necessity to work well with other experts, and overall, the imperative to reinvent yourself frequently. I wish for all students to discover this book and use it frequently during their journey as students and as professionals.”

—**Nathalie Gosset, MS, MBA, Head of Marketing and Business Development, Alfred Mann Institute for Biomedical Engineering, University of Southern California, USA**

“Bioengineering and biotechnology are emerging as distinct disciplines amid the biological revolution and during a period of rapid globalization. These interesting times offer us unprecedented opportunities for professional and personal growth. . . . The legacy of our times will include how well we used our rapidly advancing technologies to improve the world around us. This book provides a roadmap for the contributions of bioengineering and biotechnology in this quest.”

—**James Moore, PhD, Professor, Department of Biomedical Engineering, Texas A&M University, USA**

“I am very excited about this book. As a bioengineering educator, I am always looking for information that can provide guidance for students as they prepare for their careers. The contributors in this book are so enthusiastic about their careers that many of the chapters made we want to switch careers on the spot! I believe that engineering students do not receive enough guidance about alternative career paths. This book will very much help fill the void.”

—**Judy Cezeaux, PhD, Professor, Department of Biomedical Engineering, Western New England College, USA**

“In my position as the international student representative for the IEEE Engineering in Medicine and Biology Society, I have observed repeatedly that professional development is a primary concern of bioengineering students. This book is not only timely in addressing this concern, but also in providing such a sophisticated and comprehensive view of the role of bioengineering in society. Every student should read this book!”

—**Jennifer Flexman, PhD, 2005–2007 Student Representative, IEEE Engineering in Medicine and Biology Society, USA**

“This book is a must read—it contains a great deal of essential information for junior as well as senior professionals.”

—**Paolo Bonato, PhD, Director, Motion Analysis Laboratory, Spaulding Rehabilitation Hospital, and Assistant Professor, Harvard Medical School and Harvard-MIT Health Sciences and Technology, USA**

“This is an exciting undertaking! The book is very well thought through and balanced. I enjoyed very much reading the chapters I have reviewed. Congratulations to all contributors and the editors of this book.”

—**Gudrun Zahlmann, PhD, Director of Business Development, Siemens Medical Systems, Germany**

“This is a *functional* book with immediate impact, and is very helpful to those who *need* and desperately *want* help in making a career choice.”

—**Jonathan Newman, NSF/IGERT Predoctoral Fellow in Biomedical Engineering, Georgia Institute of Technology and Emory University, USA**

“This book covers a comprehensive list of career development topics of particular interest to postdoctoral scholars. The authors provide diverse perspectives on a broad range of career issues of value to early-career bioengineers and scientists. The book is a rich new resource for the postdoctoral community.”

—**Alyson Reed, Executive Director, National Postdoctoral Association, USA**

“. . . It is the most comprehensive look at career development in bioengineering and biotechnology I have seen. A great resource that I plan to recommend to students and faculty!”

—**Charla Triplett, President, Biomedical Engineering Career Alliance, USA**

“The book has quite a full-range of contributors. I had no comments on the contents except “wow”!!! While targeted to the bioengineering and biotechnology fields, any technology professional would benefit from the information in this marvelous book on career development.”

—**John Paserba, Manager, Mitsubishi Electric Power Products, Inc; IEEE Fellow and Member, Board of Governors, IEEE Power Engineering Society, Past-Chair, IEEE-USA Student Professional Awareness Committee, USA**

“What’s special about bioengineering is that practitioners can make of it what they wish. This book shows how true this is.”

—**Maurice Klee, PhD, JD, Attorney-at-Law, Fairfield, Connecticut, USA**

“A timely and important publication . . . This should be a required reference book for all those working at the interface of engineering and biology for meeting challenges of the 21st century related to health, energy, environment and sustainability.”

—**Brahm Verma, PhD, Professor and Founder, Faculty of Engineering, University of Georgia; Founding President, The Institute of Biological Engineering, USA**

“. . . incredibly interesting. It is not easy to find this kind of ‘straight talk’ and I’m glad to see that finally such a reference is now available.”

—**Jennifer Jackson, 2008 President-Elect, American College of Clinical Engineering; Clinical Engineer, Brigham and Women’s Hospital (Teaching Affiliate of Harvard Medical School), USA**

“A career in bioengineering and biotechnology is not about searching for jobs, but *creating* innovative opportunities; more so, pioneering not just in science or engineering, but also extending into politics, management, governance, transparency, law, and social development. Recent years have shown how bioengineering and biotechnology can shield society and human life from untoward situations be it biological weapons, pandemics or even terrorism at large. And with contributions from luminaries, this volume should just serve as an inspiration for us to make the world a better place.”

—**Basheerhamad Shadrach, PhD, Senior Program Officer–Asia, The International Development Research Centre (Centre de recherches pour le développement international), India**

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