Physical Models of Living Systems is an entertaining and engaging textbook that hits a perfect balance between biological experiments, physical models, and computational approaches. Thanks to Nelson's skillful writing and the excellent accompanying online resources, this book will appeal to a broad audience and teach even a beginner how to solve problems numerically. It could serve as the primary text for an introductory course in quantitative biology or as enriching supplemental reading material for undergraduate or graduate biophysics or bioengineering courses.

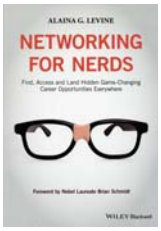
Eva-Maria Collins
University of California, San Diego
La Jolla

Networking for Nerds
Find, Access and Land Hidden Game-Changing Career Opportunities Everywhere

Alaina G. Levine
Wiley, 2015. $29.95 paper (248 pp.).
ISBN 978-1-118-66358-5

I have always refused, on principle, to read books from the *For Dummies* series. Although I find "nerd" less insulting than "dummy," I had similar reservations when I saw the title of Alaina Levine's new book, *Networking for Nerds: Find, Access and Land Hidden Game-Changing Career Opportunities Everywhere*.

Levine is founder and president of Quantum Success Solutions, a public-speaking and leadership-training business. She has received acclamation for providing career-skills training to scientists through articles, webinars, and other activities, including her occasional blog posts for PHYSICS TODAY's website. The aim of her book—to teach students and professionals in science and related fields the networking skills needed to become leaders—is something I have long promoted as an adviser, and now director, of the Society of Physics Students. Recently Wes Watson, an SPS chapter officer at Sonoma State University, told me that "SPS turns nerds into leaders." So I put aside my reservations and decided to see what *Networking for Nerds* had to offer.



Many scientists might ask why they should take the time to read a book on professional networking. Levine addresses that question in chapter 1; astrophysicist and Nobel laureate Brian Schmidt also addresses it in the foreword. Essentially, they both state that professional networking is critical for scientific advancements because it leads to collaborations and the exchange of ideas. Levine also discusses the "Hidden Platter of Opportunities," a phrase she trademarked, which refers to the jobs and opportunities that come through a personal connection. And in making a distinction between valuable scientific networking available to all and unsavory backroom dealings, she sets the tone for the remainder of the book.

At just over 200 pages, *Networking for Nerds* is a relatively quick read, full of great advice. Replete with personal anecdotes, it covers a wide variety of topics, from dinner etiquette to critical tools for making the most of scientific conferences and social media. It also highlights the importance of learning to deal with failure, something all young scientists need to understand. For those of us who like to get to the highlights quickly, the book offers three useful features: bulleted textbook-style "Chapter Takeaways" summarizing key points; numerous text boxes containing tips; and an easily consumed main text, broken up into bulleted lists and small, digestible chunks.

It is difficult to determine which ideas in the book are original. Some of the topics have long been discussed, and many other articles, books, and websites treat the subject. However, Levine's is the most complete single-volume coverage of networking for science students and professionals that I have come across, and her presentation on several topics is fresh and useful.

Physics students at all levels would benefit greatly from the lessons in this book. For example, during my frequent participation in the undergraduate sessions at scientific meetings, I have observed that students tend to interact primarily with people from their own institutions. They are missing a great opportunity; I encourage them to avoid doing that, as does *Networking for Nerds*.

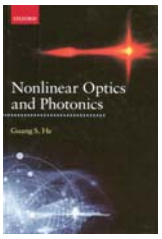
All scientists, not just students, are likely to pick up several good tips from this book, especially on such contemporary topics as using social media for serious professional activities. Overall, Levine provides valuable advice on how to build and take advantage of your professional network—whether or not you like to be called a nerd.

Sean J. Bentley
Society of Physics Students/Sigma Pi Sigma
College Park, Maryland

Nonlinear Optics and Photonics

Guang S. He
Oxford U. Press, 2015. $89.95
(631 pp.). ISBN 978-0-19-870276-4

Several generations of physics and engineering students no doubt recall with affection (or dread) John David Jackson's well-known text *Classical Electrodynamics*, whose third and most recent edition was published by Wiley in 1998. It offered graduate students their first rigorous introduction to electromagnetic waves and optics but mostly stuck to linear physics.



One of the first texts to go beyond linear optics was Robert Boyd's now-classic *Nonlinear Optics* (Academic Press, 1992). Its fresh perspective coupled with a succinct and clear stress on the fundamentals made the subject matter accessible to graduate students. However, it omitted such important topics as the response function of materials. The third edition (Academic Press, 2008) addressed the early shortcomings and now stands as the most balanced and clearly presented among the many nonlinear optics (NLO) texts.

A recent addition to that list is Guang He's *Nonlinear Optics and Photonics*. The new tome by He, a senior research scientist at the Institute for Lasers, Photonics, and Biophotonics at the University at Buffalo, draws on his extensive experience. The first 10 chapters are dedicated to the fundamentals, and each chapter ends with a set of problems. The rest of the book covers a sampling of advanced topics and applications, but does not provide corresponding problems. As such, we are presented with a hybrid: part textbook, part reference.

The range of phenomena that is covered by the NLO umbrella is so wide that no single volume can cover every topic. In large part, then, the distinction between NLO books is in the choice of topics emphasized, the target audience, and the clarity of presentation. *Nonlinear Optics and Photonics* stands out for the breadth of topics, and the many useful illustrations, that go beyond the normal fare. For example, chapter 16 covers various aspects of fast and slow light. The author begins by providing a careful definition of phase velocity and group velocity. He also describes how a wavepacket is affected in gain media,