A LARGE NUMBER OF OUR IEEE Members work in either academia or industry. At the start of their careers, many of those in industry are provided clear directions and guidelines from their company and senior management, including various resources and numerous other essentials needed to do their jobs. While the level of oversight may vary between companies and depend on corporate culture, there is no question from where funds and other resources come. In fact, it is likely that the new employee will be assigned to a team and given a specific task, say, developing a 10-nm etch process.

In contrast, our colleagues in academia are solo professionals, largely responsible for their own successes or failures. Though they work for nonprofit, higher-learning institutions, they are expected to act as entrepreneurs, promoting themselves and their work. They are part of a department but are by no means a team, as everyone works on personal research and teaches separate classes.

As opposed to those in industry, someone beginning his or her academic career as an assistant professor may not have a clear idea of the job’s description, expectations, performance standards, and related matters. It is one of those things that gets passed down from generation to generation: to receive tenure, promotions, and other relevant rewards, you need to acquire many grants, support a sizable research group, publish numerous papers, and gain international recognition through awards and other accolades. The quantity of these may vary between institutions and the expectations between disciplines. But generally, none of this is written down, particularly guidelines on how to write winning proposals, raise funds for research, and deal with steps that can make or break a career. These, however, are precisely the topics covered in Get Funded: An Insider’s Guide to Building An Academic Research Program.

Robert Trew, the author, has had a long academic career as a professor of electrical engineering at North Carolina State University, Raleigh, a reputable research university, and built a successful academic research program of his own. He served as chair of his electrical engineering department, where his responsibilities included recruiting new faculty. He also worked as a program manager at two leading U.S. agencies, the Department of Defense (DoD) and the National Science Foundation (NSF), giving him an insider’s knowledge on what the funding agencies look for, including the necessary supporting research details that are included in winning proposals. Trew knows these matters from both sides of the fence, and I cannot think of a more qualified person to write such a book. Needless to say, this is an authoritative contribution and a much-needed guide for young academic professionals.

Because of the author’s background, all of the funding-source descriptions involve U.S. grant agencies, such as the DoD, the National Institutes of Health, the NSF, and NASA. Nevertheless, the rest of the book’s contents are universally applicable, especially the sections on job applications, the interview process, writing successful proposals, and marketing oneself. They are relevant to all of our international colleagues.

After a brief introduction in Chapter 1, Chapter 2 presents the history of research funding in the United States, including an account of how the U.S. government started supporting basic research around the time of World War II. There is also a brief history of industrial support for research. Chapter 3 provides a comprehensive account of the faculty recruitment process and the annual review conducted by the department and dean regarding each professor’s performance. The process involves 14 steps, taking up to a full year to complete. Trew provides helpful suggestions on how to prepare an application package and successfully navigate the interview process. An introduction to start-up packages and how to negotiate salaries is very valuable in this chapter. Additional topics include taking time off from teaching in the first year and even managing dual career scenarios, where a spouse may be seeking an academic position.
at the same university. This chapter covers the academic tenure process and includes details on preparing a tenure package.

Chapter 4 is devoted to marketing research, academic entrepreneurship, and establishing a well-funded research program. One of the most difficult things for most of us is refusing requests that demand our time. A professor’s time is extremely limited, as faculty are always pulled in many directions, i.e., pursuing funding for research, managing research, mentoring students, teaching courses, attending departmental and university committee meetings, and so on. Time-consuming requests often come from other faculty—both internal and external, often from well-established colleagues—to collaborate on individual projects and join large teams. This chapter discusses time management in this context and details the art of saying no to requests when they do not serve personal interests.

The author also provides highly useful suggestions on visiting program managers and maintaining communication in Chapter 4. Trew goes into more detail on these topics in Chapter 6, with specific reference to each U.S. funding agency. This chapter also discusses how research funds are managed in each agency, the different categories of funding opportunities, and the proposal solicitation process. Chapter 5, “Know Where the Money Is,” gives readers based in the United States the basic principles of U.S. government funding; different funding opportunities, such as contracts, grants, and cooperative agreements; and where to look for new solicitation announcements from various funding agencies. The chapter also briefly covers funding sources in industry.

Proposal preparation is the focus of Chapter 7. Based on his vast experience, Trew provides guidelines for a successful proposal and thoroughly discusses each subsection of an academic proposal.

There are nice touches throughout the book, including how each chapter closes with the section, “What We Have Learned.” Overall, this is a comprehensive guide for raising funds for an academic research program, and it is an excellent resource for faculty members just beginning their career.