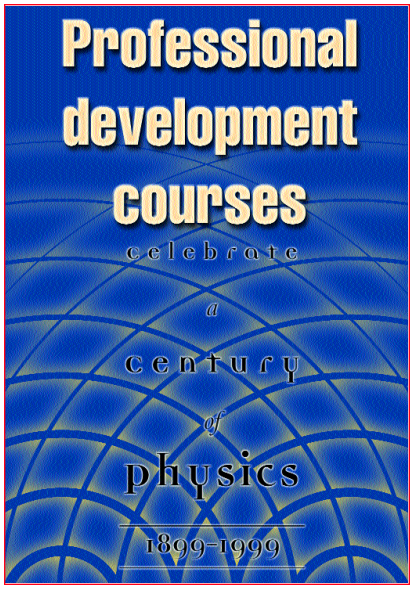
Teaching "Techies" How To Manage

When asked by the American Physical Society (APS) what professional development courses most interested them, members of the Forum on Industrial and Applied Physics (FIAP) overwhelmingly ranked the problems of being a manager as number one. That choice reflects the concerns of industrial physicists working in or contemplating managerial jobs, and their awareness of the need to acquire new skills and a better understanding of leadership.



During its centennial meeting, APS will host a workshop titled "Management Problems of the Technical Person in a Leadership Role," a wide-ranging program designed to increase the successful transition of technical specialists into the ranks of management. It is one of several events of particular interest to FIAP members scheduled during the APS meeting, which will be held March 20–26, 1999, in Atlanta. Other events include a series of special symposia (see *The Industrial Physicist*, 12/98, pp. 35 and 37), an informative tutorial on career choices, FIAP's business meeting, and a networking breakfast for women industrial physicists.

Technical specialists moving into management positions confront several challenges along their new career paths. "The skills and capabilities that help them do their jobs as technical specialists are dramatically different from what it takes to lead people," says Vicki Cherry, an electrical and biomedical engineer with management experience in the food-processing industry. She will lead the workshop, which was developed by Fred Pryor Seminars.

The five-hour session on Sunday, March 21, will be followed by a two-hour optional question and answer period. During the workshop, Cherry will address many issues, including topics such as how to delegate work; dealing effectively with corporate politics and power structures; channeling one's strengths as a technical specialist into strong leadership skills; and ways to develop productive, motivated employees.

"It takes more people skills than technical skills to do the job of a technical manager," Cherry says. "The number one reason technical managers fail is because they don't fully understand the role of a manager. They don't understand that it involves not just precision and measurement of productivity, but also knowing how to deal effectively with their people."

Technical experts tend to look for perfect solutions to specific problems, but as managers, they must find less-than-perfect—but acceptable—answers to many different situations. High standards remain necessary for any manager, but excessive expectations can cripple his or her effectiveness. Thus, new managers need to realistically assess whether their high expectations are actually interfering with their performance as managers, Cherry says.

A trend that will continue well into the next century, she adds, is the shift from autocratic to participative management. For decades, U.S. managers made decisions with little or no input from their subordinates. Today's managers need to skillfully practice "situation leadership"—to get their team involved in the planning and decision-making process and to recognize that on any given project, someone else might have better skills than they do to head the effort.

Technical people have six general characteristics, such as their ego drive and narrow focus, which can positively and negatively affect their leadership. For example, they tend to have higher regard for people within their own discipline than outside. Engineers, for example, generally don't respect the work of physicists as much as they do the work of other engineers, and vice versa, Cherry says. In an era when interdisciplinary R&D plays an increasing role in industry, would-be managers need to understand how best to accentuate the positives of their background and training and to eliminate the negatives.

The FIAP tutorial, "Perspectives on Career Choices in Industrial and Applied Physics," will be held Sunday morning, March 21. "Major changes have taken place in the way American industry competes in the global marketplace," notes Leonard J. Brillson, professor of electrical engineering and physics at Ohio State University. "These changes have dramatically altered the roles and responsibilities of researchers in industry."

During the tutorial, Brillson will examine how global competition, the pace of technological change, and the consequent business adaptations have altered the work environment for industrial physicists. He will also discuss how these changes present scientists with new opportunities to use their talents in effective and technically relevant ways, and how physicists can complement their technical expertise with additional skills necessary for successful industrial R&D careers.

In addition, John K. Lowell (Jekyll Consultants, Dallas, TX) will discuss "A Physicist's Role in Ultrasubmicron Microelectronics Technology," and Galen B. Fisher of the General Motors R&D Center (Warren, MI) will talk on "The Physicist as Line Manager in Interdisciplinary Environments."

At FIAP's annual business meeting on Tuesday, March 23, the FIAP members newly selected as APS Fellows (see pp. 00-00) will be honored and presented with their certificates. Women working as or interested in becoming industrial and applied physicists will have an opportunity to meet and talk on Monday, March 22, when APS's Committee on the Status of Women in Physics and FIAP co-sponsor a two-hour networking breakfast.

For more information or to register early to ensure a place at the workshop or breakfast, contact Arlene Modeste at 301-209-3232 (email modeste@aps.org).