

# Becoming Leaders

A Practical Handbook  
for Women in  
Engineering, Science,  
and Technology

F. Mary Williams  
Carolyn J. Emerson

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# Road Map

The chapters in this book may be read in any order. The first and last chapters (“Introduction” and “Women in Engineering, Science, and Technology”), however, are recommended for all to read. Below are subsets of special interest to particular career stages:

## Students

- 3 Strategies for Students in STEM
- 4 Graduate Studies
- 10 Time Management
- 5 Job Hunting and Gender
- 16 Sexual Harassment
- 7 Personal Networks and Mentors

## Career Women

- 6 Career Path and Progress
- 14 Women in the Public Service
- 8 Work–Life Balance
- 10 Time Management
- 7 Personal Networks and Mentors
- 2 Women Are Leaders

## Faculty Members

- 12 Tenure Strategies for New University Faculty
- 6 Career Path and Progress



- 8 Work–Life Balance
- 10 Time Management
- 7 Personal Networks and Mentors
- 2 Women Are Leaders

### **Deans/Heads/Chairs**

- 13 Proactive Diversity for Academic Deans and Department Heads
- 19 Promoting Women’s Participation
- 16 Sexual Harassment
- 8 Work–Life Balance

### **Managers**

- 15 Diversity Management and Accountability
- 19 Promoting Women’s Participation
- 16 Sexual Harassment
- 8 Work–Life Balance

# Foreword

As a junior in high school, aspiring to be a leader in engineering was the farthest thing from my mind. After all, my idea of an engineer was someone who drove a train! But that image was changed by a civil engineering professor from the University of Kentucky who spoke at our annual “Career Day.” His ability to demonstrate with excitement what value engineers brought to the world along with his encouragement for young women to enter the profession “sold” me on the idea of entering the STEM profession.

Despite the immediate obstacles I faced—my guidance counselor telling me it was a bad idea because I didn’t have the aptitude; my math teacher telling me I would flunk out because I didn’t have the requisite calculus, physics, and chemistry training—I not only graduated with my civil engineering degree from Purdue University but also became the first woman president of the American Society of Civil Engineers in its 152-year history.

When I look back and analyze how I rose to become a leader in both professional organizations and my own internationally known consulting firm, I find that my success was obtained largely from the same path described in Dr. Mary Williams and Carolyn Emerson’s book *Becoming Leaders*. My three keys to success—Communication, Confidence, and Commitment—are closely aligned with the suggestions and tips provided in this practical handbook.

I too often see talented women reach plateaus in life because of the lack of confidence to follow their dreams and to be their own person. I see so many women fall just short of achieving success because of intimidation and a feeling that they just can’t do it. In my travels around