

Women in Technology: Career Options Beyond Research

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My Non-Research Roles

- DARPA
 - Program Manager for Information Survivability
 - Developed and managed a \$45M/yr research program on system security and survivability
 - Develop, guide, and nurture a research community
 - Show results through commercialization and transition to DoD
 - Began developing a \$100M/yr multi-agency research program in High Confidence Systems
 - Assistant Director for Distributed Systems in the Information Technology Office
 - Manage, guide, and mentor other program managers
 - Manage office-wide special activities

DARPA

Challenges	Opportunities
Steering a community in a new direction	Creating new research areas
Selling the idea; getting/maintaining funding	Influencing agency directions
Conflicts with other agencies	Influencing other agency directions

- How I got the job: Personal networking
- Why I wanted the job
 - To foster research in a role where I could have greater influence
- Accomplishments
 - Concept of system survivability as a research area
 - New funding opportunities for security research
 - Survivability and high confidence systems as major research themes of the federal government

DARPA

- Personal growth
 - Established my reputation on a wider stage
 - Wealth of personal contacts
 - New skills
- Lessons learned / advice
 - This is a job that will create new career opportunities
 - For someone who is ready to make larger impact than you can as an individual investigator
 - *More than anything, you need:*
 - *a vision*
 - *an overriding commitment*
 - *ability to communicate the vision*
 - *ability to inspire a corresponding commitment*

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My Non-Research Roles

- SRI International
 - Associate Director of the Computer Science Lab
 - Developing new research areas in distributing computing
 - Recruiting and obtaining funding
 - Planning for technology commercialization
 - Program Director for Secure Systems
 - Directed a research group that did computer security research and developed several technology prototypes (secure database systems and intrusion detection systems)

SRI International

Challenges	Opportunities
Growing a research group	Producing more results that I could as an individual investigator
Selling our ideas; obtaining funding	Having influence in a wider community

- How I got the job: Personal networking
- Why I wanted the job: To work with first-rate researchers
- Accomplishments
 - Created the first secure database system with extremely fine-grained access control; some concepts were used in commercial DBMSs
 - Was instrumental in defining the directions of the database research community
 - Created the first intrusion detection system, which was the impetus to start this field

SRI International

– Personal growth

- Established my reputation in computer security
- Community building
- Contacts
- Skills

– Lessons learned / advice

- I was greatly assisted by a mentor and a few extremely good technical folks
- Advancement was through demonstrated team-building and fundraising abilities
- I was basically my own small business: there was no management there who felt it was their mission to help me succeed

My Non-Research Roles

– *Data Security Letter*

- **VERY** small publishing business (spare time)
- High-priced newsletter reporting on computer security research
- I co-founded the business with a partner, whom I later bought out
- I served as editor, then editor and publisher (as well as principal contributor, bookkeeper, etc.)
- I later sold the business

– Why I did it: To work with a proven entrepreneur and technical achiever

– Personal growth

- Established my reputation among businesses and governments
- New skills
- Many business lessons learned