



**Put Your Science to Work:
Practical Career Advice for
Early Career Physicists**




Dr. Peter S. Fiske
July 7, 2018
SLAC





Why am I REALLY here?

- **Experience**
 - My career path (so far) has been unusual (for a Geophysicist) but highly stimulating and enormously enjoyable.
 - I benefited from numerous mentors and got lots of good advice
 - Pass some of it along
- **Concern**
 - Young S&Es don't get very good career development advice.
 - Such advice is of greatest value at the START of your career!
- **Prejudice**
 - I believe that technically-trained individuals have enormous opportunity to improve the world.





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The world outside of academia has evolved...

Old

Go to school for skills
Job Security = Good
Wages = Reward
Infrastructure = Biggest Asset





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Seniority (mattered most)
Guilds (were everywhere)
Risk Aversion (was the smart thing)
Passivity (was the safe bet)





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New



Life-long learning
Risk-taking = Good
Stock Options = Reward
IP = Biggest Asset






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Experience (matters most)
Independents (are everywhere)
Risk Management (is the smart thing)
Entrepreneurialism (is the safe bet)

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Unfortunately, much of academia reinforces ...the OLD

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The need for Physics students to think broadly about themselves is not new...


“Young people themselves don’t realize how valuable they are with a Ph.D. It means an ability to think deeply, solve problems, analyze data, criticize and be criticized. [PhD-trained graduates] often don’t realize the breadth of what they are capable of doing.”

Dr. Neal Lane
(Former Director, National Science Foundation)
“Producing the Finest Scientists for the 21st Century”
Science 4, November 1994 741-743

S&E grads possess many of the traits and skills that are of highest value in the “real world”

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Dr. Al Levin



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Transferable skills

- ability to function in a variety of environments and roles
- teaching skills: conceptualizing, explaining
- counseling, interview skills
- public speaking experience
- ability to support a position or viewpoint with argumentation and logic
- ability to conceive and design complex studies and projects
- ability to implement and manage all phases of complex research projects and to follow them through to completion
- knowledge of the scientific method to organize and test ideas
- ability to organize and analyze data, to understand statistics and to generalize from data
- ability to combine, integrate information from disparate sources
- ability to evaluate critically
- ability to investigate, using many different research methodologies
- ability to problem-solve
- ability to do advocacy work
- ability to acknowledge many differing views of reality
- ability to suspend judgment, to work with ambiguity
- ability to make the best use of “informed hunches”

Did you know a Science degree teaches you these things?

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Personal qualities

- intelligence, ability to learn quickly
- ability to make good decisions quickly
- analytical, inquiring, logical-mindedness
- ability to work well under pressure and willingness to work hard
- competitiveness, enjoyment of challenge
- ability to apply oneself to a variety of tasks simultaneously
- thorough, organized and efficient
- good time management skills
- resourceful, determined and persistent (and able to live on \$2K/month!)
- imaginative, creative
- cooperative and helpful
- objective and flexible
- good listening skills
- sensitive to different perspectives
- ability to make other people “feel interesting”

Employers in all fields are looking for people with these traits

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20 successful S&E grads in non-academic careers were asked ...



“Of the many skills you developed while in graduate school, which ones are the most valuable to you now?”

- Finding one’s own path and taking initiative with little assistance
- Ability to work in a high-stress environment
- Independence
- Maturity
- Computer skills
- Circumventing the rules
- Learning to seek out problems and solutions
- Ability to persuade
- Ability to create
- Ability to work productively with difficult people

and my favorite:

The ability and courage to start something even if you don’t know how yet

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Employers in ALL sectors are hungry for people with these skills and qualities



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What image does “Physicist” conjure?



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The Curse of Being Smart



- We have become very highly skilled → We tend to value our skills the most
- We can conceptualize → We can conceive of complications
- We are used to knowing it all → We fear being the “dummy”
- We are intellectually smart → We fail to appreciate other forms of smart
- We are used to being exceptional → We don’t like to fail

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Match the Person and the Career



- | | |
|---------------------|----------------------------|
| Cell Biologist | Science Media Entrepreneur |
| Chemist | Congressional Staffer |
| Astrophysicist | Financial Analyst |
| Biophysicist | Management Consultant |
| Geologist | Rodeo Star |
| English | Experimental Physicist |
| Plant Biologist | Book Editor |
| Theoretical Chemist | Chancellor of Germany |
| Geophysicist | Software Entrepreneur |
| Mathematician | High School Teacher |
| Electrical Engineer | Secretary of Defense |
| Medieval History | Programmer |

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Match the Person and the Career: The Answers



- | | | |
|---------------------|-------|----------------------------|
| Cell Biologist | _____ | Science Media Entrepreneur |
| Chemist | _____ | Congressional Staffer |
| Astrophysicist | _____ | Financial Analyst |
| Biophysicist | _____ | Management Consultant |
| Geologist | _____ | Rodeo Star |
| English | _____ | Experimental Physicist |
| Plant Biologist | _____ | Book Editor |
| Theoretical Chemist | _____ | Chancellor of Germany |
| Geophysicist | _____ | Software Entrepreneur |
| Mathematician | _____ | High School Teacher |
| Electrical Engineer | _____ | Secretary of Defense |
| Medieval History | _____ | Programmer |

They do have ONE thing in common: They’re SMART ... like YOU!

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The 80:10:10 rule



How will you grow and gain new skills if you don't invest the time?
 How will people know of your abilities if you don't tell them?

"Opportunities are seldom labeled"
 - John Shedd

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The skills that will REALLY count ...



- Leadership
- Persuasion
- Humor
- Tact
- Understanding of Risk and Reward
- Understanding of Investment and Return
- Organization
- Sensitivity
- Drive
- Perspective
- Creativity

Good News: You can LEARN These!

"Give me ten people who have all of these skills and I could do anything"

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Typical questions asked by Science grads facing an uncertain job market



- "How do I get a job in _____?"
- "How do I write a resume?"
- "What jobs call for my skills?"
- "Where is the bathroom? I'm going to be sick!"

Better questions are:

- What do I enjoy doing and what am I good at?
- What are various career like?
- What careers and jobs are a good match to my skills, interests, and values?
- Who can I talk to?

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Why are these questions better?



- Scientists and engineers (S&Es) are preoccupied with matching skills and ignore other important factors in choosing a career
- S&Es lack information and exposure to other career fields
- Career change for S&Es can be harder:
 - lack of an established pathway
 - fear/anger of getting a degree "for nothing"
 - ignorance/fear of life in the "real world"

If you don't like what you do for a living, you probably won't be very good at it

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Steps in the Career Planning Process



Career development is a continual process
 Career development is part of being a professional



most people think it starts here
 but
 it really starts down here

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Self-Assessment:



- Informal methods
 Initial brainstorming
- Self-guided methods
 Interest Exercises
- Formal methods
 Exams and Tests
 Career counseling



Make your neuroses work for you!

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Initial brainstorming



- What do I enjoy doing most?
- What do I like most and least about my present career?
- What are my values?
- What do I like to read?
- What organizations or jobs sound interesting to me?
- When have I been my happiest at work?
- When have I been most unhappy?

Career Development Journal

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Self-guided exercises



1. Make a two-column list of everything you can think of that you like and dislike about the academic career, and then assign priorities. What do you learn about your values, interests and skills as they affect the work and workplace?

Things I love about a research career Things I hate about a research career

Intellectual challenge	Long hours
Teaching	Low pay
Flexible work schedule	Isolation
Independence	Funding rat race
Smart colleagues	Politics
Learning new things	Arrogant colleagues
Collaborating	Lack of teamwork

These differences are critical to career success and happiness

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Self-Guided Exercises



Think back over the experiences you have had in your life - in the areas of work, leisure, or learning - and pick three to ten that have the following characteristics:

- a. you were the chief or a significant player
- b. YOU - (± the world or significant others) - regard it as a success: you achieved, did, or created something with concrete results, or acted to solve a problem, or gave something of yourself that you are proud of and are pleased by
- c. you truly enjoyed yourself in the process.

List each of them, write why you consider it a success, and write a paragraph or two detailing the experience, step by step.

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Formal methods of self-assessment



Myers-Briggs Type Indicator Test - analyzes your beliefs and interests and categorizes you into 1 of 16 personality types. Used to understand how individuals may work well or not well together.

Strong Interest Inventory - analyzes your interests and skills and compares them to representative people in a variety of careers and work environments.

Career Beliefs Inventory - assesses the sources of anxiety about jobs, careers and career change.

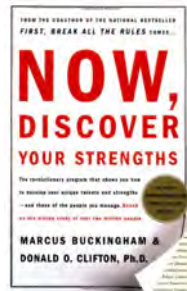
StrengthFinder – identifies the things you are BEST at (so you can play to your strengths)

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What is a strength?



- The ability to provide consistent, near perfect performance in a specific given activity
- An activity that leaves you feeling strong
- A Strength is produced when a talent is refined with knowledge and skill



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Strength	Description
Believer	one with a constant drive for accomplishing tasks
Activator	one who acts to start things in motion
Adaptability	one who is especially adept at accommodating to changes in direction/plan
Analytical	one who requires data and/or proof to make sense of their circumstances
Arranger	one who enjoys orchestrating many tasks and variables to a successful outcome
Belief	one who strives to find some ultimate meaning behind everything they do
Command	one who steps up to positions of leadership without fear of confrontation
Communication	one who uses words to inspire action and education
Competition	one who thrives on comparison and competition to be successful
Connectedness	one who seeks to unite others through commonality
Consistency	one who believes in treating everyone the same to avoid unfair advantage
Context	one who is able to use the past to make better decisions in the present
Collaborative	one who proceeds with caution, seeking to always have a plan and know all of the details
Developer	one who sees the untapped potential in others
Discipline	one who seeks to make sense of the world by imposition of order
Empathy	one who is especially in tune with the emotions of others
Focus	one who requires a clear sense of direction to be successful
Futuristic	one who has a keen sense of using an eye towards the future to drive today's success
Harmony	one who seeks to avoid conflict and achieve success through consensus
Intuition	one who is adept at seeing underlying concepts that unite disparate ideas
Includer	one who instinctively works to include everyone
Individualization	one who draws upon the uniqueness of individuals to create successful teams
Input	one who is constantly collecting information or objects for future use
Reflection	one who enjoys thinking and thought-provoking conversation often for its own sake, and also can data compress complex concepts into simplified models
Learner	one who must constantly be challenged and learning new things to feel successful
Remember	one who seeks to take people and projects from great to excellent
Positive	one who has a knack for bring the light side to any situation
Relator	one who is most comfortable with fewer, deeper relationships
Responsibility	one who, inexplicably, must follow through on commitments
Restorative	one who thrives on solving difficult problems
Self-Assurance	one who stays true to their beliefs, judgments and is confident of his/her ability
Significance	one who seeks to be seen as significant by others
Strategic	one who is able to see a clear direction through the complexity of a situation
Won	one who is able to easily persuade

Exploring the World of Work



1. Keep your eyes and ears open
 - read the newspaper
 - talk to people
 - browse the Web
 - hear outside speakers
2. Build your skills base
 - stay conversant with the latest technologies
 - attend workshops
 - take a class or two outside your area
3. Build your NETWORK

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Networking: Essential Career Tool #1



What is networking?

My definition:

Networking is developing relationships with people who share your professional and personal interests, and alerting them to your goals and abilities.

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Networking: How most people get their jobs



Networking is not:
Tiresome schmoozing for a job
Restricted to the slick and superficial

As a young scientist you have been networking throughout your career,
you just probably didn't realize it!

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Who is my Network?



Anybody you know and feel comfortable asking a specific favor from can be part of your Network:

- Schoolmates
- Recent graduates
- Collaborators
- Friends from High School or College
- Past bosses and colleagues
- Family
- People you meet at seminars, conferences and workshops
- Other people who are looking for jobs

and

Anybody they know

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Asking a favor



- Please introduce me to ___ who is in your network
- Please forward my (resume, latest reprint, etc.) to...
- Please provide a reference for me if ___ calls
- Can you tell me the latest about ___?
- Can you send me a copy of ___?

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70% of your business connections will be made from "friends-of-friends"

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 - Other people who are looking for jobs
- and
- Anybody they know

The most valuable in your network are those already established in the career field that interests you and who are willing to give you help

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“The best preparation you can make toward the goal of having an [academic] career is to find yourself a “research aunt or uncle,” someone with little or no authority over you, who has enough experience to act as a sounding board and giver of accurate advice. Do not be shy about getting to know the people outside your advisor’s realm.”

Peter Feibelman, A Ph.D. is NOT Enough!

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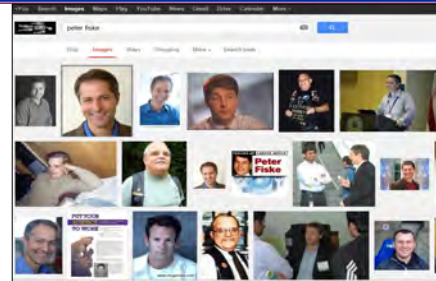


Your E-persona

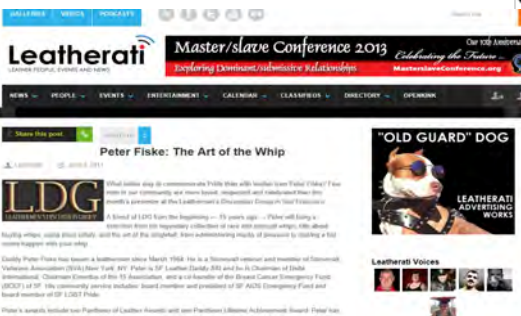
- Facebook – for friends
- Linked In – for colleagues and professional friends
- Your/your group’s website
 - Post your papers
 - Post your bio
 - Don’t post your CV
- Vanity Google

You can link to me at Linked In (Peter Fiske – Put Your Science to WORK)

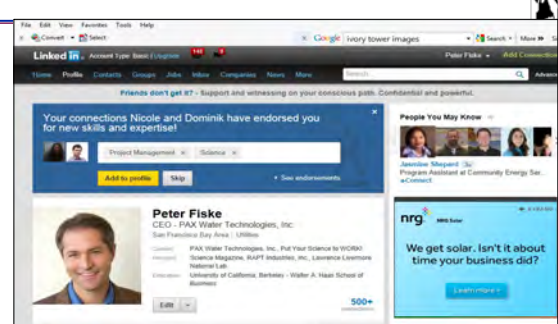
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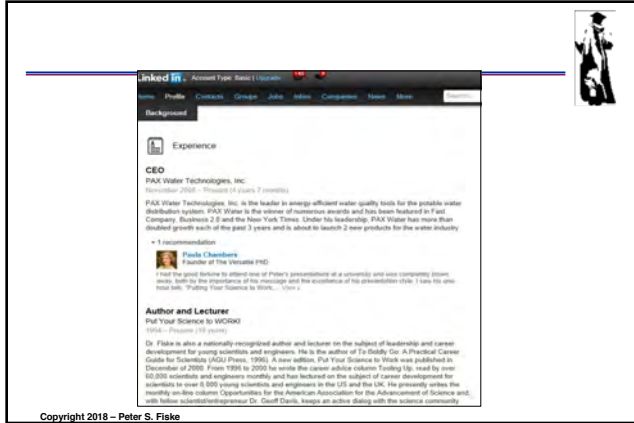
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Peter Fiske – Put Your Science to WORK



Background

Experience

CEO
PAX Water Technologies, Inc.
 November 2008 - Present (4 years 7 months)

PAX Water Technologies, Inc. is the leader in energy efficient water quality tools for the potable water distribution system. PAX Fiske is the winner of numerous awards and has been featured in Fast Company, Business 2.0 and the New York Times. Under his leadership, PAX Water has more than doubled growth each of the past 3 years and is about to launch 2 new products for the water industry.

+ 1 recommendation

Paula Chambers
 Founder at The Venetian (P&G)

What's your advice to respond to Peter's presentation at a university and to companies (owner, exec, staff) to the importance of his message and the existence of his presentation slide. I am his one and only. Putting Your Science to Work... >View

Author and Lecturer
Put Your Science to WORK!
 1994 - Present (19 years)

Dr. Fiske is also a nationally recognized author and lecturer on the subject of leadership and career development for young scientists and engineers. He is the author of *The Quality Gap: A Practical Career Guide for Scientists* (JGSI Press, 1996). A new edition, *Put Your Science to Work* was published in December of 2008. From 1995 to 2000 he wrote the career advice column *Trading Up*, read by over 60,000 scientists and engineers monthly and has lectured on the subject of career development for scientists to over 6,000 young scientists and engineers in the US and the UK, the primary editor the monthly on-line column *Opportunities for the American Association for the Advancement of Science* and, with fellow faculty/entrepreneur Dr. Geoff Davis, keeps an active dialog with the science community.

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Skills & Expertise

- Business Development
- Entrepreneurship
- Public Speaking
- Start-up
- Product Management
- Mergers & Acquisitions
- Engineering
- Strategy
- Strategic Planning

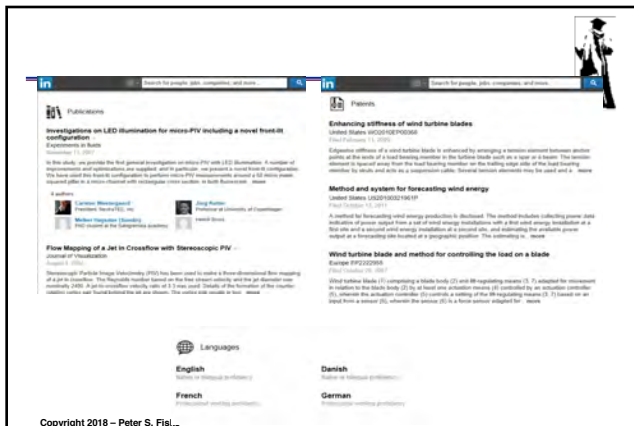
Education

University of California, Berkeley - Walter A. Haas School of Business
 MBA, Finance and Law
 1989 - 1992

Academic and Societal: Won 2001 *Stanley Business Plan Competition*

Stanford University

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Publications

Investigations on LED illumination for insect-PIV including a novel frontlit configuration
 8 September 2016

In this study, we provide the first general description of insect-PIV with LED illumination. A number of improvements and adaptations are explored and a particular one is presented in more detail. We have used this frontlit configuration to perform insect-PIV measurements around a 40 micron insect, demonstrating a motion-blurred image resolution in both dimensions.

Flow Mapping of a Jet in Crossflow with Stereoscopic PIV
 Journal of Visualization
 August 2016

Stereoscopic Particle Image Velocimetry (PIV) has been used to make a three-dimensional flow mapping of a jet in crossflow. The technique involves the use of a stereo camera and a novel frontlit configuration (PIV) in an insect-PIV setup. It is a novel study of the interaction of the insect-PIV camera and frontlit illumination at an insect-PIV setup.

Enhancing stiffness of wind turbine blades
 United States: US20160270034
 Filed October 11, 2016

Embodiments of a wind turbine blade is achieved by arranging a tendon between another embodiment of a wind turbine blade and the turbine blade such as to wrap at a desired distance a portion away from the root leading towards the leading edge side of the leading trailing edge, and side of a cross-sectionally. Several tendon elements may be used and a more

Method and system for forecasting wind energy
 United States: US20160270035
 Filed October 11, 2016

A method for forecasting wind energy production is disclosed. The method includes collecting power data indicator of power output from a set of wind energy installations with a first wind energy installation at a first site and a second wind energy installation at a second site, and estimating the available power output of a forecasting site located at a geographic position. The estimating is based

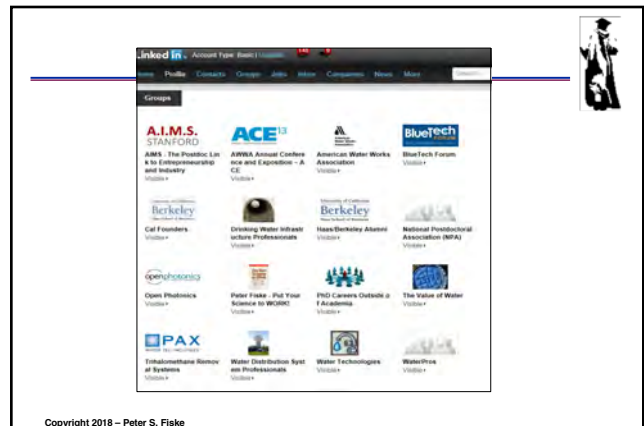
Wind turbine blade and method for controlling the load on a blade
 Europe: EP2622010A1
 Filed October 11, 2016

The method includes collecting power data indicator of power output from a set of wind energy installations with a first wind energy installation at a first site and a second wind energy installation at a second site, and estimating the available power output of a forecasting site located at a geographic position. The estimating is based

Languages

- English (fluent-proficiency)
- French (fluent-proficiency)
- Danish (fluent-proficiency)
- German (fluent-proficiency)

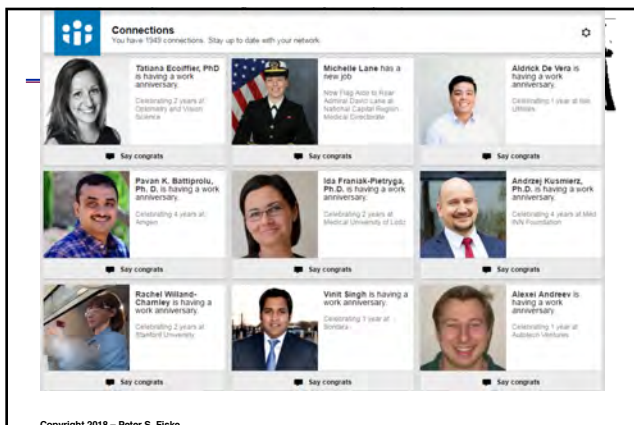
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Groups

- A.I.M.S. STANFORD
- ACE
- American Water Works Association
- BlueTech
- AAEP: The Practice Link to Entrepreneurship and Industry
- AAEP: Annual Conference and Exposition - ACE
- American Water Works Association
- StanTech Forum
- Berkeley
- Drinking Water Infrastructure Professionals
- Haas Berkeley Alumni
- National Professional Association (NPA)
- Cell Founders
- OpenProteomics
- Peter Fiske - Put Your Science to WORK!
- PhD Careers Outside of Academia
- The Value of Water
- OpenProteomics
- PAX
- Water Distribution System Professionals
- Water Technologies
- WaterOps

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Connections
 You have 1542 connections. Stay up to date with your network.

- Tatiana Ecoffier, PhD** is having a work anniversary. Celebrating 2 years of Chemistry and Vision Science. Say congrats
- Michelle Lane Fisk** is a new job. Hope you take it easy! Admiral Coast Lane at National Capital Region Medical Center. Say congrats
- Aldrick De Vries** is having a work anniversary. Celebrating 1 year at IBM. Say congrats
- Pavan K. Battiprolu, Ph.D.** is having a work anniversary. Celebrating 4 years at Amazon. Say congrats
- Ida Franjak-Pietryga** is having a work anniversary. Celebrating 2 years at Medical University of Lodz. Say congrats
- Andrzej Kusmierz, Ph.D.** is having a work anniversary. Celebrating 4 years at IBM. Say congrats
- Rachel Willand-Chamney** is having a work anniversary. Celebrating 2 years at Stanford University. Say congrats
- Vinod Singh** is having a work anniversary. Celebrating 1 year at IBM. Say congrats
- Alexei Andreev** is having a work anniversary. Celebrating 1 year at Autodesk. Say congrats

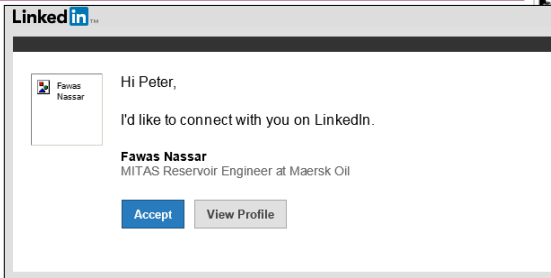
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What do you want your image to be?

- **What professional face do you want to project?**
 - What are the consequences of choosing one part of your professional "façade" over another?
- **What would a potential funder think when viewing your profile?**
- **What would a potential employer think when viewing your profile?**

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LinkedIn Etiquette



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LinkedIn Etiquette



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Rules to Link By

- **Never Go Generic** – when sending invitations, cordially explain the connection and motivation
 - Don't use the automatic "link-to-everyone-in-my-contacts-list"
- **Be timely** – If you are going to seek a Link – do it within the first 24 ours of meeting the person
- **Have a goal in mind**
- **Establish rules and stick to them**
 - Fiske's rules:
 - Always accept invites from people I have worked with, met in person, spoken to on the phone, had an exchange with on a chat room or LinkedIn Group or students from one of my classes
 - (Almost) always accept invites from people not in the above categories who provide a cordial and clear explanation for why they want to Link

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How to get a meeting with a busy person

- **Be persistent**
- **Make it easy for them**
 - "I will come to your office/home/wherever..."
- **Offer them something:**
 - "I'd like to have coffee with you and pick your brain.. In exchange, I will tell you everything I know about ____"
- **Thank them**
 - ... and follow up a few months later with an update (very sticky!)

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Constructing a bio

- 1 paragraph
- 3 paragraphs
- 1 page



Biography for Dr. Peter S. Fiske

Dr. Peter S. Fiske is the Chief Technology Officer of PAX Mixer Inc. and PAX Water Technologies as well as VP for R&D for parent company PAX Scientific, Inc. In his various roles, Fiske manages day-to-day operations for PAX Water and PAX Mixer, overseeing all aspects of Sales, Marketing and Product Development. Under his leadership, PAX Mixer Inc. won a prestigious 3-year, SEM Advanced Technology Program award from the Department of Commerce.

Prior to joining the PAX Companies, Fiske was co-founder of RAPT Industries, Inc., a start-up based on technology from Lawrence Livermore National Laboratory, where Fiske was a staff member for 6 years. Fiske identified the technology while at LLNL and, as a second-year evening M.B.A. student, developed the business plan for RAPT which won first place in the third annual U.C. Berkeley Business Plan Competition in 2001. Fiske and his partners subsequently closed a series A round of investment and since then have raised over \$12M in government funding from the DOD, NIST and NASA. Fiske led negotiations to license a portion of the technology to a major semiconductor equipment manufacturer, and led the first sales of products. Fiske was CEO of the Company from May, 2003 to April, 2004.

Fiske is the author of 30 technical articles, most in international peer-reviewed journals including SCIENCE. He presently serves on Bay Area Teachers' (CA 10) Small Business Advisory Committee where he works with other small business owners and Congressional staffers to evaluate and propose legislative initiatives to increase the growth and economic vitality of the East Bay of the San Francisco Bay Area.

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Business Cards

- **Get a PROFESSIONAL looking card (spend the \$)**
- **Talk to your Departmental Secretary or Campus Bookstore about logo and printing**
 - 500 is usually the minimum
- **Check out scannable versions**

Business cards are a professional courtesy – and an indicator of professionalism

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Focusing on Specific Opportunities: Becoming an Insider on Every Job



Research your career field of interest as thoroughly as you research your science

Stalk your next job like a big game hunter

Techniques for getting on the inside track:

- Informational Interviewing
- Interning
- Volunteering
- Part-timing
- Moonlighting
- Consulting
- Incorporating the outside world in your research

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Informational Interviewing



“Going directly to places where you would like to work is six times as effective as mailing out résumés and cover letters.”

Richard Bolles- *What Color is Your Parachute*

Advantages to Informational Interviewing:

- you are in control
- you can ask sticky questions that wouldn't be appropriate in a job interview
- you can see people in their actual work environment
- you can get feedback and advice
- you can make sure the work environment is right for you
- you can gain visibility
- you can practice being perfect for when it really counts

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Informational Interviewing: How do I get started?



- Get a point of contact through your network or the career planning and placement center you are using
- contact the person by phone or e-mail, explain that you want to learn more about the career field and that you got their name from _____. They may refuse or say that another person would be more appropriate. If so, contact that person and move forward.
- prepare some of your questions in advance - don't waste time: a typical informational interview is only 30 minutes. People do NOT enjoy answering questions that could or should have been investigated elsewhere
- questions asked usually pertain to:
 1. Required background and training
 2. Specific information regarding the career
 3. Personal experiences
 4. Advice
 5. Future trends

If you do well the person you talk to may end up being a useful part of your network

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Informational Interviewing: Some final advice



- **Treat it like a formal interview for a job:**
 - do your homework
 - think carefully about what you want to learn
 - prepare questions
 - act professionally
 - write a thank-you note
- **Do not treat it like a formal interview for a job:**
 - do not ask for a job, even indirectly
 - do not speak with one person and assume you have the whole story

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Why are people willing to be bothered?



- People like to “give back”
- People like talking about themselves
- Finding fresh talent is critical to an organization's success
- Information transfer is a two-way process they may learn something important from you

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The Science of Résumés and CVs



True or False:

The purpose of a résumé is to get you a job

A résumé is a description of all your past achievements and work history

An individual résumé can be sent out to many different employers without alteration

CVs and résumés are basically interchangeable

And now for the answers

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The answers:

The purpose of a résumé is to get you an INTERVIEW, not a job.

A résumé is a description of those past experiences that are MOST relevant to the position being sought. A resume is as much about where you are going as it is where you have been.

You should adapt your résumé for each specific job opening and you should USE THE WORDS IN THE JOB DESCRIPTION as much as possible.

CVs and résumés are totally different documents and should NOT be used interchangeably. If you are uncertain whether an employer wants a CV or a résumé ASK THEM!



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Action-rich past tense verbs:

Management Skills	Research Skills	Technical Skills			
administered	clarified	co-authored	assembled	coordinated	balanced
analyzed	collected	collaborated	built	developed	budgeted
assigned	critiqued	corresponded	calculated	enabled	calculated
chaired	diagnosed	developed	computed	encouraged	computed
consolidated	evaluated	directed	designed	evaluated	developed
contracted	examined	drafted	devised	explained	managed
coordinated	extracted	enlisted	engineered	facilitated	marketed
delegated	identified	formulated	fabricated	guided	planned
developed	inspected	influenced	maintained	informed	projected
directed	interpreted	interpreted	operated	instructed	researched
evaluated	interviewed	lectured	pinpointed	lectured	
executed	investigated	mediated	programmed	persuaded	Creative Skills
organized	organized	moderated	remodeled	set goals	acted
oversaw	reviewed	negotiated	repaired	stimulated	conceptualized
planned	summarized	persuaded	solved	taught	created
prioritized	surveyed	promoted		trained	customized
produced	systematized	proposed			designed
recommended		publicized			developed
reorganized		reconciled			directed
reviewed	Communication Skills	recruited	Teaching Skills	Financial Skills	established
scheduled	addressed	spoke	adapted	administered	directed
supervised	arbitrated	translated	advised	allocated	fashioned
	arranged	wrote	clarified	analyzed	illustrated
	authored		coached	appraised	instituted
			communicated	audited	
			conducted		



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The best resumes...

- **The best resumes...**
 - Connect clearly with the job being advertised
 - Highlight key accomplishments that are relevant to the position being sought
 - Are cleanly laid out, easy to follow
- **The best cover letters...**
 - Are engaging, direct and well-written
 - Challenge the reader to rethink their preconceived notions of you
 - Explain the gaps and apparent mismatches



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Resume and Cover Letter Advice

On the web:

<http://www.nextwave.org>
Tooling Up

Past columns:

How to Write a Winning Résumé
The Electronic Résumé Revolution
The Commandments of Cover Letter Creation

On the bookshelf:

The Damn Good Resume Guide by Yana Parker



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A methodology for answering questions: STAR

- Situation/Task:** Describe the situation you encountered. Give the background, and its relation to you.
- Action:** Describe what YOU did to address the situation or solve the problem.
- Result:** Describe the result of your actions.



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Negotiating an offer

1. Delay the salary negotiations as long as possible - try not to get locked into a salary before you are offered a job
- 2 Value the offer fully. Consider these other parts of compensation:
 - health care
 - schedule of raises
 - bonus plan
 - commission plan
 - stock option
 - pension plan
 - profit sharing plan
 - employee education/tuition reimbursement
 - stability of company
 - dependent tuition reimbursement
 - paid parking
 - car provided
 - vacation
 - sick leave
 - maternity/paternity leave
 - flex time/alternative work schedule
 - anticipated work hours
 - relocation allowance
 - potential for advancement

Get it in Writing



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Can you get the offer raised?

Consider the factors listed below. The more that are true, the greater your flexibility:

- You possess unique abilities
- They have few other candidates for the job
- The search has been going on a long time
- This is a unique position in the organization
- The organization is flexible in general
- You have other offers
- They really need someone soon

In contrast, you will have less flexibility to negotiate salary and benefits if the following are true:

- The job is at an entry level and similar to others in the organization
- The organization is highly structured and rigid
- The organization expects you will take what is offered

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Some final advice on interviewing

- Arrive early—give yourself 10-15 minutes to sit and chill out
- Case the joint—if it is in a place you've never been before, swing by the day before just to make sure you know how to get there. The assurance of having been there before will help
- Bring along extra copies of your resume
- Give a good handshake—if you are unclear about what a good handshake is, go try out your handshake on your friends
- **Make eye contact**—one simple technique for ensuring that you have made good eye contact: make a mental note of the color of your interviewers eyes
- Ask questions—it's better to be clear about the question at the start than go rambling down some tangent
- Be yourself—people tend to do a poor imitation of anything else but

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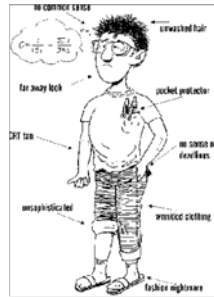
Perceptions and Realities: Overcoming Stereotypes

According to business people, academics/scientists are:

- simple minded about money
- impractical about time
- no sense of deadlines
- socially passive
- value ideals as absolutes

Other potential perceptions to overcome:

- hermit vs. leader
- arrogant vs. team player
- rebel vs. organizer
- problem person vs. solution person



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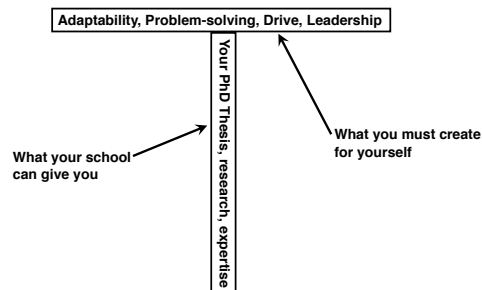
Don't forget your own misconceptions...



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Summing it all up: You must be a T-person



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Myths and Realities of the Modern Job Market




Myth 1# Find a job that matches your skills


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Myths and Realities of the Modern Job Market



Myth 1# Find a job that matches your skills




Reality #1: **SKILLS, VALUES and INTERESTS** are all critical aspects of finding a fulfilling career.


"You always end up overvaluing what you know and undervaluing what is out there in plain sight"
Thomas Friedman – The Lexus and the Olive Tree

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Myths and Realities of the Modern Job Market




Myth #2: Employers care only about technical skills




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Myths and Realities of the Modern Job Market



Myth #2: Employers care only about technical skills

Reality #2: Employers care about lots of things in addition to skills:




- Personality
- Degree of Fit
- Learning Ability
- Leadership
- Communication Skills
- Persuasion Skills
- Drive


"We hire for attitude and train for skills"
VP for Product Development – Specialty Chemical Manufacturer

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Myths and Realities of the Modern Job Market



Myth #3: You should map out your career trajectory many years into the future



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Myths and Realities of the Modern Job Market



Myth #3: You should map out your career trajectory many years into the future




Reality #3: Serendipity, unplanned detours, and "setbacks" are inevitable. The people who can exploit chance opportunities, explore new areas and make the best of setbacks tend to be happier and more successful.

"Five years ago, I would never have predicted that I would end up here!"
Astrophysicist-turned-Financial Analyst

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Some final thoughts




You can serve science, your community, and your country in many different environments - don't be afraid to consider a non-traditional career path just because it is unfamiliar to you, your advisor, your department or your family.

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My Nature columns...

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COLUMN
Boost your market value
To get grants and jobs, know when your skills will be valued and how to promote them

BY PETER FISKE A business-savvy colleague explained: "It's not so much that you don't see

Nature
March 9, 2018
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