

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



**Dr. Peter S. Fiske**  
August 6, 2019  
NSF PrePARE



**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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**Why did I become a scientist?**



- I loved exploration
- The natural world fascinated me
- My father was a scientist (and seemed to have a fun career)
- I wanted to do something adventurous and meaningful
- I wanted to have an impact on the world (and be recognized for it)



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**Why did you become a scientist?**



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**What you do for a career is a deeply personal thing**



- Influenced by your parents and family
- Influenced by your upbringing
- Influenced by your personality and temperament
- Influenced by random encounters and chance opportunities

**My "frame" is on the individual and his, her or their career choices**

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

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

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### The world outside of academia has evolved...

**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 PhDs 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 21<sup>st</sup> Century”  
 Science 4, November 1994 741-743

PhDs 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**

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

*Did you know a PhD teaches you these things?*

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**Personal qualities**

1. intelligence, ability to learn quickly
2. ability to make good decisions quickly
3. analytical, inquiring, logical-mindedness
4. ability to work well under pressure and willingness to work hard
5. competitiveness, enjoyment of challenge
6. ability to apply oneself to a variety of tasks simultaneously
7. thorough, organized and efficient
8. good time management skills
9. resourceful, determined and persistent (and able to live on \$2K/month!)
10. imaginative, creative
11. cooperative and helpful
12. objective and flexible
13. good listening skills
14. sensitive to different perspectives
15. ability to make other people "feel interesting"

*Employers in all fields are looking for people with these traits*

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**20 successful PhDs 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?"*

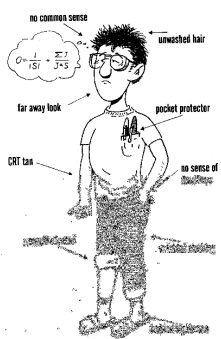
- Finding one's own path and taking initiative with little assistance
- Ability to work in a high-stress environment
- Independence
- Maturity
- Computer skills
- Circumventing the rules
- Learning to seek out problems and solutions
- Ability to persuade
- Ability to create
- Ability to work productively 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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**What image does "PhD" 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  
Chemist  
Astrophysicist  
Biophysicist  
Geologist  
English  
Plant Biologist  
Theoretical Chemist  
Geophysicist  
Mathematician  
Electrical Engineer  
Medieval History

Science Media Entrepreneur  
Congressional Staffer  
Financial Analyst  
Management Consultant  
Rodeo Star  
Experimental Physicist  
Book Editor  
Chancellor of Germany  
Software Entrepreneur  
High School Teacher  
Secretary of Defense  
Programmer

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### Match the Person and the Career: The Answers

Cell Biologist \_\_\_\_\_  
Chemist \_\_\_\_\_  
Astrophysicist \_\_\_\_\_  
Biophysicist \_\_\_\_\_  
Geologist \_\_\_\_\_  
English \_\_\_\_\_  
Plant Biologist \_\_\_\_\_  
Theoretical Chemist \_\_\_\_\_  
Geophysicist \_\_\_\_\_  
Mathematician \_\_\_\_\_  
Electrical Engineer \_\_\_\_\_  
Medieval History \_\_\_\_\_

Science Media Entrepreneur  
Congressional Staffer  
Financial Analyst  
Management Consultant  
Rodeo Star  
Experimental Physicist  
Book Editor  
Chancellor of Germany  
Software Entrepreneur  
High School Teacher  
Secretary of Defense  
Programmer

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

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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 PhDs 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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### 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

- |                               |                            |
|-------------------------------|----------------------------|
| 1. Creativity                 | 1. Confirmation bias       |
| 2. Mentoring                  | 2. Horrible power dynamics |
| 3. Learning new things        | 3. Uncertainty             |
| 4. Networking – meeting folks | 4. No schedule             |
| 5. Wearing different hats     | 5. Bigotry                 |
| 6. New knowledge              | 6. High stress/pressure    |
| 7. Smart people               | 7. No frickin' life        |
| 8. Travel                     | 8. Competition             |
| 9. No schedule                | 9. Frickin' tenured jerks  |

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Still suckin'



- Peer review
- Writing
- No frickin' LIFE!!!
- Tedious shit, broken shit
- Grant rat race
- Nebulous impact
- Shmoozing sucks
- My life = my work = sucks
- No frickin' money
- Sloooooooooow
- Egos

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Self-guided exercises



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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.

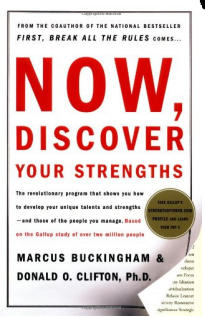
StrengthFinder – identifies the things you are BEST at (so you can play to your strengths)

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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
Activator	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
Deliberative	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
Ideation	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 on objects for future use
Intuition	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
Maximizer	one who seeks to take people and projects from great to excellent
Positivity	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
Woo	one who is able to easily persuade

A Strength is like a Superpower



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Exercise: What is Your Superpower?

- Take 3 minutes – reflect on the results of your StrengthFinder inventory, and think about, then write a short description of your personal “superpower”



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Peter Fiske's Superpower

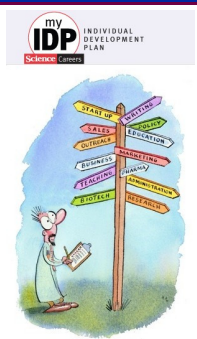
Woo: the ability to persuade others



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IDPs

- Explore how your skills interests and values map onto some common PhD career paths
- Set goals for yourself
- Keep you and your advisor in synch




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### Exploring the World of Work

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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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### Introductions

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- Please introduce yourself to someone sitting close to you (who you don't know)










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### Communication - Definition

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- *Noun* the act or process of using words, sounds, signs, or behaviors to express or exchange information or to express your ideas, thoughts, feelings, etc., to someone else




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### We are highly evolved social animals...

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- We are designed to pick up on subtle queues that signal fitness, power, and fecundity
- We are highly biased toward social behavior and cooperation
- We are predisposed to favor those genetically similar to ourselves (“selfish gene” theory)

As a result, we are in a constant dialog between our forebrain (governing executive function) and our limbic system (governing emotion and reaction)


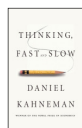


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### Daniel Kahneman (Nobel Prize – Economics, 2002)


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<p><b>System 1</b></p> <ul style="list-style-type: none"> <li>• Fast, automatic</li> <li>• Instinctive, stereotypical</li> <li>• Emotional, subconscious</li> </ul>	<p><b>System 2</b></p> <ul style="list-style-type: none"> <li>• Slower, Effortful</li> <li>• Deliberative, Infrequent</li> <li>• Logical, Conscious</li> </ul>
---	--

Scientists and Engineers live in a world of System 2 thinking...

However, when we request that certain reviewers be excluded from reviewing our proposals, we also acknowledge that we live in System 1 too...




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### Most of our decisions are based in System 1

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System 2 is lazy, and spends most of its time rationalizing and being a spokesman for System 1

Effective technical leaders recognize that BOTH systems must be addressed to have maximum effect



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Effective Persuasion Requires Appealing to BOTH Mental Systems...



System 1

- Trustworthy, Believable
- Authoritative
- Interesting
- Sympathetic/Safe
- Funny

System 2

- Credentials
- Demonstration of Knowledge/Facts
- Argumentation and Logic

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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.

*If you know the person well enough to ask them a favor, they are a member of your network.*

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Networking: How most people get their jobs



Networking is not:

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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 favor from is part of your Network.

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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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Who is my Network?



- Anybody you know and feel comfortable asking a favor from is 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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  - Family
  - People you meet at seminars, conferences and workshops
  - 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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Working a Meeting



- Identify who you want to connect with while at the meeting
- Reach out to them via e-mail
- Introduce yourself after their talk or during their poster
- Be clear about what you are seeking
  - Time frame for your transition
  - Introduction to someone else
  - Advice
- Follow up with a brief thank you and next steps
- Visit the exhibits booths
  - Chat up people there – what do they do for their company?
  - What are the areas of growth for their company in the next 12 months?

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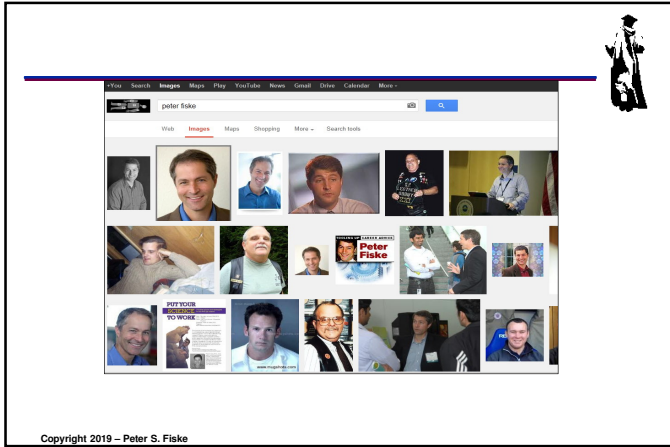


### Your E-persona

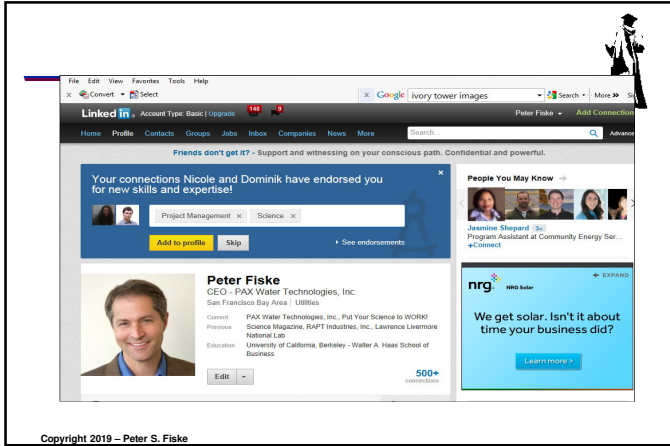
- Facebook/Instagram/Etc. – for friends
- Linked In – for colleagues and professional friends
- Your/your group's website
  - Post your papers
  - Post your bio
  - Don't post your CV
- Vanity Google

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

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**LinkedIn**

Hi Peter,

I'd like to connect with you on LinkedIn.

**Kendra Collins**  
Lead Copywriter. Never a dull moment. Always a great read.

[Accept](#) [View Profile](#)

You are receiving Invitation emails. [Unsubscribe](#)  
This email was intended for Peter Fiske (CEO - PAX Water Technologies, Inc.) [Learn why we included this.](#)  
If you need assistance or have questions, please contact [LinkedIn Customer Service](#)  
© 2014, LinkedIn Corporation. 2029 Sberlin Ct. Mountain View, CA 94043, USA

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## LinkedIn Etiquette

**From Hojjat Nasr, Ph.D.** [View Profile](#)

Lead Multiphysics (Fluid/Thermal/Structural) Engineer at CD-adapco | Experienced in Aerospace & Defense, Oil & Gas  
3 shared connections

I'd like to add you to my professional network.

-Hojjat Nasr, Ph.D.

[Accept](#)

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## LinkedIn Etiquette

**From Matthew Hedayat** [View Profile](#)

Independent  
4 shared connections

Hi Peter,  
Nice meeting you at the UCSD on Saturday.

- Matthew Hedayat, Ph.D., PE., MBB.

[Accept](#)

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## LinkedIn Etiquette

**From Rachel Tsui** [View Profile](#)

President of Oxbridge Biotech Roundtable San Diego, NSF Graduate Research Fellow at UCSD  
6 shared connections

Hi Peter,

It was great to meet you last Saturday at the UCSD PhD Careers Conference. I really appreciated your moderation of the panel and your keynote address!

Regards,  
Rachel Tsui

[Accept](#)

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## Research Gate

**Peter S. Fiske**  
#13671 · Ph.D.

[Add new research](#)

Overview Contributions Info Stats Scores Research Interests

**Introduction**  
We created a short description of your work. Review it to quickly add an introduction that helps others understand your research.

[Review introduction](#) [Not now](#)

**3 of your full-texts aren't public yet**  
Easily make them publicly available on your profile to help create more visibility for your research.

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## Google Scholar

**Peter Fiske** [Follow](#)

Director - Water-Energy Resilience Research Institute, Lawrence Berkeley National Laboratory  
Verified email at [rl.gov](#)  
water treatment water resource management desalination

TITLE	CITED BY	YEAR
Bonding and dynamical phenomena in MgO: A high temperature <sup>17</sup> O and <sup>25</sup> Mg NMR study	46	1994
Pseudotachylites generated in shock experiments: Implications for impact cratering products and processes	38	1995
Shatter cones and shocked rocks in southwestern Montana: The Beaverhead impact structure	28	1990
What is a PhD really worth?	23	2011

**Cited by** [VIEW ALL](#)

	All	Since 2013
Citations	420	108
h-index	11	5
i10-index	14	2

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How to get a meeting with a busy person



- **Be direct**
- **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 3 months later with an update (very sticky!)

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Constructing a bio



Biography for Dr. Peter S. Fiske

- **1 paragraph**
- **3 paragraphs**
- **1 page**



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, \$2M 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, 2001 to April, 2004.

Fiske is the author of 20 technical articles, most in international peer-reviewed journals including SCIENCE. He presently serves on Rep. Ellen Tauscher's (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

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

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Getting Out There: 2 programs at U.C.



- **PIEP – Postdoc Industry Exploration Program**
  - Monthly day-long visits to local technology companies
  - Face-to-face meetings with management
  - Tours of the facilities
- **BPEP – Berkeley Postdoc Entrepreneurship Program**
  - Postdocs are seeking advice about commercializing technology and starting their own companies
  - Monthly evening workshops
  - Network and resource center
  - Day-long summer workshop



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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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What is Informational Interviewing?



- **Identify a person working in a company, institution, university or organization that interests you**
- **Meet and learn about their job, their organization and their career pathway**

Informational interviewing is the #1 way to uncover new opportunities and build your professional network

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## Step 1: Identify people you want to speak to




- What companies, organizations or jobs interest you?
- Where are people using similar tools or techniques to what you are using?
- Where (geographically) are you interested in working?
- What trends or fields are you interested in learning more about?
- What questions do you want to answer?

Goal: Arrive at a short list of organizations or people to focus on

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## Step 2: Connecting to specific people



- Who do you know at your target organizations?
- Who do you know who knows someone at your target organizations?
- Who are these people, and where do they sit in their organization?
- What other things possibly connect you to these people?
- Get their e-mail address

Goal: Have a specific plan for reaching out to each person with a request for an informational interview

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## Step 3: Make the request



- Reach out to the individual directly by e-mail
- Have your “friend-in-common” make a WARM introduction by e-mail
- Explain clearly who you are and what you’d like to learn and talk about
  - Promise them no more than 30 minutes, but allow them to expand the agenda
- Make it as easy for them as possible
  - “I would love to come to your office when convenient, but can also meet you for coffee nearby...”
- Be pleasant but persistent
  - Busy people are busy
  - Professional, friendly persistence is a GOOD thing

Goal: Time and place for your interview

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## Step 4: Prep them and yourself



- Continue to research the person
- Send them a short bio about yourself
- Ask if it would be possible/helpful/convenient to meet others while you are there
- Offer to give a technical talk, if appropriate
- Consider how you will dress and logistics for the interview
- Think more about what you want to learn and prepare questions

Goal: Maximize the value of their and your time

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## Step 5: Have a GREAT interview



- Great first impression
  - Good handshake
  - Make eye contact (color of their eyes)
- Roll through your questions, but follow your instincts
- Be mindful of time and check in when you’re close to the scheduled end
  - Many Info interviews can run long if additional “connection” is established
- Thanks them, and be clear on any possible follow-up
- Get their e-mail address

Goal: Leave them with the impression that you are smart, outgoing, curious and interested in their work

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## Step 6: Follow-up and “anchoring”



- Thank them by e-mail for their time
- Complete the follow-up items you discussed
- Make an appointment on your phone for 3 months time:
  - E-mail them an update – and thank them again!

Goal: STICK in their minds as a positive, thorough, proactive and polished technical professional: make them a new member 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 e-mail within 24 hours
- **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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## Becoming an insider through ...



- Internships
- Volunteering
- Part time work
- Moonlighting
- Consulting
- Incorporating outside topics into your research

Academic job searches can utilize many of these same “insider” strategies

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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!

Think about what they are looking for. What does “success” look like for someone in this position?

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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

Don't give “salary history” or “expected salary”... even when asked!

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## Telling stories is powerful Jedi magic



- Stories invite the listener to be in the narrative
- Stories disarm a listener's urge to "get to the ending"
- Stories promise pleasure and entertainment through a vicarious experience
- System 1 operates on stories



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## A methodology for answering questions: STAR



- S**ituation/**T**ask: Describe the situation you encountered. Give the background, and its relation to you.
- A**ction: Describe what YOU did to address the situation or solve the problem.
- R**esult: Describe the result of your actions.

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## Exercise – Develop a STAR response



- "Tell us a situation while you were in graduate school in which you had to innovate"
  - Take 5 minutes – quickly draft outline
  - Include a key story
  - Prepare for the entire response to be ~1 minute

Be prepared to give deliver the STAR response to all of us

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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

**Adaptability, Problem-solving, Drive, Leadership**

↑

**Your PhD Thesis, research, expertise**

←      →

What your school can give you      What you must create for yourself

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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 for PhDs**

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**Myths and Realities of the Modern Job Market**

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**Myth #2: Employers care only about technical skills for PhDs**

**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**

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**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**

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**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**

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Job hunting in the new century involves personal connections, chance encounters, and random opportunities. The more people you know, the greater your "job cross section." Getting a job in science requires the same job hunting skills and techniques as any job (including getting a job in academia). Thinking about finding a job is stressful, demoralizing and produces anxiety. Actually doing something about finding a job is liberating, empowering and fun. 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 latest column...**

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**CAREERS**

**Boost your market value**

To get grants and jobs, know where your skills will be valued and how to promote them.


**BY PETER FISKE**

Memberships might not seem like a glamorous career move, but they can be a valuable asset in your professional network. Here's how to get the most out of your memberships.

A business school colleague explained that she was planning to leave her current position to start her own business. She was looking for ways to build her network and increase her visibility in the industry.

It was a good idea, but she didn't know where to start. She was looking for ways to build her network and increase her visibility in the industry.

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March 8, 2019  
Page 275



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