Guidance for graduate students considering a career in industry

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May 4th, 2016
About me...

- Mechanical Engineer
- Oil and Gas, Operations, Project Management, Technical Capability, Strategic University Partnerships
  - Enhanced Organizational Teamwork
  - Advisor Program
  - Leadership & Collaboration for Technologists
  - PhD recruitment.. Technology Associate Program

- Current..
  - UIDP Guidance for PhD students considering a career in industry
  - Research Program Director
  - iCorps mentor
What’s the problem?
Current State.. A bewildering amount of information

- Graduate students and postdocs express challenges in gaining awareness of the issues associated with industry careers (although they express confidence in knowing about academic careers)
- Frequently faculty also lack knowledge on the ins and outs of industry careers
Number of PhDs entering industry is growing...

- Engineering – 73%
- Physical Sciences - 60%
- Life Sciences – 29%

Source: NSF Employment sector of doctorate recipients with definite post graduation U.S. employment commitments, by broad field of study for 2013
What students are saying..

- There is a lack of university support and resources for PhD students who are considering industry.
- Exposure to industry varies by department and PI.
- Difficult to find PhD internships and not all PIs support them.

What industry is saying...

- Students often lack deep understanding of industry needs, and (sometimes) the ability to apply theory to business needs.
- We look for specific tech competences. A techno-business mindset is also a crucial element, but it is often missing.
**PhDs understand what a career in industry entails**

- Strongly agree: 10%
- Moderately agree: 40%
- Neutral: 20%
- Somewhat disagree: 20%
- Strongly disagree: 10%

**PhDs have business and interpersonal skills to succeed in industry**

- Strongly agree: 0%
- Moderately agree: 55%
- Neutral: 15%
- Somewhat disagree: 10%
- Strongly disagree: 5%

**Our Faculty support and encourage PhD internships**

- Strongly agree: 5%
- Moderately agree: 45%
- Neutral: 25%
- Somewhat disagree: 15%
- Strongly disagree: 5%
Insights and best practices

• Departments with a higher proportion of industry sponsored research have a natural advantage – but must exploit these linkages and cultivate industry internships etc.
• Invite industry speakers and panelists to campus (Student clubs, Career seminars, Business and Interpersonal skills classes)
• Use alumni networks
• When supported and executed well, graduate level internships are extremely valuable
• Industry sponsored PhD fellowships
• Strengthen career offices for PhDs and Post Docs
  – Dedicated resources
  – Faculty orientation and support
Graduate Students:
How do I learn about and prepare for a career in industry?

University:
How do our faculty and departments support PhDs and Post Docs considering non-academic careers?

Government:
How do we optimally develop future STEM leaders to tackle complex problems and drive innovation across both public and private sectors?

Industry:
How and where do I recruit PhDs and Post Docs with strong business skills?

Whose problem is it?
Graduate Students:
Invite industry speakers to campus, develop business and interpersonal skills, ask faculty and departments for help

University:
Strengthen graduate student career resources and incentivize faculty to support all potential career paths

Government:
Catalyze greater industry, government, academic partnerships for graduate education

Industry:
Clearly communicate desired skills and roles, provide more graduate student fellowship and internship opportunities

All are part of the solution
we need to change the culture at many universities... if graduate students chose a non-academic career it should not be viewed as a failure”

Thank You!