2011 On-Ramps into Academia Workshop

May 15-17, 2011

Seattle, WA

University of Washington ADVANCE
Center for Institutional Change

Acknowledgements

- National Science Foundation
- UW ADVANCE Center for Institutional Change
- On-Ramps into Academia Advisory Board

Dr. Jennifer Rexford, Princeton University

Dr. Ayanna Howard, Georgia Institute of Technology

Dr. Geri Richmond, University of Oregon

Dr. Jean Jacoby, Seattle University

Dr. Pat Mooney, Simon Fraser University

WELCOME AND INTRODUCTIONS

Why Academe Wants YOU

Matt O'Donnell, University of Washington
Cherry Murray, Harvard University

Why Academe wants YOU

- Can connect theory and practice
- Understand how to complete projects
- Complementary network to academics
- Can relate to students who enter industry
- Can think big!

Matt O'Donnell
Dean, College of Engineering & Professor, Bioengineering
University of Washington

HARVARD
School of Engineering and Applied Sciences

Why Academe Wants YOU

- Can get to the point quickly
- Can communicate with non-specialists
- Can think strategically
- Good role model for teamwork, cooperation and accomplishment
- Understand “you get what you measure”

Cherry Murray, Dean, Harvard School of Engineering and Applied Sciences

Preparing for Academia

Cecilia Aragon, University of Washington
Geri Richmond, University of Oregon
Rashaunda Henderson, University of Texas at Dallas

Planning the Transition to Academia: A multi-year process

- Research CVs of faculty with job you want
- Fill in gaps
- Give talks at universities; do informational interviews
- “Organic networking” with faculty
- Mentor others before you get the position

Transitioning

- Increase your visibility as much as possible.
- Use your network - and develop new networks - to discuss your potential move and get advice.
- Try to create a “buzz” in your community about your potential move as the process progresses.

Be patient and aggressive

Preparing for Academia

- Seek advice from your faculty advisor, previous classmates, professors, etc.
  - Mentors and accountability partners
- While in industry do the following:
  - Continue to publish and stay close to research
  - Network by serving your local professional society and attending conferences
- Begin putting your application materials together
  - Teaching philosophy, research and service activities, grant writing experiences
- Read books for inspiration about changing your career direction
- Develop ideas for research and begin considering where your research might get funded
- “Do it afraid” - Interview

Leadership in Academia

Matt O'Donnell, University of Washington
Claire Gmachl, Princeton University
Eve Riskin, University of Washington

My Path: Matt O'Donnell – CoE Dean, UW

- GE R&D – 1980-1990
- University of Michigan – 1990-2006
  - Bioengineering/EECS Professor
  - Bioengineering Chair – 7.5 years
- University of Washington – 2006-2011
  - Dean of Engineering and BioE Professor

What I like about academic leadership

- Shorter time constants – like industry
- Deal with high-level people – e.g., donors
- Interact with entire campus

Leadership in academia

- Academic freedom
  - Academia does not claim your intellectual allegiance as industry does
    - More valuable than imaginable
    - With it comes significant responsibility for intellectual leadership
- Speak “industry code” & have “street cred”
  - Understanding industrial leadership helps bridge the worlds of industry and academia and facilitates collaboration
  - Blunts sometimes negative image of academia in industry
- Your best people will leave soon
  - Students will graduate and post-docs (and faculty) will leave
  - Leadership of an ever changing cast of characters and talents.

- **My path:**
  - EE Professor 1990 (no industry)
  - ADVANCE Director 2002
  - Associate Dean 2005
- **What I like about leadership:**
  - Working with people
  - Being creative in a different way
  - Having immediate impact

Eve Riskin, Professor of Electrical Engineering, UW

Work/Life Balance

Jean Jacoby, Seattle University
Geri Richmond, University of Oregon
Ayanna Howard, Georgia Institute of Technology
Debra Wallace, University of South Carolina Beaufort

Tips for Work/Life Balance

- Prioritize tasks
- Sleep, eat, and exercise!
- Maintain family relationships and social time with friends
- Maintain at least one personal passion/ hobby
- You can say “NO”!

Jacoby

Building a Strong Work-Life Balance Portfolio

- Develop and maintain a balanced career/life portfolio that has all the elements of a strong financial portfolio
  - Contains a diverse and balanced set of investments
  - Evolves with your age
  - Is aligned with your values

- Invest your energy proportionately to these investments

- Evaluate your portfolio periodically and shift your energy if the portfolio gets out of balance - or your plans change

- Make certain that your health is a priority investment throughout the life of your portfolio

Work- Life Flexibility for Faculty:
Tips and Strategies

- Academia provides personal freedom to manage own time and work. Focus on what you **must** accomplish to succeed. Don't get side-tracked.
- Work until your TIME IS UP as well as until your TASK IS DONE. Master the art of multi-tasking.
- Document the 101 ways that allow you to say NO. Avoid feeling guilty when you do!!
- Schedule your ABSENCE as well as your PRESENCE. Put personal commitments on your work calendar.

Work/Life Balance

- Put on your own oxygen mask first
  - Work identity should not be your complete identity
  - Find something you love and do it just for you
- Drop activities that sap time and energy
- Rethink your errands and obligations. Get help.
- Exercise
- Other than teaching, academia is very flexible
  - Take advantage of your options
- Bolster your support system
- Let stuff go
  - Celebrate your successes. Don't dwell on your failures.

Wallace

CV Workshop

The Interview Process

Cecilia Aragon, University of Washington
Mari Ostendorf, University of Washington
Karen Panetta, Tufts University

The Interview Process (Differences from Industry Interviews)

- Lead the interview
  - Will get you called prima donna in industry
  - But in academia it's expected that you will be an intellectual leader, an entrepreneur
- Brag about yourself
  - In industry this is a no-no; team player
  - Weave in descriptions of what YOU did
  - Awards YOU won (they won't have read your CV)
- You need to conform to their image of a brilliant academic within the first minute (first impression, has nothing to do with your accomplishments)
- Being "collegial" can be considered a negative!
- Non-academic background won't be considered a positive by many. Don't harp on it.

Tips for Academic Interviewing

Mari Ostendorf, UW Electrical Engineering

- Be prepared for different styles & priorities
  - Example people:
    - Dean, chair, faculty, grad students, maybe undergrads
    - Direct vs. stealth questioners
  - Example priorities:
    - "Be interested in my research" vs. "Tell me about yours"
    - Teaching vs. research; student vs. faculty interactions
    - Chalk talk skills (details) vs. showmanship (big picture)
  - Be alert and adapt to your interviewer!
- Have a 5-year vision & plan for getting there
  - What do you want your group to look like?
  - What problems do you want to have solved?
  - What do you want to be known for?

Karen's suggestions for "The Interview Process"

- Check out their course catalog and be prepared with a list all the courses you will be willing to teach to show flexibility.
- Make sure your technical interview presentation reveals your expertise and research plans.
- Research your interviewers and pitch how you can collaborate with them.

Building Your Teaching Program

Claire Gmachl, Princeton University
Ayanna Howard, Georgia Institute of Technology
Jean Jacoby, Seattle University

Building your teaching program

- Teaching is hard work, but also very rewarding
  - First-time course = time-consuming (4 hrs prep / 1 hr class, + HW, grades, …)
  - Truly makes a difference for students, with some time delay
  - Great recruiting tool
- Teach what you know and love!
  - Build course material from practice, technical & otherwise.
  - It's easier to inspire your students if you are inspired yourself.
- Consider the needs of students and the department
  - There will be outdated courses or gaps in the curriculum
  - Have the energy, fresh mind, and passion to do something about it.

Claire F. Gmachl

Building Your Teaching Program: Tips and Strategies

- Now
  - Approach local universities to become an Instructor/Adjunct Professor
  - Offer a tutorial at conferences that are in your field
  - Practice your presentations skills with managers
- Later
  - Link your projects/homework assignments to real-world problems in your field
  - Invite your colleagues to guest lecture in your classes/University
  - If at an R1, LIMIT your course preparation time!!

Transfer Non-Academic Experiences into the Classroom

- Use real-world examples
  - Share failures as well as successes
- Draw upon skills that you've developed in the private sector
- Teaching tips:
  - Be enthusiastic
  - Respect your students
  - Be organized

Jimi Lott © Seattle Times

Berni Kenworthy, left, of the University of Washington, and Jean Jacoby of Seattle University take concentrated samples from Green Lake. Biologists aren't sure exactly what caused the algae bloom that prompted officials to shut down the lake.

Jacoby

Building Your Research Program

Claire Gmachl, Princeton University
Debra Wallace, University of South Carolina Beaufort
Suzie Pun, University of Washington

Building your research program

- Proposal & grant process is not random
  - Stacked in favor of beginning academic researchers
  - Good ideas and good proposals will get funded
  - Get on an NSF panel early on – see proposal selection process
- Leverage grant opportunities w/ industry
  - Research programs with required (optional) industry participation
    - Industry experience of the PI is a plus
  - SBIRs, STTRs, … sponsored research
- Re-invent yourself
  - New ideas, new grants, new hires, …

Building Your Research Program

- Schedule your time according to your ability
  - teaching load? student access? department expectations?
- Rome wasn't built in a day….
  - Set up your research environment
  - Plan for time to get re-familiarize with research
  - Is there unpublished data that you can publish?
  - What are the next steps in your research program?

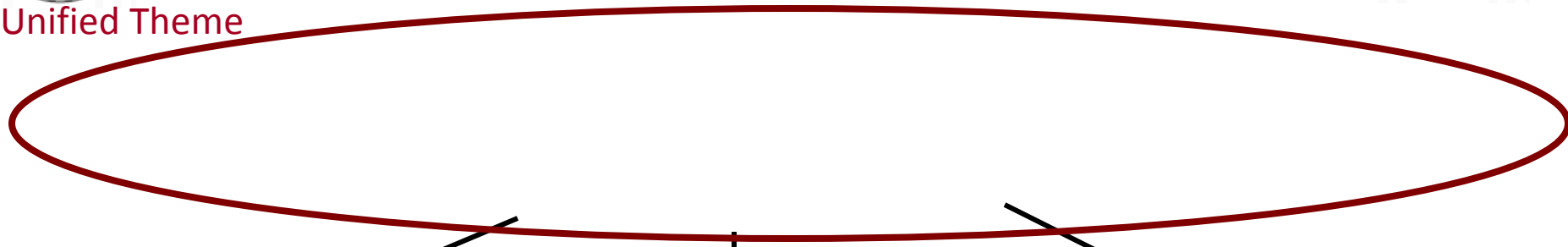
- Untraditional resources or paths you can tap or trod?
  - Internal grants? Foundations?
  - Education? Outreach? Interdisciplinary collaborations?
- Establish a strong support network. Surround yourself with role models with experience and expertise
  - Consult with them but don't emulate. Create your own experience.
- Plan for growth.

Wallace

Pun Lab

Department of Bioengineering, University of Washington

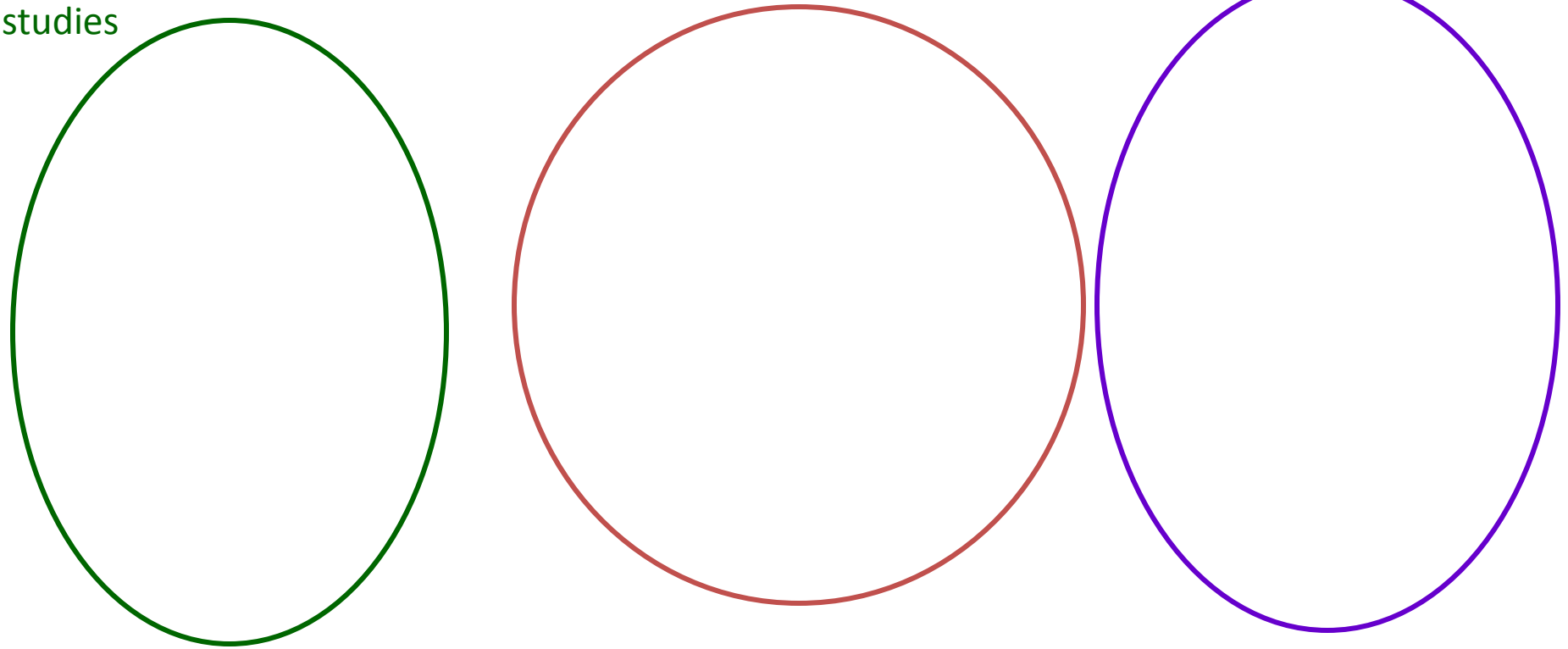
1. Unified Theme



3. Characterization/mechanistic studies

2. New area

4. Experienced area



Keeping Ties with Industry

Karen Panetta, Tufts University
Jean Jacoby, University of Washington
Rashaunda Henderson, University of Texas at Dallas

Karen's suggestions for: "Keeping Ties with Industry"

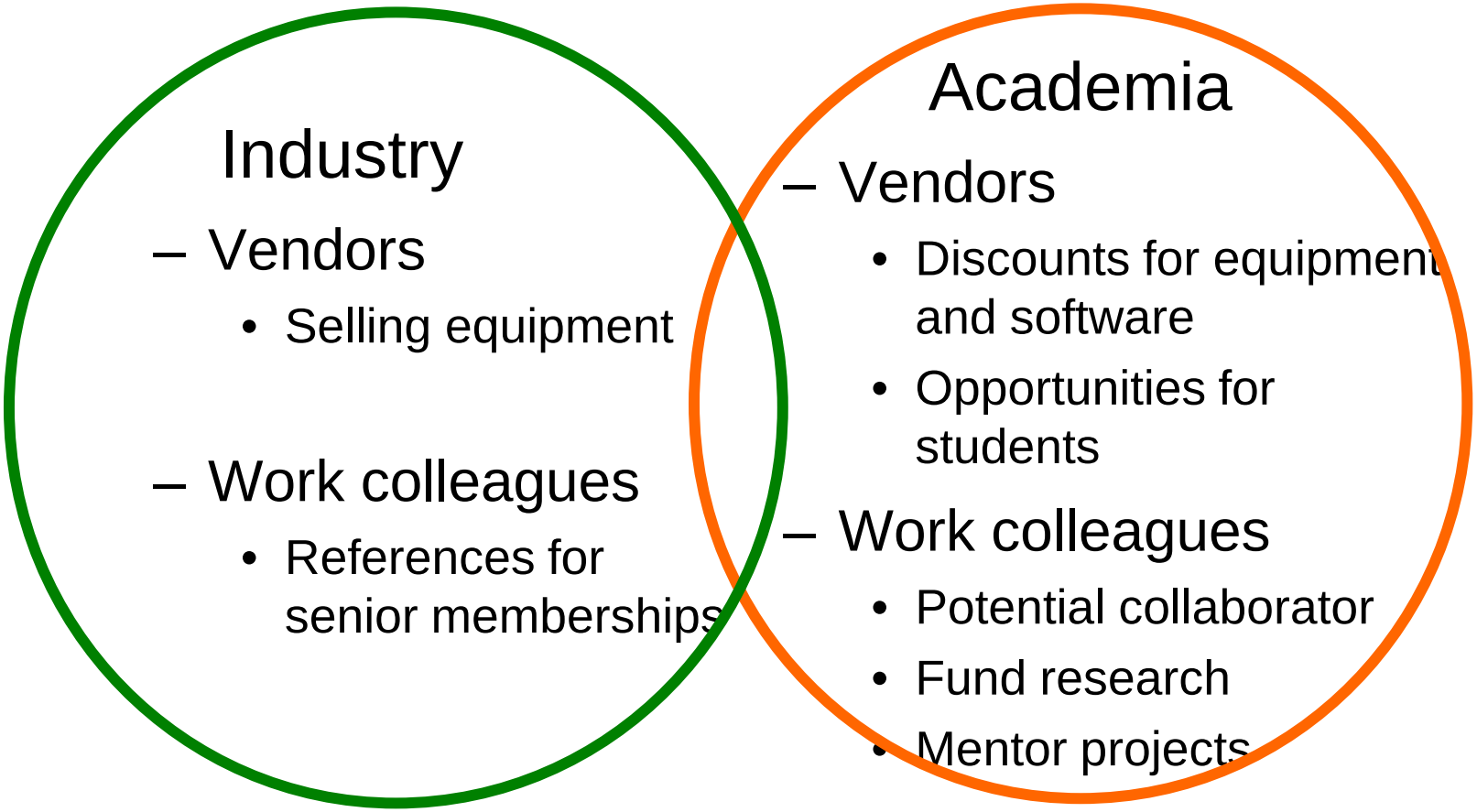
- Volunteer to be a speaker at local professional events (IEEE, ASME, SWE) and present your research interests.
- Seek out research projects of interest to industry to work on with students for senior projects.
- Volunteer for Corporate sponsored outreach events and meet their representatives and employees.

Keep Ties with Industry

- Research collaborations
- Sponsorships for senior design projects in the SU Project Center
- Consulting contracts
- Student internship and employment

Bridge in Tibet designed and built by Seattle University project team

Keeping Ties with Industry



•Stay active within your professional society
•Don't be afraid to call on old friends and use the commonality to your advantage
•Network at conferences

FINAL QUESTIONS?

TAKE-AWAYS?

After On-Ramps

- Complete evaluation form
- Tell others about On-Ramps
- Follow up surveys
- RSS feed
- Stay in touch