Top Tips for Balancing the Demands of a Research Career (Research, Service, Teaching, and Corporate Demands)

Tracy Camp (Colorado School of Mines)

Robin Graham (Argonne National Laboratory)

CRA-W.org

@CRAWomen

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What does CRA-W do?
Individual & Group Research Mentoring

Undergrads: Undergraduate Research Experiences

Undergrads: Distinguished Lecture series/role models

Grad Cohort: Group mentoring of graduate students

Grad Students: Discipline Specific Research workshops

Academics/PhD Researchers: Group mentoring for early and mid career @ CMW, Grace Hopper, and Tapia

Undergraduates → Graduate Students → Academic careers / Industry/government labs

2400+ students & PhDs a year

Stay in touch: CRA-W.org, @CRAWomen,
Facebook: CRA-W, Linked-in: CRA-Women

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CRA-W Events at Grace Hopper

Visit the CRA-W Booth in the EXPO to learn more (#2050)

Attend another CRA-W Session
~~Wednesday (3)~~ Thursday (3) or Friday (1)

Visit a CRA-W Table at the
Student Opportunity Lab on Friday
(Undergrads)

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Session Topics

- Understanding institutional expectations for success
- A close look at Academia (and tips for a good balance)
- A close look at Industry/National Labs (and tips for a good balance)
- Closing comments/questions

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Pop quiz!

https://tinyurl.com/GHC17-CRA-W

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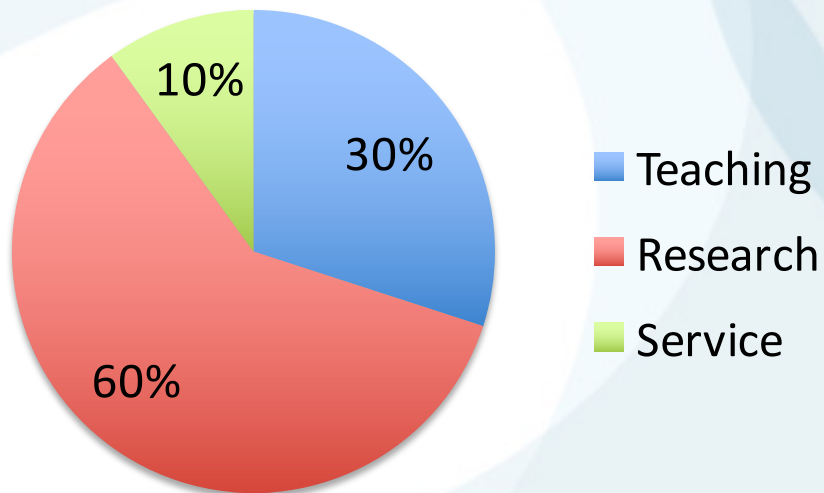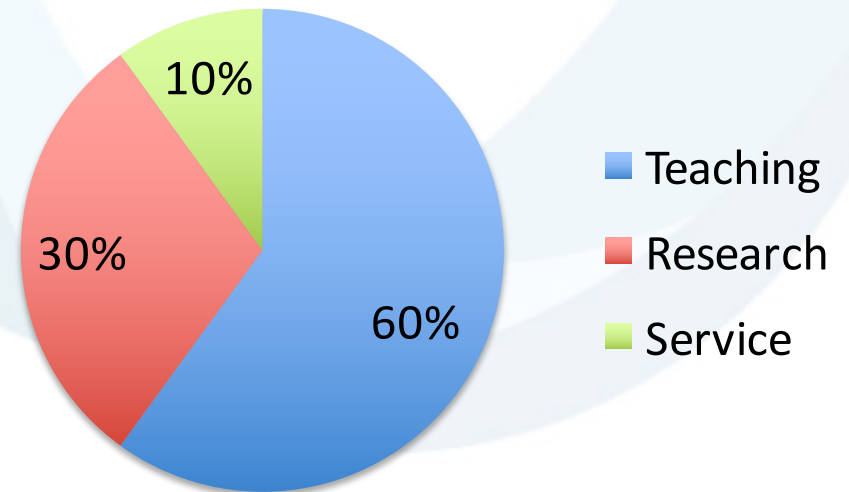- Closing comments/questions

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Expectations at 2 schools

Jane's institution (R1)

Teaching 30%
Research 60%
Service 10%

Joe's institution (SLAC)

Teaching 60%
Research 30%
Service 10%

Understand your Institution

Expectations vary by institution – **know yours!**

- Rules/guidelines often intentionally vague
- Criteria can evolve while you are in the pipeline

- Some schools provide T&P training workshops
- Look at CVs of successful, recently tenured faculty
- **Ask!**

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Homework!

For Current Faculty

- Read the faculty handbook section on tenure expectations

- Ask your chair what % of your time should be spent in each category

- Ask 2+ trusted mentors/colleagues what % of your time should be spent in each category

Homework!

For Prospective Faculty

- Add this question to the list of questions you plan to ask on campus/Skype interviews

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Find Mentors (help set balance)

Don't all have to be female

Formal mentors
- Sometimes assigned by institution
- Even if not best fit, spend time with person

Informal mentors
- Good to have mentors for different activities (teaching, research)

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Get team of mentors!

Research shows that those who are mentored achieve greater career advancement and higher work satisfaction than those who are not mentored.

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My early mentors

Academia Categories of Evaluation

1. Teaching
2. Research/Scholarship
3. Service

1. Teaching

Understand expectations of **your** institution.

Find out how much teaching **really** counts

General tips:

- Do a good job while **minimizing effort**

- Have an overall **teaching plan/goals**; update these annually.

- Try to **limit number of new courses** you teach/prepare

- Shoot for **mix** of courses (e.g., ugrad honors and grad core courses)

- Negotiate course release

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2. Research / Scholarship

Understand expectations of **your** institution.
Research includes
  – working on problems yourself
  – advising graduate students working on problems
  – publishing results
  – getting funding for your research
  – collaborating with peers

LOTS of tips …
  A bad student is worse than no students.

3. Service

Understand expectations of **your** institution.
Find out what/how much service **really** counts
Examples:

- Academic advising/mentoring
- Departmental and university committees
- Program committees
- Review panels
- Journal/conference paper reviews
- Community engagement projects

Key tip: LOTS of opportunities … quality and reliability are KEY (not quantity)

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Think / Pair / Share time!

Which area do you spend too much time?

Which area do you spend too little?

(assumes you understand your expectations!)

Talk with neighbor (1 minute each)

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Time Management is KEY

You must focus, prioritize, and manage time

Delete
Delegate
Delay
Diminish

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TODO List?

Daily List?

TODO List Game?

Importance of saying "no"

Learn **how** to say "no"

– Everybody is super busy, so don't just say "I can't because I'm too busy."

– Don't burn bridges. Leave room for "yes" later.

– Give your answer as soon as you can (esp if it is "no").

– Saying "yes" when you can't do your best work leads to other problems

– Offer name of someone else who may be able to help.

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A little background on Dept of Energy National Labs

Non NNSA Labs ~$7billion/yr
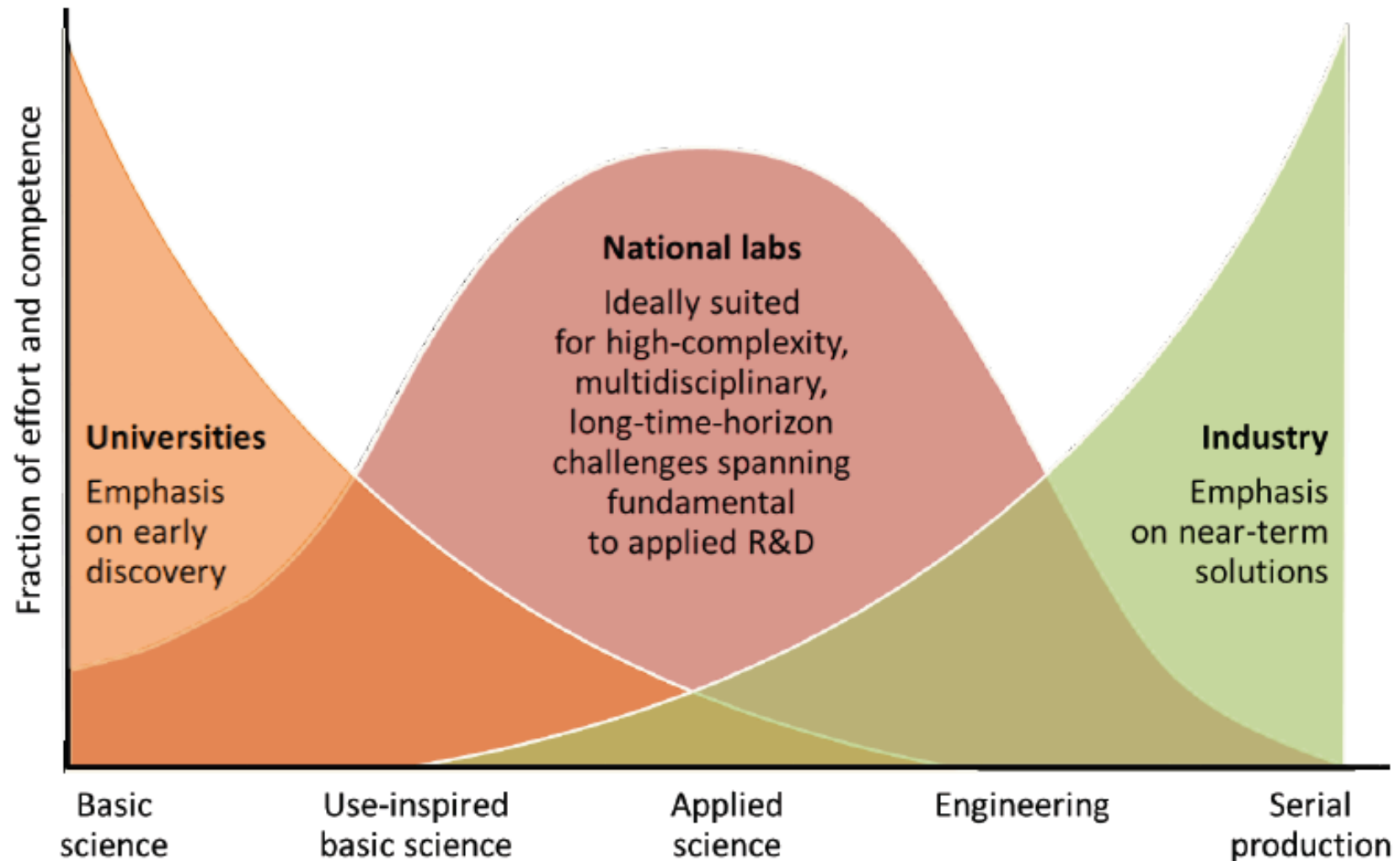NNSA Labs ~$7billion/yr

A little background on National Labs

TRL 1 to TRL 7 research

Source: Thom Mason, Director, Oak Ridge National Laboratory

A little background on National Labs

Office of Advanced Scientific Computing Research –
2017 Budget - $619M ; Budget request 2018 - $722M

Key Lab Capabilities

- Advanced computer science, Visualization and Data

- Applied Mathematics

- Computational Science

- Cyber and Information Sciences

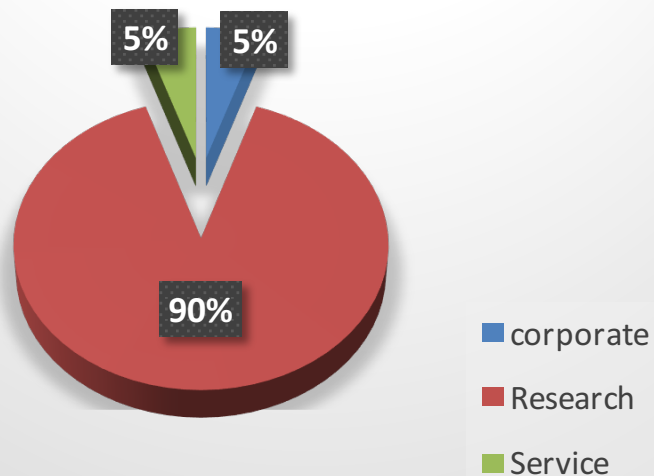**High Performance and Leadership Computing facilities**

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Career demands of National Lab and Industry Researchers

Early Career Demands

- 5%
- 5%
- 90%

Legend:
- corporate
- Research
- Service

Mid to Late career Demands

- 10%
- 30%
- 60%

Legend:
- Corporate
- Research
- Service
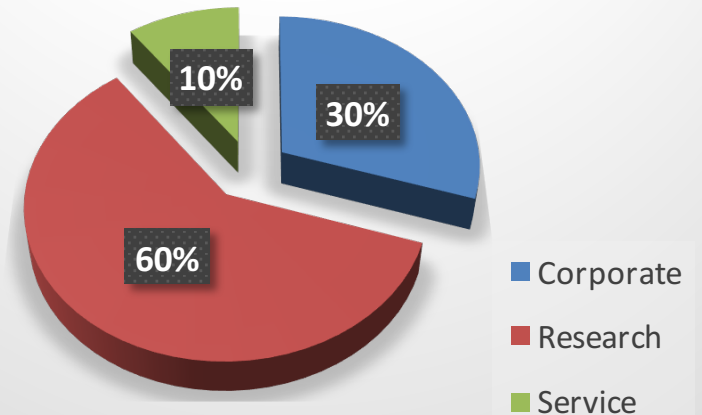
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Research Demands

– **Doing research**
  - Collaborative
  - Team

Recognize teamwork requires lots of communication and you need to budget for that time

– **Publishing research**

Tips

Find people you enjoy working with

Get to know researchers outside your field – creative things happen

Force yourself to publish even if the sponsor doesn't care

Learn how to tell a story

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Lab Demands

– **Procuring research funds (yourself, others)**

- Understanding sponsor wants

- Shaping sponsor wants

– **Supporting Sponsor needs**

- Delivering on proposals

- Workshops

- Reviewing proposals

Tips

Research potential funding sponsors

Read Sponsor strategic plans; workshop reports

Allow enough time for internal reviews of proposals

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Service Demands

Supporting your profession

  Editorships

  Reviewing papers/proposals

  Society positions

Supporting Institutional needs

  Strategic Planning

  Diversity & Inclusion

  Safety

  Community outreach

Tips

Service is a great way to build networks (and friends) inside and outside the Lab

Talk to colleagues about the career value of service

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The Research-Corporate-Service Balance Change

As your career matures the balance between Research – Corporate & Service demands will shift

Less hands on time on research

More time spent on sponsor needs

More time on Lab strategy & planning

More time talking about others research

Shaping national research directions – exciting

- more multidisciplinary

- more cross-institutional

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Know your institution to be efficient in your time use

- Learn from your supervisor how funding flows in your institution
  - Accounting side
  - Political side
- Learn what the promotion paths are
  - Don't just ask your supervisor, talk to HR and multiple colleagues
- Know what your supervisor values. Take advantage of performance planning & assessments
  - Ask her (or him)
  - Ask others
- Communicate your successes!!! Your supervisor looks good when you look good
- But be generous with credit

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Realities of Working at a National Lab or Industry

Gov't (& Industrial) research funding ebbs and flows between years and with Administrations!!

Research flexibility is good
(but have a personal direction)

Keep yourself marketable outside your institution
- Know what other markets appeal to you!
- Recognize what other markets value may not be what the Lab values

Random Practical tips on Time Management

- Keep track of how you spend your time – it helps you focus
- Make annual goals and post where you can see them and revisit them
- Make weekly achieve lists – do they relate to annual?
- Make daily to do lists
- Set aside sometime each week to do something at work that you really enjoy doing

- **Spend money to buy time**

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Finally, know yourself as well as your institution

- Think about whether you'd prefer a support role?
  - Pros
    - May keep you closer to doing what you like (e.g. analysis, coding).
    - The happy introvert
    - Maybe more job options – lots of people need competent "doers"
    - Shielded from chasing $$
  - Cons
    - You will work on what others want you to work on

- *Find the balance that makes YOU happy but meets the institutional needs*

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Overall Advice

The most important thing is to enjoy the work you do

- Keep in mind the milestones you need to reach to be successful at what you do

- The steady pace wins the race!

Strike a balance between your family and social life and your career

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In Summary

- Know what your Department or Lab expects for success

- Keep people in your Department or Lab informed about your progress/successes, and ask where you can improve

- Learn to manage your time

- Focus on quality not quantity, but do not forget you also need sufficient quantity

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THANKS

Please rate and review the session in the GHC 17 mobile app

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