



Navigating a High Performance Computing Career

2014 RMACC Symposium

Dr. Patty Lopez, Intel Corporation



Agenda

- Introduction (5 min)
- Elevator speech (15 min)
- Presentation skills (15 min)
- Working with others (15 min)
- Finding a mentor (20 min)
- Takeaways (5 min)
- Q & A (15 min)

Brief Bio



Hometown: Espanola, New Mexico

College: New Mexico State University

Degrees: BS, MS, PhD in Computer Science

Nickname: "Google Girl"

Work experience through college:

→ Tutor, User Assistant/Programmer, TA, RA,
Research Specialist

Work experience in industry:

Software Engineer & Imaging Scientist (HP)

Platform Applications Engineer (Intel)

Awards/Honors:

2013 Grace Hopper Conference General Co-Chair
(Industry)

CRA-W Board, ABI Board, CAHSI Board

2010 HENAAC Award for Community Service

HP Technical Leadership, Diversity & Inclusion

Patents: Seven in software, hardware, and UI

http://en.wikipedia.org/wiki/Patricia_D._Lopez

Your Elevator Speech

- Is a way of introducing yourself to someone you'd like to meet
- Can change, depending on who you are meeting
- Can be one to five minutes long, depending on the situation
- Includes your name, organization, educational or employment status, employer, and current role
- Shares your goals, interests, aspirations, activities
- Identifies your areas of expertise and what you have to offer
- Establishes rapport and flows easily with practice
- Segues into an opportunity to talk in more detail (exchange of business cards, contact info, next meeting, etc.)

Elevator Speech Example 1:

"I am interested in high performance computing research and I am wondering what kinds of opportunities are out there."

Critique?

Elevator Speech Example 2:

"My name is Patty Lopez, and I am a Platform Applications Engineer at Intel. My current work focuses on customers who want to integrate high-end Intel Xeon server chips into their product lines. These chips are used to power high performance computing systems. I provide technical design support and represent their design needs to internal teams.

As a volunteer, I'm the vice-chair of Latinas in Computing, an open group that provides mentorship and professional development for our members. We're always interested in growing our community."

Exercise: Practice Your Elevator Speech

- Take a minute to think about what you would say if you had 2 minutes to introduce yourself. Essential items to include:
 - Your name, title, school or organization
 - Your area of academic study and/or job role
 - Your interest(s), so you can connect via a research topic, as a collaborator, or for open position.
- Choose someone you don't know and take turns giving your speech

Presentation Skills

- Allow you to share your knowledge and expertise
- Allow you to demonstrate leadership
- Create visibility for your contributions
- Help you build your network
- Create opportunities for future collaboration and engagement

Honing Your Presentation Skills

- Avoid reading your slides
- Make eye contact with your audience
- Start with an agenda, and summarize key takeaways
- Acknowledge your contributors
- For difficult or complicated questions, offer to talk afterward
- Practice alone, enlist a friend, then to small groups
- Consider joining Toastmasters – leadership opportunities are available

Working With Others

- Everyone has a preferred work style
- Good relationships are essential to your success
 - Establish positive interactions with your boss, department head, advisor, mentor, and peers
- It's hard to over-communicate
- Let you build others' confidence in you
 - Listen well, ask questions to clarify
 - Executing well at small assignments leads to opportunities to take on bigger ones

Understanding Your Work Style

Listen to yourself:

- How do you bring up difficult issues?
- How do you respond to criticism and feedback?
- How do you use your voice and your influence to direct attention to urgent problems?
- Do you have examples to back up your approach?
- Can you share experiences where a particular approach did not work?
- Should the issue be solved behind the scenes?
- Do you make sure you have the resources you need to be successful?

Establishing Your Credibility

Work proactively to provide solutions as problems arise:

- Develop shared goals and regularly assess progress
- Identify risks as early as possible
- Have a plan B, C, and D
- What resources can help you get the job done?
- Can you scale back the problem?

Taking Credit for Your Success

Learn to toot your own horn:

- You don't need to brag, but you do need to take credit for your contributions
- Cultural values can make this challenging
- Make clear what contributions are uniquely yours
- Be prepared to give examples
- Start with your peers and instructors/faculty
- Practice sharing your contributions in larger groups

What is Mentoring?

- 1-to-1 relationship
- Encourages
- Guides growth
- Helps you succeed

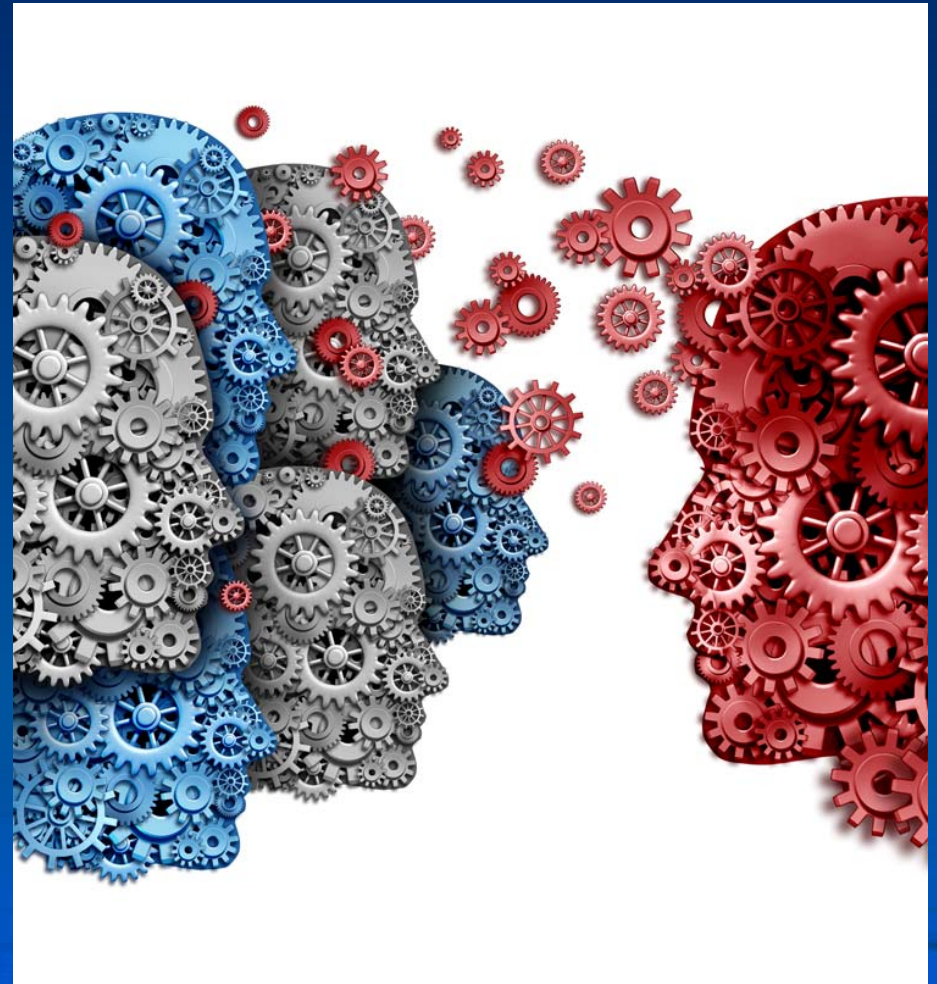


Why Find a Mentor?

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

What Does a Mentor Offer?

- Acts as a role model
- Advises
- Advocates
- Coaches
- Makes connections
- Protects
- Provides letters
- Supports
- *Each mentor is unique*



Mentoring Tip #1:

Build a TEAM of mentors with varying expertise/experience



Mentoring Tip #2:

- The person most motivated to find you a good mentor is YOU.



- Decide what you want or need.
- Find a mentor who can help you get there.

Where Do I Find Mentors?

- Everywhere
- People you admire
- People who are good at something you aren't
- People who have the role you want someday
- Senior people in/outside of your organization
- Peers
- Family members
- Reverse mentors – mentors younger than you
- MentorNet: www.mentornet.net

The Secret of Approaching a Potential Mentor:

- Almost everyone is flattered by someone who wants their advice/help
- Start with a small request ("Could your review my resume?")
- Seek evidence that the person respects/values you
- Build a relationship over time
- "I need a mentor in the area of <X>, would you be willing to mentor me?"
- Keep in touch - be specific about what you want/need
- Say "Thank you!"

Mentoring Tip #3:

Find
GOOD
Mentors!



What Makes for a Good Mentor?

- Interested
- Supportive
- Patient
- Knowledgeable
- Competent
- Responsive
- Helps you figure out how to use your strengths
- Helps you figure out how to overcome your weaknesses



Mentoring Tip #4:

End a relationship
that isn't working



Mentoring Tip #5:

What should I talk to my mentor about?

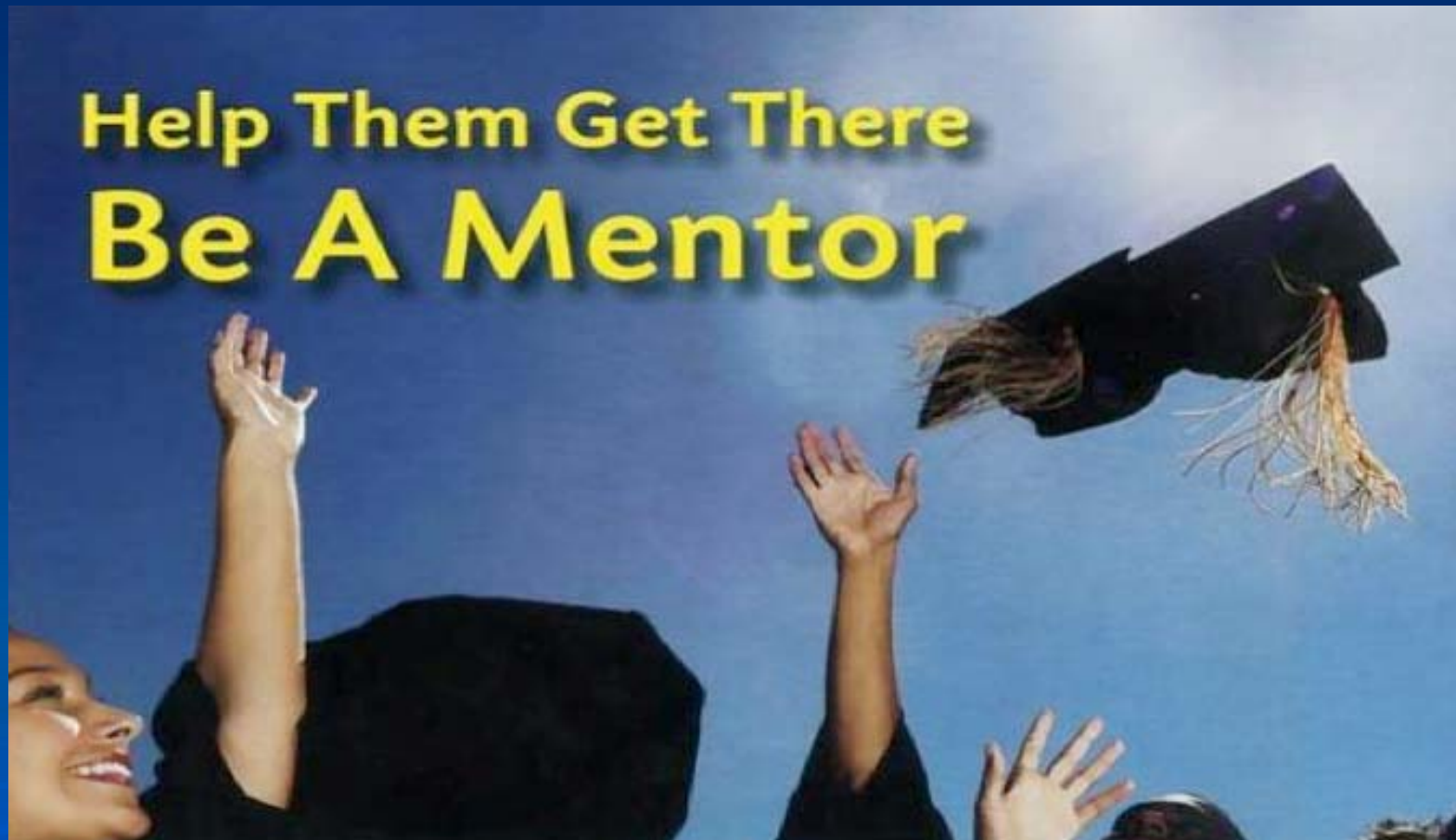
- Courses of interest, research areas
- Negotiation skills
- Imposter syndrome
- Your elevator pitch or your resume/CV
- What do you (mentor) wish you had known when you were at my stage in life?

Mentoring Tip #6:

Plan to graduate from
(most of) your mentoring
relationships



Mentoring Tip #7:



Why be a Mentor?

- Enable someone else to succeed
- Renewed enthusiasm for your job
- Increase your own confidence
- Retain talent in the tech pipeline
- Give back



Takeaways

- Your elevator speech is your best marketing tool
- Presentation skills are essential in every job
- Working well with others is essential to career growth
- Mentors are everywhere!

Recommended Resources

- Anita Borg Institute – www.anitaborg.org – Sisters community
- Grace Hopper Conference – www.gracehopper.org
- National Center for Women & Information Technology – www.ncwit.org
- Computing Research Association – Women – www.cra-w.org
- MentorNet – www.mentornet.net
- “Good to Great: Why Some Companies Make the Leap... and Others Don’t”, Collins, 2001
- “How To Be a Star at Work: 9 Breakthrough Strategies You Need to Succeed”, R. Kelley, 1998
- “Ask For It: How Women Can Use the Power of Negotiation to Get What They Really Want”, Babcock and Laschever, 2008
- “First, Break All the Rules: What the World’s Greatest Managers Do Differently”, Buckingham and Coffman, 1999
- “Lean In: Women, Work, and the Will to Lead,” Sandberg, 2013

Acknowledgements



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Got Questions?



CRA-W

Computer Research Association Committee on the
Status of Women in Computing Research

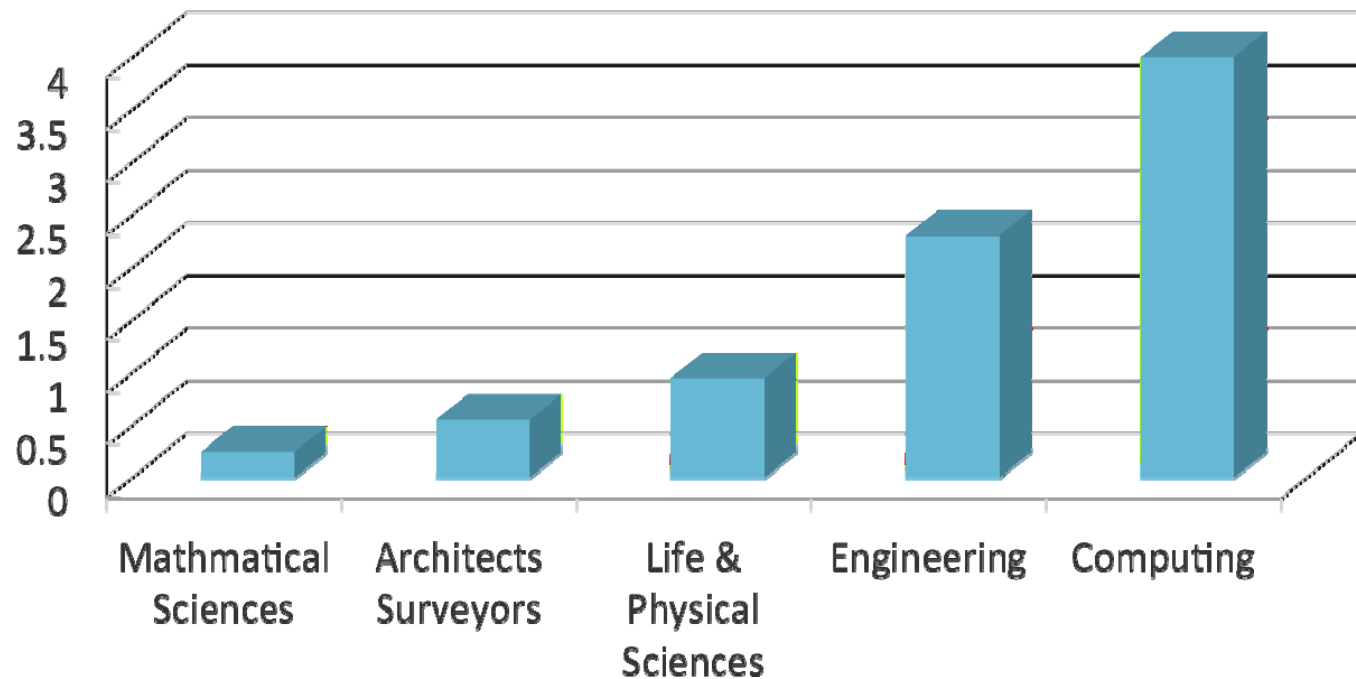
Mission: Increase the participation and
success of women in computing
research



Why? Increase participation in jobs that shape our world

C R A
W

STEM 2018 Predicted Jobs in Millions*



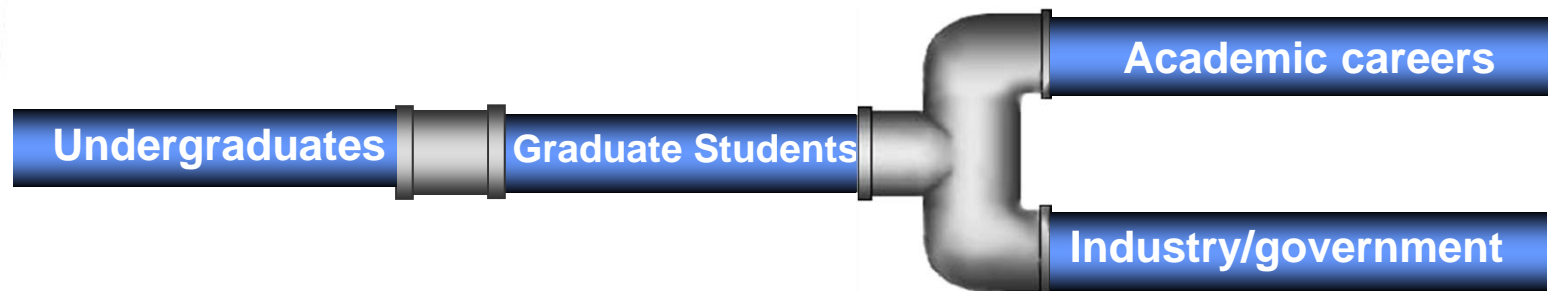
***Source:** "Report on Science, Technology, Engineering and Math (STEM) from the Georgetown University Center on Education and the Workforce," Anthony P. Carnevale, Nicole Smith, and Michelle Melton, Oct. 2011.

What does CRA-W do?

Individual & Group Research Mentoring

- Undergrads:** Undergraduate Research Experiences
- Undergrads:** Distinguished lecture role models
- Grad Cohort:** Group mentoring of grad students
- Grad Students:** Discipline Specific Research workshops
- PhD Researchers:** Group mentoring of early & mid career
@ CMW, CAPP, Grace Hopper & Tapia

600+ students and PhD researchers a year



CERP: Center for Evaluating the Research Pipeline

Do CRA-W programs increase participation in computing?

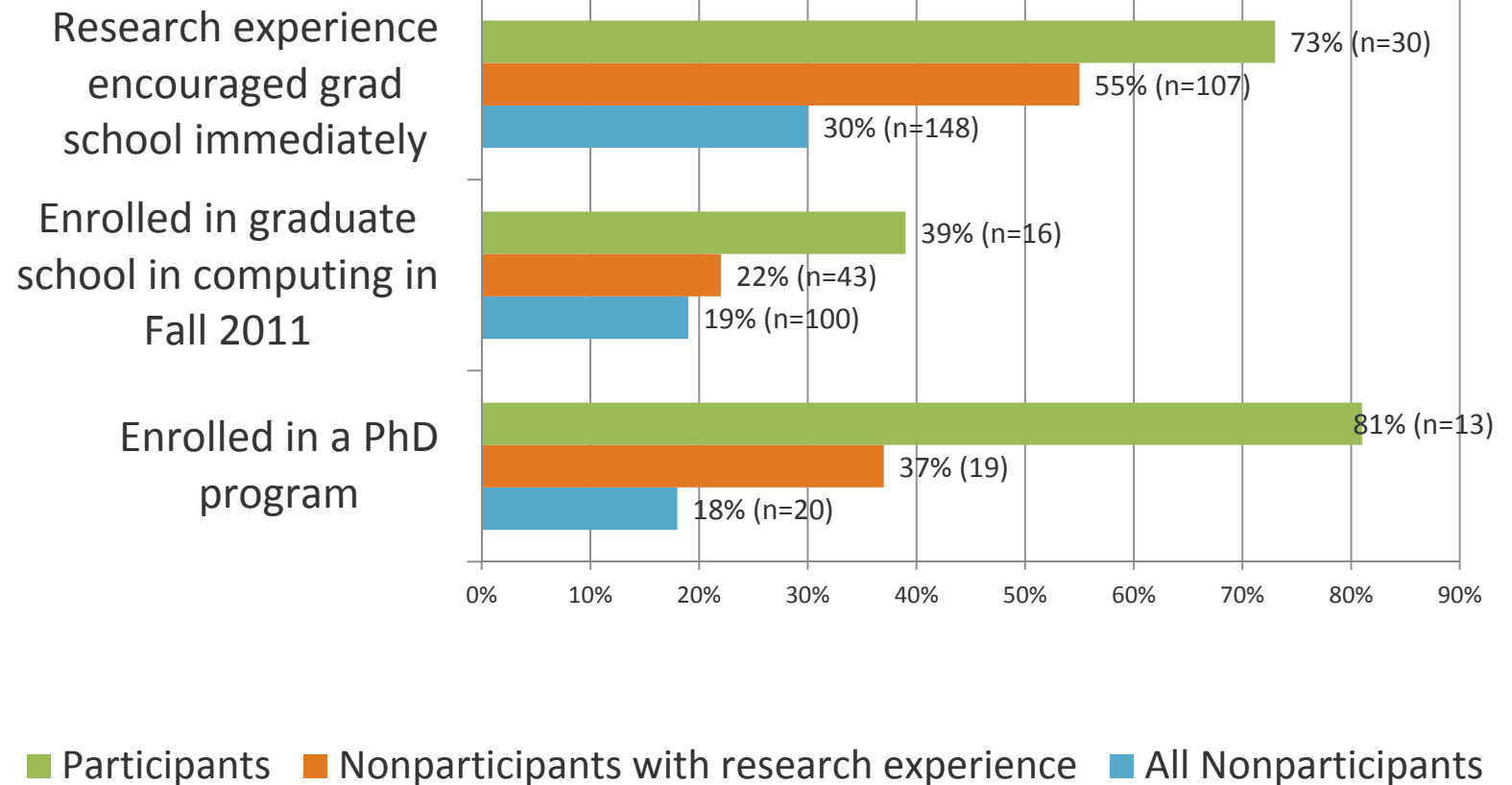


www.cra.org/cerp

Yes!

Undergraduate CRA-W participants more likely than non-participants to attend graduate school

CRA-W



Next steps?



Apply your new knowledge

Share your new knowledge at your institution

Follow up with someone you met here

Participate! join us on Facebook: CRA-W

www.facebook.com/group.php?gid=58020017457

Visit our web pages at

www.cra-w.org