

2009



Growing Your Research Program Through Networking, Collaboration, and Funding

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ANITA BORG INSTITUTE
FOR WOMEN AND TECHNOLOGY



Cecilia Aragon

Education

B.S. mathematics, California Institute of Technology

Ph.D. computer science, University of California, Berkeley (2004)

Research Positions

Lawrence Berkeley National Laboratory (2005 – present)

Research Topics

Scientist-computer interaction (human-computer interaction in scientific collaborations), computer-supported cooperative work (CSCW), visualization, visual analytics, eye tracking

Experiences with Collaboration

Colleagues from government labs and universities in computer science, iSchools, physics, environmental science, geospatial imagery

Students

External: proposals, explicit efforts to form multi-institution research groups

Personal

Married, two children ages 14 and 9



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Networking



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What is Networking?

- Making professional connections and using them wisely
- No substitute for doing quality work
- Different styles of networking
 - Informal
 - Deliberate

Why is Networking Important?

- Improves your visibility
 - makes you and your work known
 - helps get you good letters of recommendation (for jobs or promotion or tenure)
 - gives you an edge on getting papers accepted
 - gets you invitations to give talks
 - gets you invitations to serve on program committees
 - helps you get funding
- Improves your research
 - provides a source of new research ideas
 - gives you a different slant on old ideas
 - provides feedback on your research

Informal Networking

- Follow your personal style
- Serendipity happens
- Talk to people about their lives as well as their work
- Talk to people you meet by chance
- Talk to people in your own organization—not just researchers!
- Offer to help out when you can
- Ask for help when you can use it
 - most people are glad to help, if the request isn't large
 - be clear on what the person can do for you

Deliberate Networking

- Who should you meet?
 - established researchers
 - your contemporaries
 - people who could hire you
 - people who could give you good technical advice
- Where could you meet them?
 - at your university/lab/company
 - volunteer activities
 - at conferences/meetings
 - when giving invited talks



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Deliberate Networking at Conferences—Before You Go

- Write down & memorize two descriptions of your work
 - “elevator talk”—1-minute version
 - why is it an interesting problem?
 - why is your solution unique?
 - longer 3-minute version
- Practice your descriptions with others

Deliberate Networking at Conferences—Before You Go

- Who do you want to meet?
- What do you want to talk to them about?
 - read papers, and write down questions
 - ask why/how they started project, got problem
 - integrate your work and interests into conversation
- What do they look like?
 - find picture beforehand
 - ask someone to point them out



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Deliberate Networking—At Conferences

DO

- Speak—not just stand there
- Use the microphone—even if you're fearful
- Engage in questions & discussion with speakers after their presentations
- Talk to the person sitting next to you
- Make lunch/dinner plans
- Engage in hall talk
- Get your friends, advisor, other women to introduce you
- Talk to people who come up to you

DON'T

- Hang around with the same people all the time
- Interrupt heavy or private technical conversations

Deliberate Networking—The Follow up

- After meeting them
 - Write down the next step
 - Write down technical tips
 - Write down what you owe whom/what they owe you
- After getting back home
 - Send them your related papers
 - Ask for theirs, read them, send comments
 - Share software and workloads
 - Do joint work together
- Later in your career
 - Invite them to give a talk
 - Ask to give a talk there

Deliberate Networking—Other Opportunities

- Go to workshops and conferences
- Sign up to talk to seminar speakers in your department
- Get involved in activities for women
- Cold email
- Use your contacts to get new contacts
- Meet program managers



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“Shy Connector” by Sacha Chua, LivingAnAwesomeLife.com

#1 It's okay to be an introvert.

Most networking books tell you to act like an extrovert.

"Go to lots of events."


Day 1 Day 2 Day 3 Day 4

"Smile."

"Talk to people in the elevator."

Worried about being "that weirdo."

You're okay.
You don't have to fake it.
You can be a shy connector.



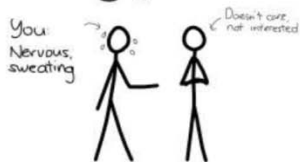
share 8 / 17 close

<http://bit.ly/shyconnector>

Networking for Introverts

#2) Change your perspective.

It's not about selling yourself.



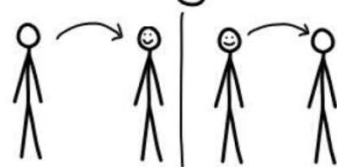
It's not about becoming popular.



It's about helping others.

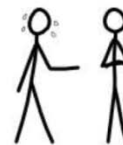


It's about learning and sharing.



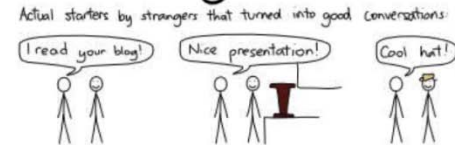
#3) Give people reasons.

If it's hard to talk to strangers...



Blog about your interests.
Use a recognizable photo of you.
You'll meet lots of people with similar interests.

Make it easy for strangers to talk to you.



Be quirky.
That gives other people (who might be shy too!) something to talk about.

It can be easier to talk to 100 people than to one. You can prepare for presentations. You can practice. You'll learn a lot along the way. Other people will talk to you because you know something they want to learn. You don't have to be an expert to share.

Sacha Chua, LivingAnAwesomeLife.com

Collaboration



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How to Get Started

- Find the people you are comfortable with
 - Individuals can bring different skills/talents/strength to the team
- Start slowly – build the relationship & trust
- Be prepared to be exposed because a good collaboration is one where you are sharing unfinished (perhaps bogus) thoughts
- Even when it makes sense on paper, collaboration has to come naturally (it's not just an academic partnership, but also an emotional one)

How to Make it Work

- Create a shared *vision*
- Use short-term objectives to subdivide research
- Be aware of personal working styles
- Establish good communication
- Build a research *team* with a group *identity*
- Establish a *process* to get work done
- Clarify upfront how the “rewards” will be shared

When/How to Stop It

- If you find you are taking too much time discussing who owns what, then it may be time to stop
- When your friends start congratulating you on papers that you didn't know about
- Be honest with your collaborator(s) about your intentions and plans
- Come to an equitable agreement about the property settlement
 - If you figured out this before hand (pre-nupt), it's easier
- It takes ~ three years to get out of a collaboration (flushing the joint ideas, money, and students)

Internal Industry/Govt Research Collaboration is a MUST

- Solve government or industry problems—large-scale, requiring significant infrastructure support—cannot solve them alone!
- Leverage expertise and breadth available in a large organization
- Increase your visibility, have more impact
- Build your career--one collaboration may lead to other opportunities
- Have more fun—it's isolating to work alone



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Establishing Research Collaborations

- Build your credibility first
 - make your work known
 - promote yourself
 - publish and participate in conferences
 - sometimes the best way to create internal recognition is to go external first...
- Be proactive
 - have a research plan
 - approach people that can bring in the expertise you need
 - be explicit about looking for collaborators
- Always be open to sharing your results

How do you figure out with whom you want to work?

- Why are you doing this? Perhaps to broaden research area or change directions slightly.
- Why are you thinking of doing this with this person? Complementary backgrounds and skills.
- What's needed? Good reputation for collaborative work -- gives credit where credit is due, puts colleagues forward, is generous.
- It's not a bad idea to find out what people say about your potential collaborator.
- Finally -- trust your instincts. Collaboration is not a marriage (but it is a friendship)

What are the Gotcha's

- Differing expectations on anything and everything: goals, “deliverables,” quality of work, LPUs.
- Differing work styles (bursty, steady).
- Unanticipated changes from funding agencies, from outside events.
- The unexpected



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Funding



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Proposal Writing DO's

- Do identify the relevant program and talk to the appropriate program manager
- Do read the program announcement carefully and respond
- Do understand the rules and evaluation criteria of the agency
- Do present your ideas clearly and succinctly using correct English
- Do provide adequate explanation - reviewers are technical peers
- Do ask experienced investigator to critique your proposal
- Do keep within agency guidelines for proposal format
- Do read copies of successful proposals
- Do volunteer to be a reviewer

Proposal Writing DON'Ts

- Don't submit an identical proposal to several programs
- Don't miss proposal deadlines, most agencies do not accept late submissions
- Don't request unrealistic items in the budget
- Don't exceed program budgetary guidelines
- Don't wait until the last minute for institutional sign-off
- Don't give up if your proposal is declined, examine the reviews and try once more

A good proposal

- Responds to the program announcement
- Presents in a concise, scientific writing style:
 - What you are going to do
 - How you will do it
 - Why it is important
 - What is your unique contribution
 - The broader impact of your proposed work
 - A well-defined evaluation and assessment plan
 - What others are doing in this area
 - An appropriate and justified budget
- Includes letters indicating support or cooperation, if proposing other participants
- Shows how current proposal builds on past support, if relevant
- Responds to the reviewers' comments, if this is a re-submission

Questions?



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