Establishing and Nurturing Research Collaborations
The Industry Perspective

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Industry Research Collaboration

• Internal
  - Peer-to-peer: team projects
  - Collaboration with visiting professors
  - Supervising student interns

• External
  - Joint research project with academia (typically through grants)
  - Often external collaboration grows out of preceding internal collaboration (with students or visiting professors)
  - Joint research project with other company (rare and a legal nightmare)
Why Internal Research Collaboration is a MUST

- Industry problems tend to be large-scale requiring significant infrastructure support - You cannot solve these problems 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 very isolating to work alone
Collaborations between industry and academia can take on various forms:

• Research grant with periodic reports
  - (you will always find happy takers here...)

• Active collaborative team effort
  - frequent and possibly prolonged mutual visits
  - Much harder to establish
  - Typically grow out of an internal collaboration through a prolonged research visit (student internship or sabbatical visit)
External Academic Research Collaborations

You can view an external collaboration as a negotiation
• Every side has something to offer, every side would like to get something out of it.
• Aim to establish a win-win collaboration

What academia brings to the collaboration:
• Intellectual property - can afford to work on more esoteric problems and beyond the industry’s expertise and time frame.
• Recruiting potential - exposure to students, visibility

What industry has to offer:
• Grant money
• Real-life problems and infrastructures
• Internships and jobs for students

Make sure you understand what you give and what you’ll get
What are the Issues & Challenges in Establishing and Nurturing Collaboration?

Size of the team (small = 2-3 people, large >= 15 people)

- The more people are involved the more knowledge and expertise you have
- But the harder it will be to
  - organize and structure the team effort
  - make everybody feel engaged and in charge
Leadership and individual contribution

- Can very dramatically
  - In larger teams some members may only take on a consulting role, others may do all the ground work.
- Multiple and varying leadership
  - You may have intellectual leaders that set the research vision, others lead the implementation effort
Credit - Can be a very touchy subject!

- Often the outside world associates a project with its most senior member. This usually happens unintentionally but can be frustrating for a junior member.

There are different types of credit:

- Credit to the intellectual leaders who contribute the research vision and design - without them the project would have not been conceived.
- Credit to the implementers who feel they put in many more hard hours - without them the research would never have seen the light of day.

Who should get more credit???
Credit

• Always set a good example: Be generous and inclusive
  - the author list better be too long than too small.
  - people will not work with you again if they felt their contribution was not acknowledged

• Be assertive about claiming credit
  - If you feel overlooked - speak up - it may be an unintentional oversight
How to Establish Collaboration?

• Build your credibility first
  - Make your work known
  - Promote yourself
  - Publish and conferences
    • Sometimes the best way to create internal recognition is to go external first…

• Be pro-active
  - Have a research plan
  - Approach people that can bring in the expertise you need
  - Be explicit about looking for collaborators

• Always be open to share your results