Research and Development

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Looking ahead (tentative)

Nov 2 – Teams
Nov 9 – Powerpoint and Latex
Nov 16 – Assignments and syllabi
Nov 23 – Talks
Nov 30 – Breakout: team assignments
Dec 7 – What’s next: quals and careers
Why teamwork is important

PhD graduates lead teams or work in teams
- In our dept, about 10 PhDs granted each year
- Half go on to academic jobs
  Recent placement includes faculty jobs at:
  • U. Florida, Polytechnic, Hofstra, UMDNJ, Virginia Tech, College of Staten Island, Lehigh, Ohio State, Fordham, RPI
  Postdocs at
    McGill, UT Austin, NYU, Los Alamos
- Most of the rest go into industrial research
  • IGM, NEC, Siemens, Sarnoff

Teams in academia

Two person teams:
- Student and advisor

Multiple person teams:
- Research project
  (often interdisciplinary)
Teams in industry

Big groups doing real work

Team theory

Kathleen M. Eisenhardt (Stanford)
Amy C. Edmondson (Harvard)
Some teams I’ve been on

SIGGRAPH 2004:
Three faculty
Three graduate students
Two undergrads
Two actors
Lab technician

Team issues

Setting expectations
Speaking up
Balancing team and self
Diversity and conflict

Teamwork is not all fun
– Team members will sometimes disagree about how to do things
– It’s bad when team members all share the same perspective: “groupthink”

Team members with different expertise
– Disagree more
– Achieve better results

Diversity and conflict

Conflict is not good in itself, though
– Personality clashes and emotional conflicts lead to worse team performance

Teams with diverse backgrounds
– race, culture, age, etc.,
have to work harder to develop trust and maintain collaboration.
Trust and communication

Nobody wants to get blamed for failure or rejected for difference.
- Sometimes people will avoid pointing out problems or mistakes.
- Sometimes people will avoid making suggestions or voicing opinions.

Recipes for success

Set clear individual goals, and share them.
- What do you want to learn?
- What are your responsibilities?
- How do you want to reflect on your participation and contributions?
Recipes for success

Get to know everybody.
– Understanding others’ situations fosters respect and flexibility.
– Your rapport with other team members is an investment for when things get tough.

Recipes for success

Think of performance in team terms
– Pointing out obstacles helps the team.
– The whole team needs to overcome them.