

Final Projects Discussion

CS289

Final Projects

- **Key point**
 - Explore an interest/idea in more depth
 - How to convert an *interest* into a “doable” short project
 - [Read the GUIDELINES on the website](#)
- **Picking a Topic**
 - Theory, Algorithms, Models, Applications, etc.
 - In all cases, this is "practice" for conducting real research:
 - Part of the exercise is to formulate reasonable size projects for yourself: [you propose what you will do, what you will deliver, how you will evaluate it.](#)
 - *Grad Students*: Pick something enhances your primary research.
 - *Undergrads*: Start EARLY (Grad class, not like a basic final project)
- **Picking a partner**
 - Projects should be done in pairs.
 - We will do introductions in class today
 - Emails and other info available on final project discussion thread

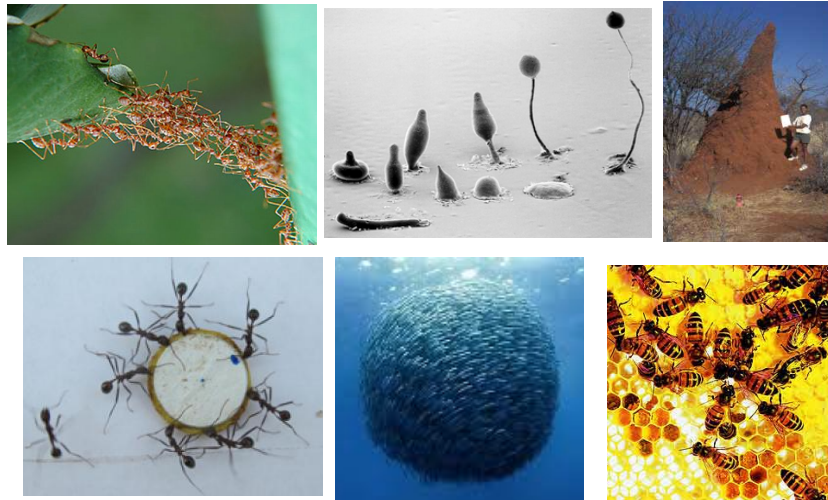
Logistics

- **Project proposal due Nov 2**
 - **Nov 9 (friday): Project proposal due.**
 - Meeting to discuss with me beforehand (Thu Nov 1)
 - Nov 30, Dec 5: Project presentations (last week of class)
 - Dec 11 (tues): Final paper is due
 - One month to complete your project
- **Meetings**
 - Googledoc to sign up (linked on discussion thread)

Proposal

- **Writing a Proposal (due Nov 9)**
 - Submit a ~5 page proposal on your class project
 - Submissions should be in **PDF** (see guidelines, examples)
- **Your proposal should contain**
 - Your and your partner's names
 - A 1 page description of the problem and its significance
 - A description of background and related work
 - A plan of execution, along with a list of weekly milestones
 - A short bibliography
- **Couple of things to think about**
 - Feel free to set milestones that come with the caveat "if all goes well up to this point, then ..."
 - Make sure that you build in evaluation points into your milestones, how will you evaluate intermediate steps?

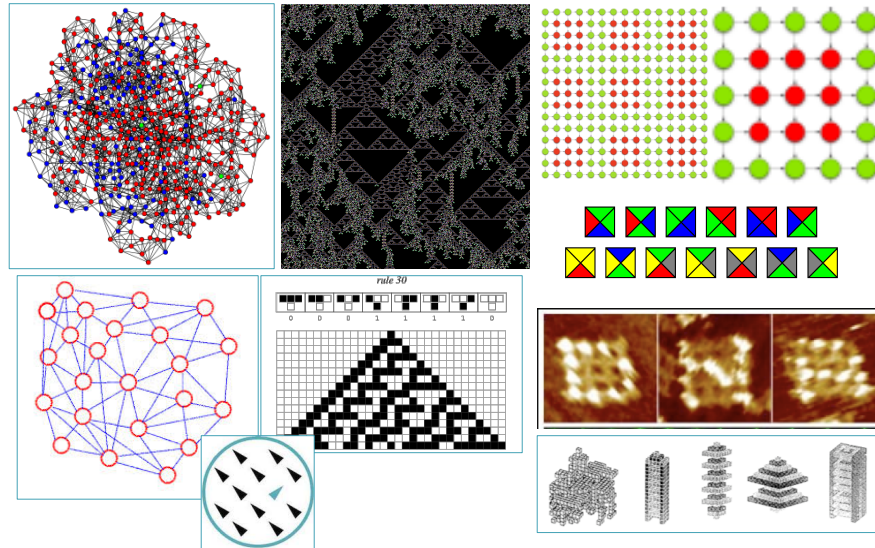
Examples: Models of Biology



Examples: Algorithms and Applications



Examples: Theory



Presenter Days

- Upcoming Schedule:
 - Next 4 lectures: *Evolutionary Computing*
 - Presenter Days: *Human Collectives*
- How it works:
 - Two paper topics per lecture (prep 30 min each)
 - Pairs of students present a paper topic (4 people/day)
 - *Your job: extra reading for context, engaging/informative*
 - *Everyone else: No reviews/reading (work on final projects!)*

Self-Organization!

- **Introduce yourself**
 - Name, Grad/Undergrad, Research area
 - General area you'd like to do a final project in
 - and one sentence description if you already have a project in mind
- Self-organize groups
 - Talk to people with like-minded interests
- Also sign up for presenter slots

Presenter Day Slots

- Sign up:
 - 2 People present a paper together (some 3s)
 - See website for paper details
- Schedule:
 - Nov 9 Paper 1: Small-world self-organized networks
 - Nov 9 Paper 2: Scale-free self-organized networks
 - Nov 14 Paper 1: Human collectives solving problems
 - Nov 14 Paper 2: Human collectives solving problems
 - Nov 16 Paper 1: Role of diversity in problem solving
 - Nov 16 Paper 2: Measuring collective intelligence
 - Nov 28 Paper 1: Evolution of altruism
 - Nov 28 Paper 2: Altruism in human groups