



How to have your CAREER and your career, too

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How is CAREER different?

- “All CAREER proposals must have an integrated research and education plan at their core.”
- 5 years
- More flexible.
- Departmental buy-in/ bargaining chip

Planning your research

- Do not promise the world but have a vision
- A concrete vision for 5 years, a vague for 10

CAREER: Computational Tools for Population Biology

Intellectual Merit: *The goal of my interdisciplinary research is to develop a robust and scalable computational framework for the emerging field of computational population biology. Ultimately, this research will enable biologists in their scientific inquiry to take advantage of new data by focusing on its underlying qualitative (rather than numerical) and explicitly dynamic structure. My approach is to*

Planning your research

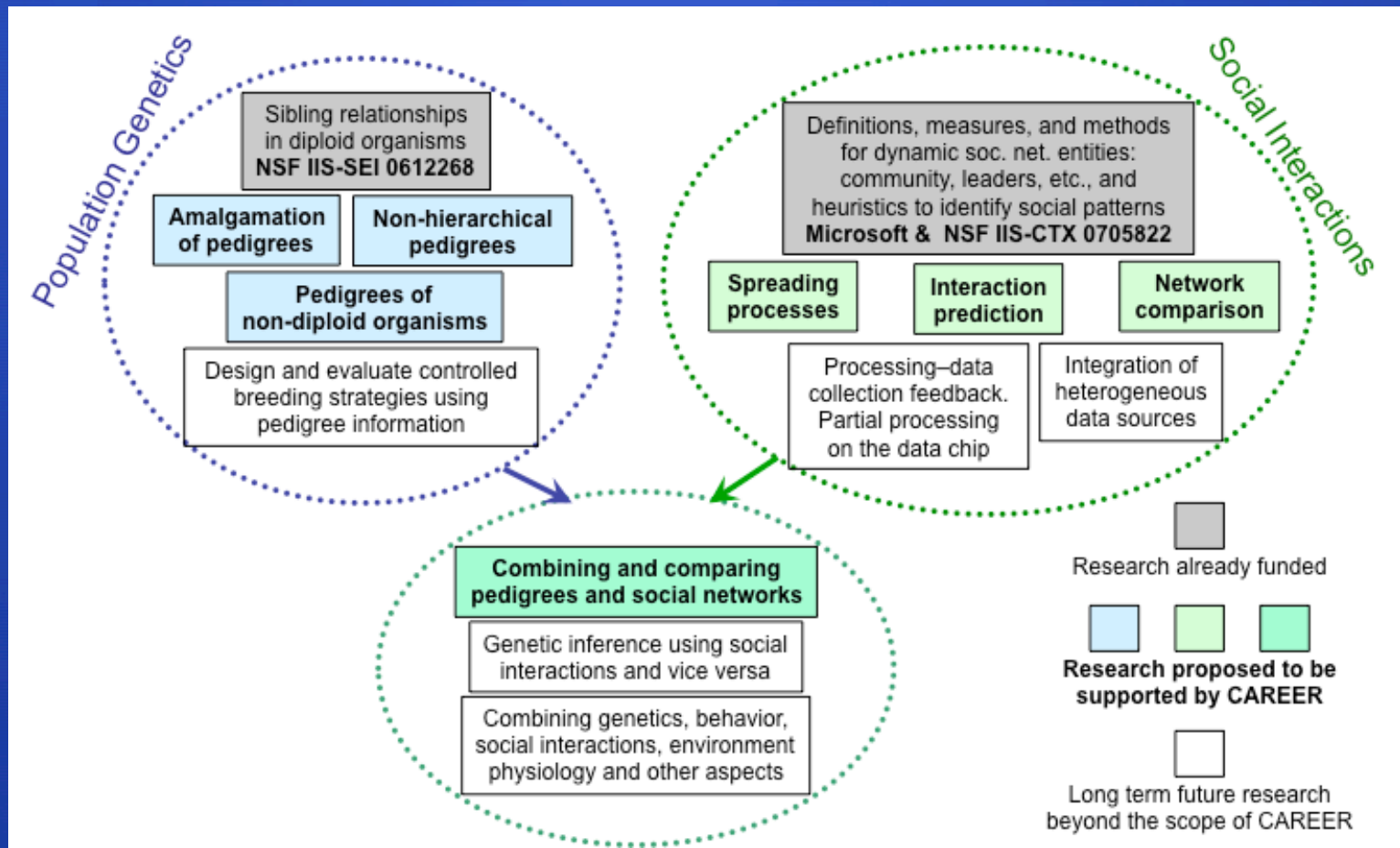
- Show how your research fits within your institution, your college, your department, *be explicit*

1.1 Proposed work in the context of UIC

University of Illinois at Chicago is a major research institution located in the heart of Chicago, is the city's largest university, and is its the only public doctoral university providing engineering education. UIC is also an urban institution with a higher percentage of Latino and African-American students than any other Big 10 university, who together make up more than 23% of the student body. Through its Great Cities program [159] UIC is committed to contributing to the education and research of the urban community. College of Engineering at UIC states diversity as one of the objectives in its 2010 Strategic Development Plan [1] and Biotechnology is one of the research thrust areas. My interdisciplinary research in computational biology and educational activities are aligned with the goals of the department, college, and the university. I have developed or have potential professional collaborations with UIC faculty in biology, bioengineering, public health, Center for Urban Planning and Policy Administration (CUPPA), National Center for Data Mining (NCDM), electric and computer engineering, and within computer science.

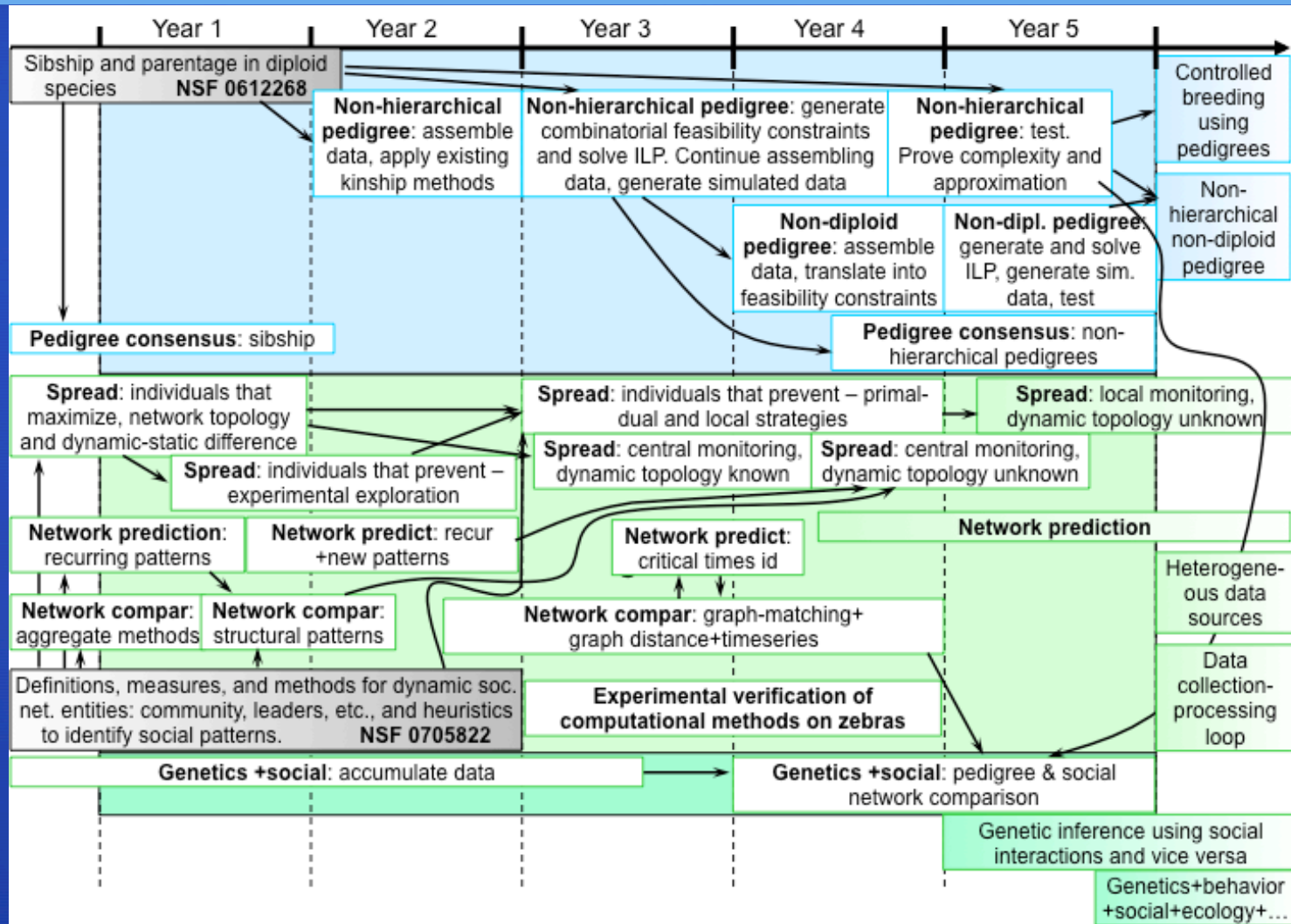
Planning your research

- Show how it builds on and extends your current research, *be explicit*



Planning your research

- Your 5 year plan does not have to be linear but it has to be explicit



If your research is interdisciplinary

- Make clear what's the CISE part, why it's CISE research
- Make sure it's solid in all fields
- Use the right jargon
- Talk to your program director
- Talk to the program directors from the other disciplines
- Get letters of commitment from your collaborators
- **But it's still your research!**

Broader impacts and education

- Only through this synthesis [of research and education] will the knowledge at the frontiers of discovery become available to everyone who wants to learn.
<http://www.nsf.gov/news/speeches/colwell/rco0925luncheon.htm>
- Do not dismiss
- Take seriously: citations to support, letters of commitment, *cite from NSF*
- Integration doesn't mean you need to become an education researcher, integrate within your life, within a theme
- Use the institution's community and existing organizations and services

While I do not think that everybody should become a computer scientist, I believe that everybody should have the opportunity to do so. Unfortunately, it is currently not the case in the United States [124] and as a result there is a shortage of scientific and technical talent [2]. The expansion of the pool of potential scientists is one of the reasons, among many, to attract women and minorities to science and technology education [2, 3]. [...] My goal is to give those who otherwise would be lost to the discipline a chance to consider computer science as a career.

I build on (1) my substantial experience in teaching, mentoring, and outreach, (2) the attractive motivation of my interdisciplinary research, (3) the diverse community at UIC and in Chicago, and (4) the strong support of the Department of Computer Science, College of Engineering, and UIC to create a comprehensive vision of integrating research and meaningful educational activities [4].

Legwork

- Talk to your department head. Bargain! space, teaching relief, staff support, ICR, student support, equipment, etc.
- Talk to your collaborators (including outreach), get concrete plan and letters.
BUT: CAREER is yours, be careful not to depend
- Talk to your program director
 - is this the right fit
 - is this the right scope
 - if your research is interdisciplinary – your program director is your friend in deciding on outside reviewers. S/he have to be aware of what you are trying to accomplish and who are the appropriate people to look at your proposal
- Figure out your budget

The budget

- At least \$400K but... – talk to your program director
- Don't over- or under-budget, but...
- If \$100K/year is not enough to support your kind of research then CAREER should not be your only grant
- Work with your business manager and OVCR – they are your friends
- Bargain with your department head

Practicalities

- **Read PGP!!!**
- Reorganize if it makes sense but not too much: reviewers expect structure
- Use headings
- Use diagrams/pictures
- Stick to format requirements!
- Check spelling! Again.

Timetable

1. Get lots (3-10) of examples of other people's CAREER (close and not too close area)
2. Write a summary (NOW)
3. Write a one sentence summary:
The question I am addressing is _____ and here is what currently is missing _____ and at the end of 5 years this is will be the (tangible) outcome
4. Write the summary (April). Give it to mentors, friends
5. Write the proposal (May). Give it to mentors, friends





