CORNELL ENGINEERING

College of Engineering Update

October 2010

Lance R. Collins

Joseph Silbert Dean of Engineering

Outline

- Leadership changes and new faculty
- General updates
  - Rankings
  - Students
  - Accomplishments
  - Budget strategy
  - Library
  - Facilities
- Critical challenges

Associate Dean for Research

Rajit Manohar
Associate Professor, ECE

Degrees received in Computer Science:
BS Caltech 1994
MS Caltech 1995
PhD Caltech 1998

- Joined Cornell faculty in 1998
- Co-Founded Computer Systems Laboratory
- Awarded Ruth and Joel Spira Outstanding Teaching Award in ECE 2009

Assistant Dean for AAD

- Kathi Warren
- Joined Cornell June 1, 2010
- Previously at Robert H. Smith School of Business at U. Maryland
- Rebuilding the AAD office

New Faculty

Christopher Hernandez
Assistant Professor, MAE

Christopher Batten,
Assistant Professor, ECE

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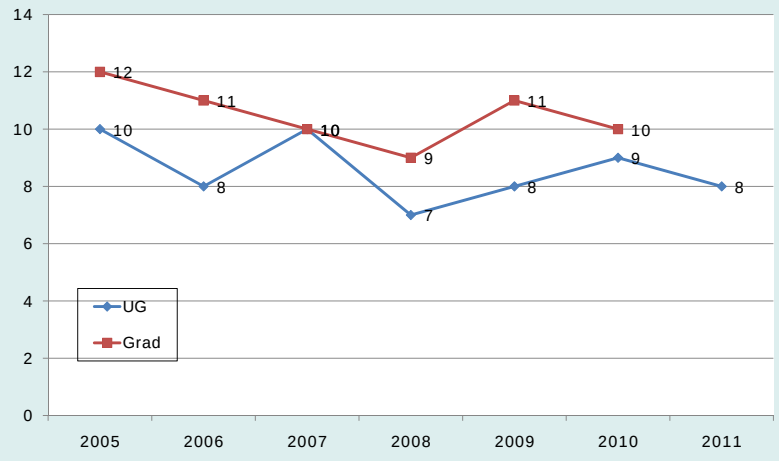
Engineering Undergraduate & Graduate US News Rankings



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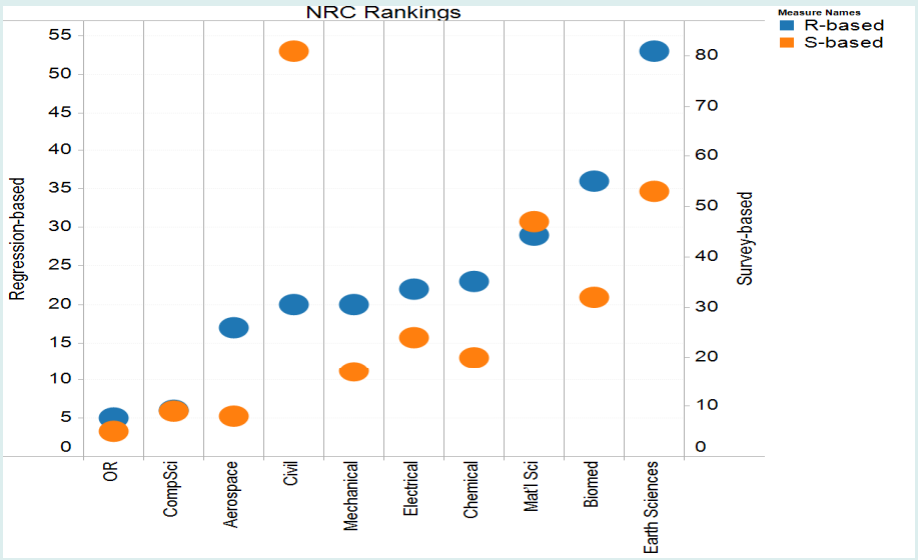
NRC Rankings



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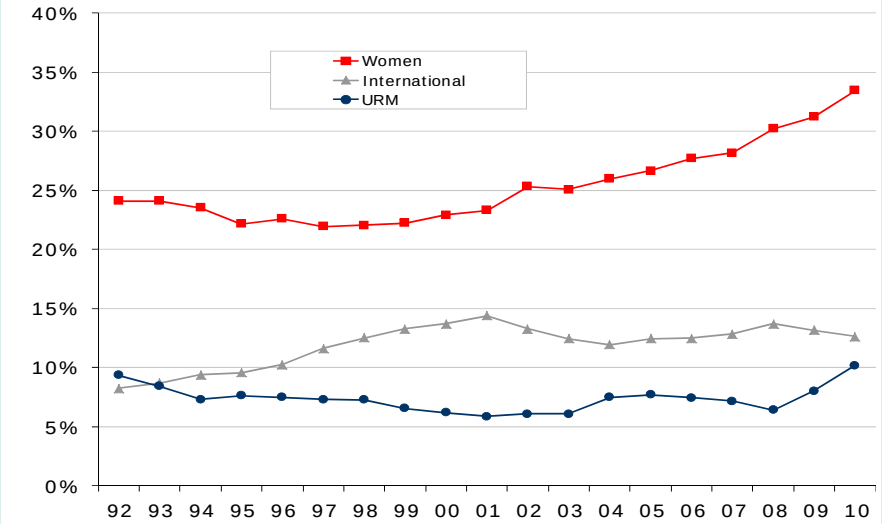
Undergraduate Women, Minorities and International



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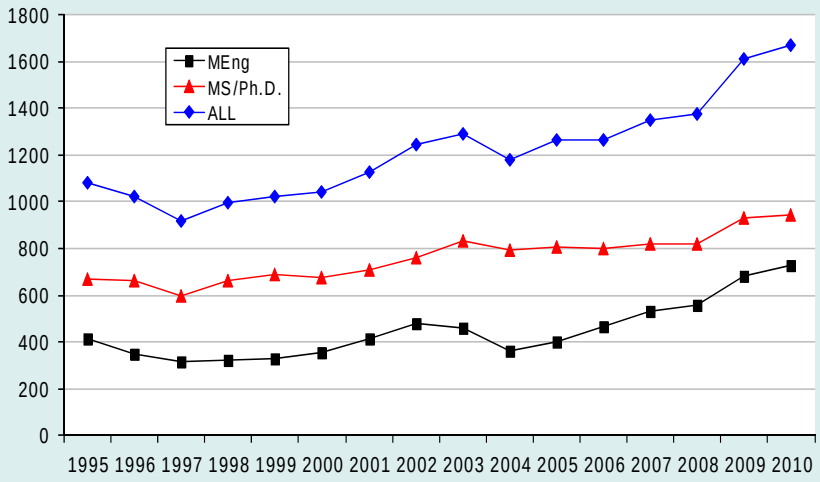
Graduate Student Enrollment



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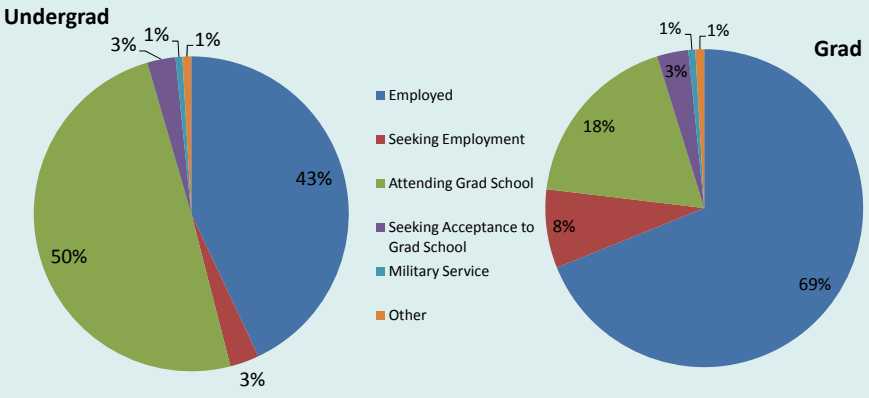
Career placement update



Class of 2009 as of Jan 2010

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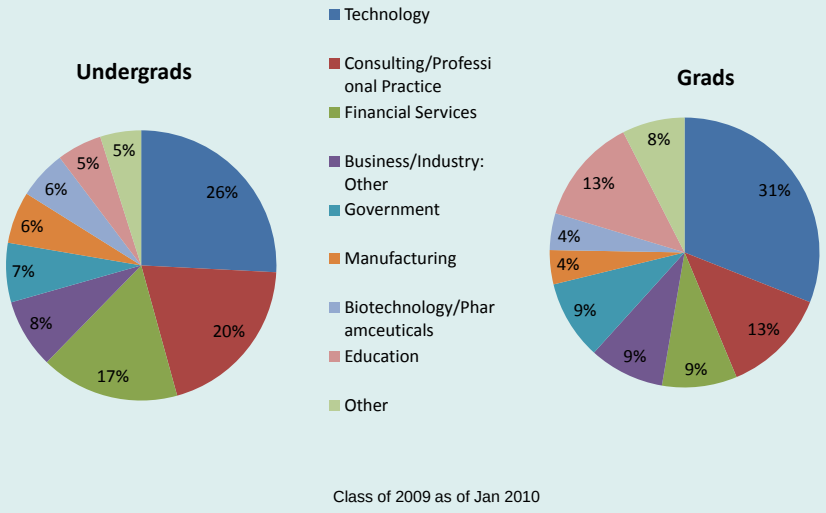
Employment Sectors



Class of 2009 as of Jan 2010

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A sampling of accomplishments since last meeting…

- Cornell Autonomous Underwater Vehicle wins 1st place for second year
- Robot sets walking world record
- 3 young faculty win NSF Early Career Awards
- Michael Lipson (ECE) wins MacArthur "Genius Award"
- David Skorton elected to the National Academies Institute of Medicine

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Budget strategy

- Two years of reduction thus far
- Overall ongoing cuts in COE approx. $7M (~9%)
- First year across the board reductions
- Second year more strategic – partnership with CIS
  - Financial transactions shared services
  - HR shared services
  - Facilities zone management
  - IT service groups

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Engineering Library Update

- Libraries changing dramatically
  - 99% online
  - 14% of collection circulated in last 5 years
- Collection will be relocated by summer 2011
- Now planning
  - Access to reference librarians
  - Use of space

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Facilities update

- Current projects
  - PSB/Clark almost complete
  - Olin renovation complete
  - Snee Institute complete
- Facilities Master plan on hold
  - Focus on renovations and maintenance
- Undergoing space plan to inform next 5-10 years
  - Most efficient use of space
  - Necessary renovations

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Student experience

- Working with students
  - Sessions on taking care of yourself and others
  - New “Friend-to-Friend” video vignette – well received
  - Planning student experience survey
- Continuing to work with faculty on minimizing stress where appropriate
  - Continuing “Notice and Respond”

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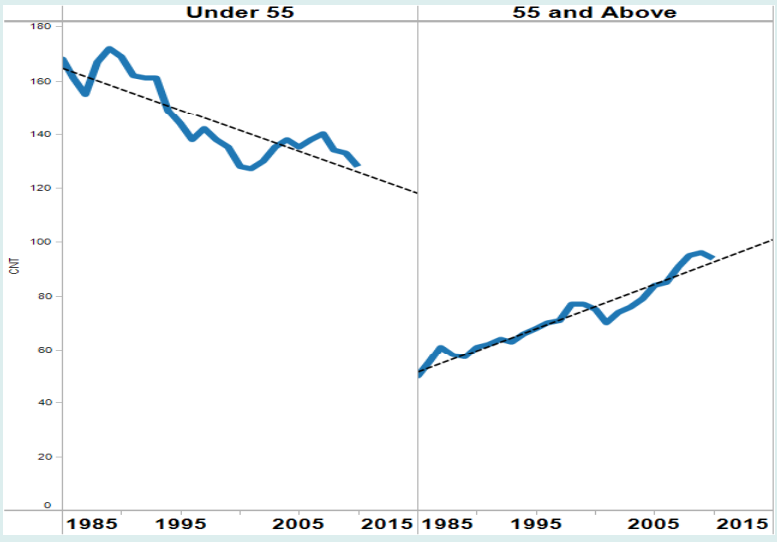
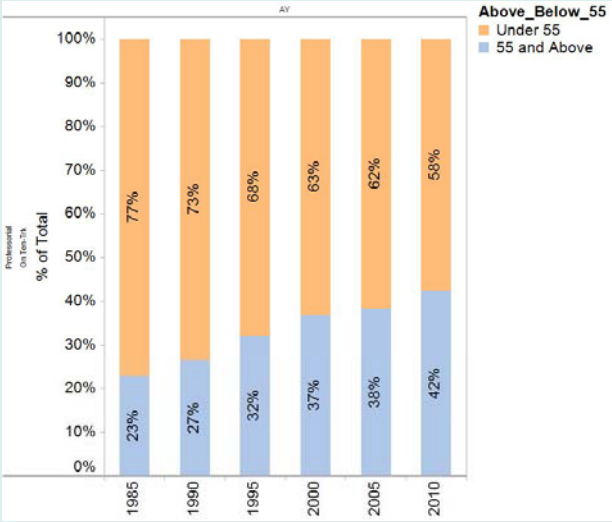
Critical Challenges

- Faculty age, attrition and slow hiring
  - Faculty/student ratio degrading
  - Key research areas unfilled
  - Reduced competitiveness for grants
- Insufficient graduate student support
- Facilities
- Critical lack of quality space
  - 2,687 nsf/faculty vs. benchmark 3,396
  - 856 research nsf/faculty vs. benchmark 1,305

Faculty Renewal Critical



Faculty age demographics



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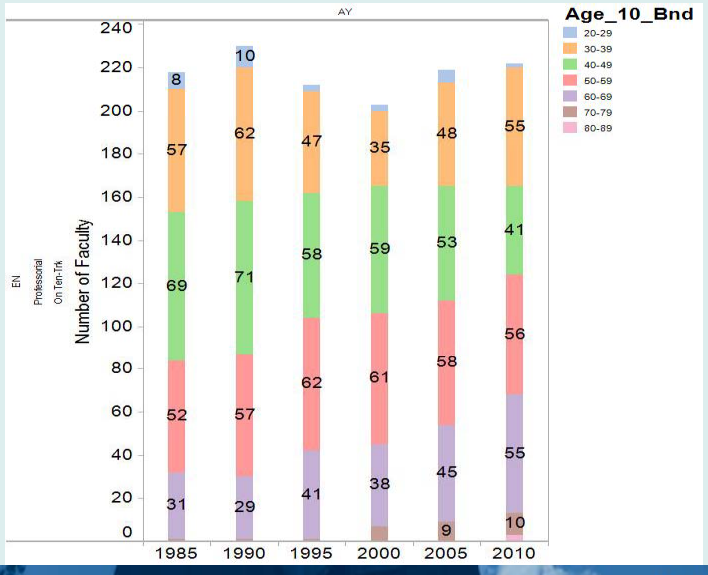

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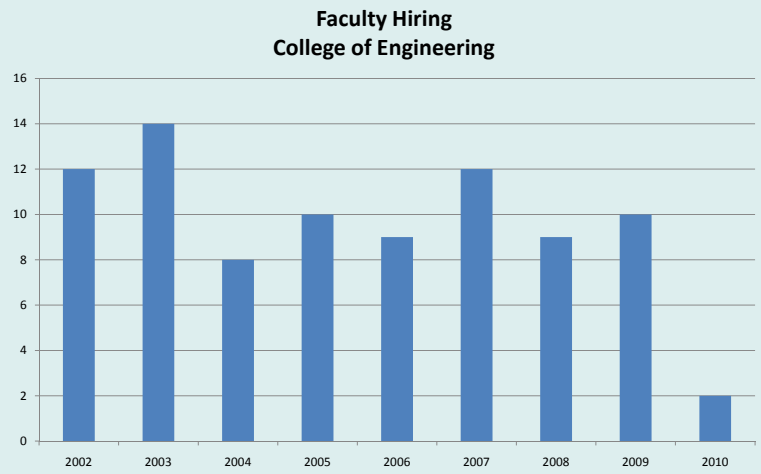
Hiring Slowed Significantly



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Plan for Excellence

- CoE will update its strategic plan (from 2004)
- Hiring with a focus on achieving or sustaining preeminence in strategic areas
  - Hire now in strategic areas; Increase diversity of faculty
  - Long term goal: reduce student/faculty ratio
- Diversify sources of research funding
  - Sustain outstanding record with NSF and NIH
  - Increase industrial funding; encourage entrepreneurial activity by faculty and students
  - Encourage “centers” across quad; enhance infrastructure
  - Graduate fellowship for each incoming PhD student
- Undergraduate Program: Second to None
  - Biomedical Engineering Major
  - Focus on Leadership: “Ivy Engineer”

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