

# ENGINEERING AT ILLINOIS

*Leadership, Collaboration, Impact*



UNIVERSITY OF ILLINOIS  
URBANA-CHAMPAIGN • CHICAGO • SPRINGFIELD



# A BRIEF OVERVIEW OF OUR COLLEGE





# OUR LEGENDS ...



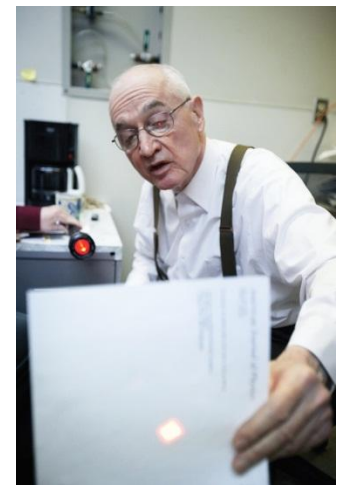
John Bardeen

Transistor  
Superconductivity



Tony Leggett

Superfluidity



Nick Holonyak

LED  
Quantum-well laser





## SOME OF OUR STARS ...



John Rogers



Jennifer Lewis



Wen-Mei Hwu



Bill Gropp





# OUR FUTURE ...



Lynford Goddard



Xiuling Li



Nadya Mason

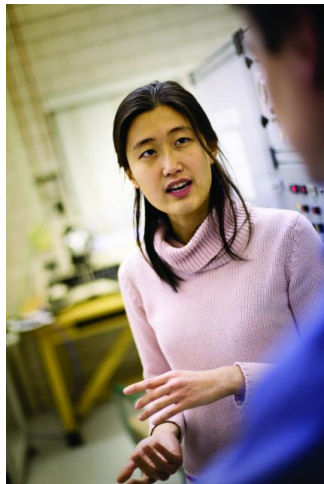


Eric Pop



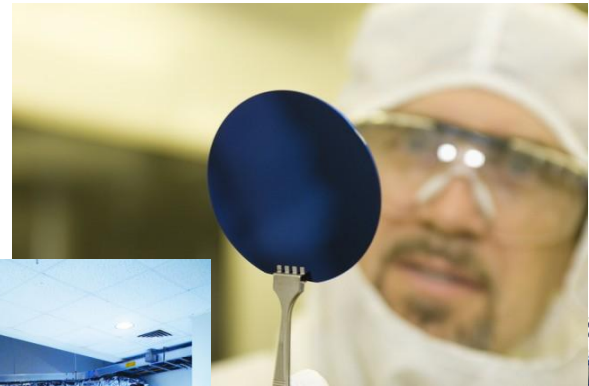


# WORKING TOGETHER...



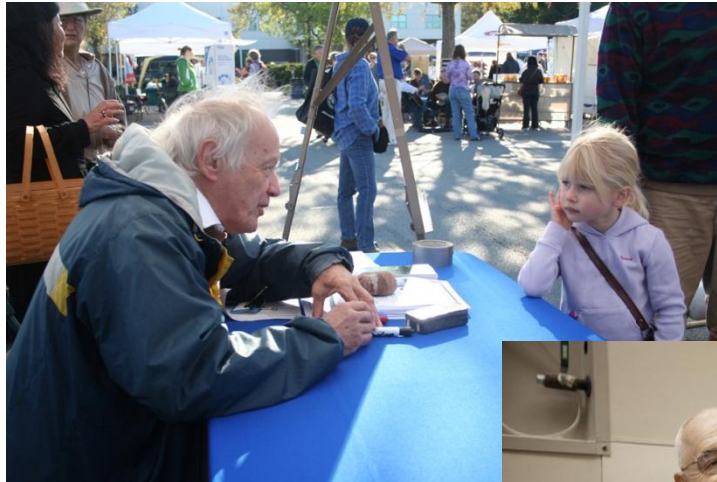


# RESEARCH IMPACT ...





# COMMITTED TO EDUCATION ...





# PREPARING LEADERS ...

- From innovation and business plan competitions to charm schools and trips to Silicon Valley, the Technology Entrepreneurship Center provides our students with rich co-curricular experiences





# AMONG THE BEST COLLEGES ...

## Top undergraduate colleges

1	MIT
2	Stanford
3	Berkeley
4	Cal Tech
4	Georgia Tech
6	Illinois
7	Michigan
8	Carnegie Mellon
8	Cornell
8	Purdue
11	Texas

## Top graduate colleges

1	MIT
2	Stanford
3	Berkeley
4	Georgia Tech
5	Illinois
6	Carnegie Mellon
7	Cal Tech
8	Texas
9	Michigan
10	Cornell
11	USC

*U.S. News and World Report 2011 rankings*





# AMONG THE BEST PROGRAMS ...

## Undergraduate program rankings

7	Aerospace
2	Agricultural
–	Biomedical (new unit)
10	Chemical
2	Civil
5	Computer Engineering
5	Electrical/Electronic
2	Engineering Physics
4	Environmental/Environmental Health
13	Industrial/Manufacturing
3	Materials
6	Mechanical

## Graduate program rankings

7	Aerospace
11	Chemical
2	Civil
4	Computer Engineering
5	Computer Science
4	Electrical/Electronic
3	Environmental
17	Industrial/Manufacturing
2	Materials
6	Mechanical
12	Nuclear
9	Physics
2	Physics - Condensed Matter

*U.S. News and World Report 2011 rankings for undergraduate programs and 2010 rankings for graduate programs*





# INTERDISCIPLINARY EXCELLENCE ...

Coordinated Science  
Laboratory

Micro and Nanotechnology  
Laboratory



Materials  
Research  
Laboratory

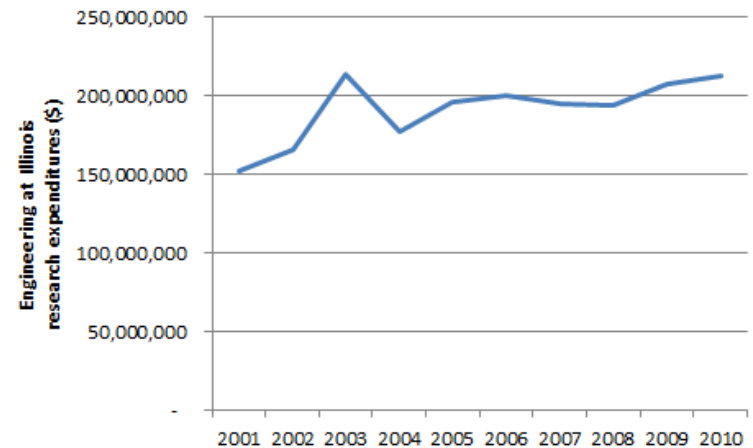




# RESEARCH INTENSIVE ...

	2010 Engineering- related research expenditures (\$)
Massachusetts Institute of Technology	306,028,000
Georgia Institute of Technology	215,352,000
<b>University of Illinois at Urbana-Champaign</b>	<b>213,155,901</b>
Stanford University	193,490,030
University of California-Berkeley	183,310,000
University of Michigan	180,608,749
Purdue University	180,043,370
Carnegie Mellon University	177,600,000
The University of Texas at Austin	151,592,170
Cornell University	125,305,443
California Institute of Technology	88,342,000
Princeton University	71,588,138

source: ASEE





# OUR STUDENTS ...





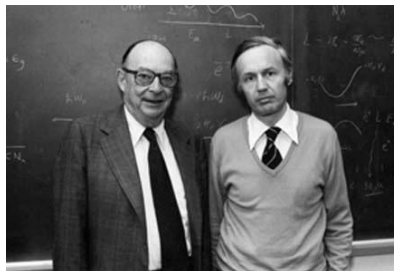
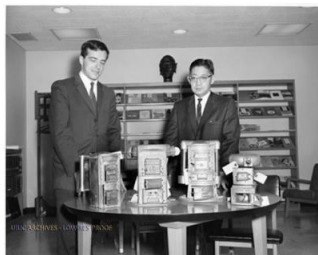
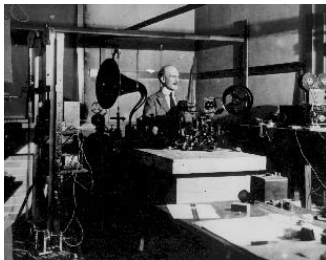
# FINANCIAL STEWARDSHIP ...

- Increased enrollments
- Online and professional masters' programs
- Investment in advancement
- External research funding
- Strategic hiring of faculty
- Shared services





# A LEGACY OF EXCELLENCE ...





# A COMMITMENT TO THE FUTURE ...





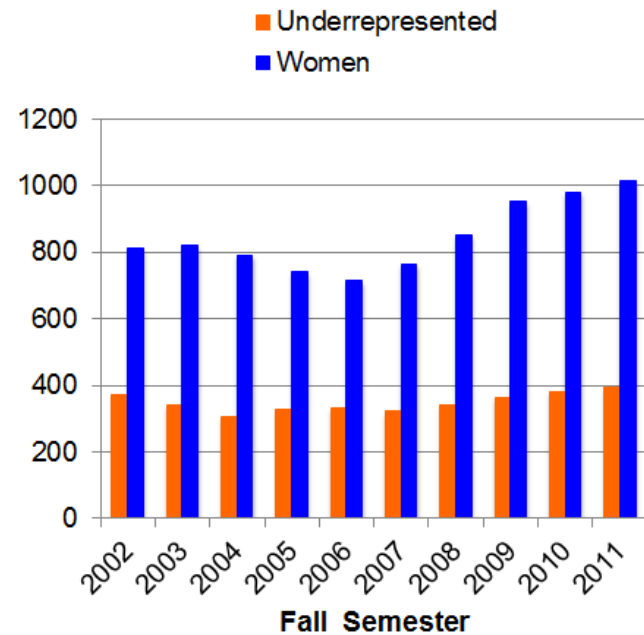
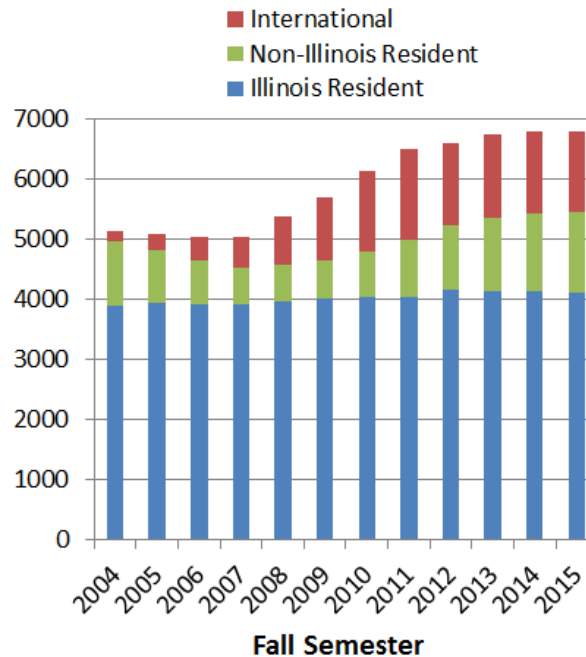
# STUDENT DIVERSITY AND FINANCIAL AID





# STUDENT DEMAND IS VERY STRONG

Engineering at Illinois Undergraduate Enrollments





# PEER COMPARISON

Undergraduate - Underrepresented %						Underrep	Total
School	Year					Undergrad	Undergrad
	2006	2007	2008	2009	2010	2010	2010
Georgia Institute of Technology	12%	11%	12%	11%	11%	990	8,622
Massachusetts Institute of Technology	21%	23%	23%	24%	24%	476	1,953
Stanford University	22%	22%	24%	25%	24%	615	2,560
University of California-Berkeley	7%	6%	8%	7%	6%	210	3,473
<b>University of Illinois at Urbana-Champaign</b>	<b>7%</b>	<b>6%</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>446</b>	<b>6,769</b>
University of Michigan	9%	8%	8%	8%	6%	341	5,482

Undergraduate - Women %						Women	Total
School	Year					Undergrad	Undergrad
	2006	2007	2008	2009	2010	2010	2010
Georgia Institute of Technology	20%	21%	22%	22%	23%	1,983	8,622
Massachusetts Institute of Technology	38%	38%	40%	40%	42%	825	1,953
Stanford University	31%	33%	34%	33%	33%	839	2,560
University of California-Berkeley	20%	22%	22%	21%	21%	735	3,473
<b>University of Illinois at Urbana-Champaign</b>	<b>16%</b>	<b>16%</b>	<b>17%</b>	<b>17%</b>	<b>17%</b>	<b>1,158</b>	<b>6,769</b>
University of Michigan	24%	23%	23%	22%	22%	1,193	5,482

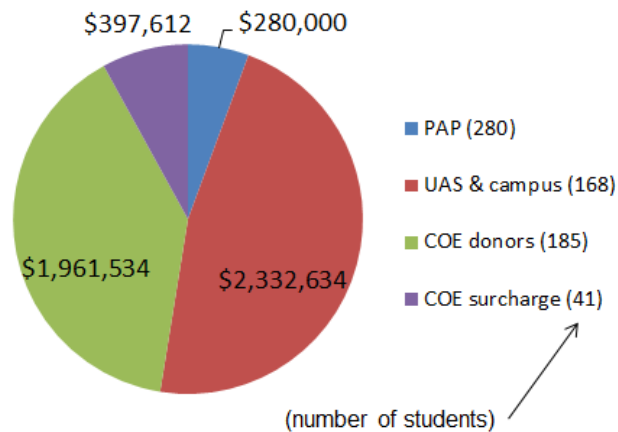




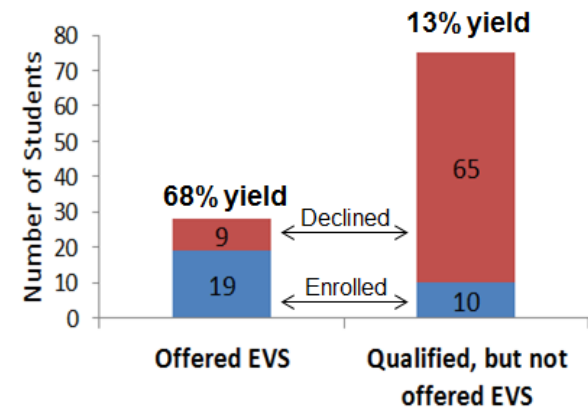
# SCHOLARSHIPS

2,485 Engineering undergraduates (38.5%) are receiving **need-based** financial aid  
 696 Engineering undergraduates hold **recruiting/diversity** scholarships

Funding sources for 2011-12  
 recruiting/diversity scholarships in  
 Engineering (\$5M total)



Yield for first two years of  
 Engineering Visionary Scholars\*  
 "full-ride" program



\* EVS eligible: traditionally underrepresented, high achieving





# ENROLLMENT SERVICES

- Recruiting
- Admissions
  - Set enrollment targets for the college, and for all 13 degree programs
  - Make timely scholarship offers, coordinated with campus
  - Send names of non-admits to UIC
- Post-Admission





# SUPPORTING STUDENT SUCCESS

Students from the ICE (Illinois Connections in Engineering) pre-freshman program



William Smith  
Engineering Mechanics senior

***"ICE allowed me to form good practices and study habits for the years to come."***

Amanda Luebbers  
General Engineering senior

***"The ICE program was an essential part of my success at UIUC."***



Jose Garcia  
B.S. Civil Engineering, 2011

***"The ICE classes over the summer put me several steps ahead of everyone else in my freshmen classes."***





# FACULTY DIVERSITY





# RECENT HIRES





# PEER COMPARISON

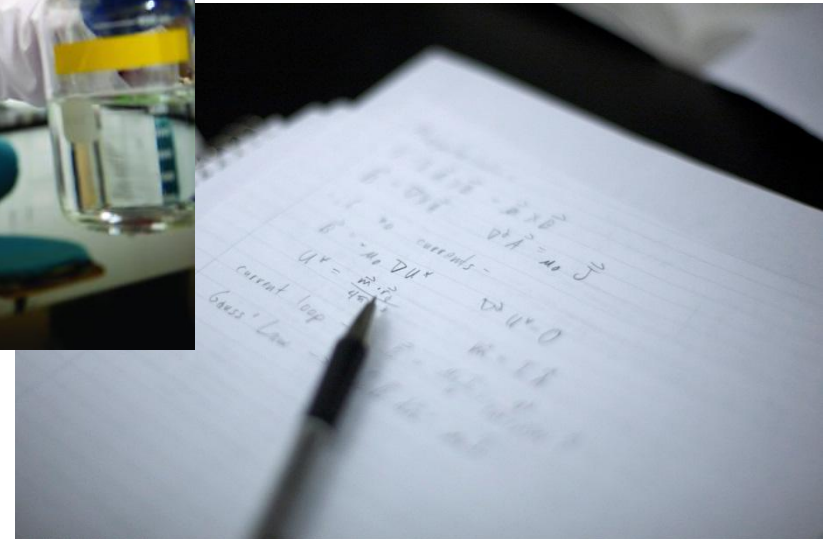
T/TT Faculty - Underrepresented %						Underrep Faculty	Total Faculty
School	Year	2006	2007	2008	2009	2010	2010
Georgia Institute of Technology	6%	6%	7%	7%	7%	31	432
Massachusetts Institute of Technology	6%	5%	6%	6%	7%	27	369
Stanford University	6%	6%	6%	5%	6%	13	214
University of California-Berkeley	5%	5%	5%	5%	5%	11	242
<b><i>University of Illinois at Urbana-Champaign</i></b>	<b>4%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>18</b>	<b>383</b>
University of Michigan	5%	5%	4%	4%	5%	17	353

T/TT Faculty - Women %						Women Faculty	Total Faculty
School	Year	2006	2007	2008	2009	2010	2010
Georgia Institute of Technology	12%	13%	13%	14%	14%	62	432
Massachusetts Institute of Technology	14%	14%	14%	15%	16%	59	369
Stanford University	13%	13%	14%	14%	15%	32	214
University of California-Berkeley	12%	13%	13%	13%	14%	34	242
<b><i>University of Illinois at Urbana-Champaign</i></b>	<b>8%</b>	<b>10%</b>	<b>10%</b>	<b>11%</b>	<b>11%</b>	<b>41</b>	<b>383</b>
University of Michigan	14%	14%	15%	16%	16%	55	353





# ACADEMIC PROGRAM REVIEW





# PROGRAM PRIORITIZATION

- Strategically relevant?
- Can we lead and have impact?
- Opportunities for collaboration?
- Financially sustainable?





# RECENT ACADEMIC EXAMPLES

- Merging three departments into two
  - Strategic focusing
- Establishing Bioengineering department
  - Strategic investment
  - Attracts the highest ACT applicants
  - Collaboration across campus
  - Shifted faculty lines from other fields





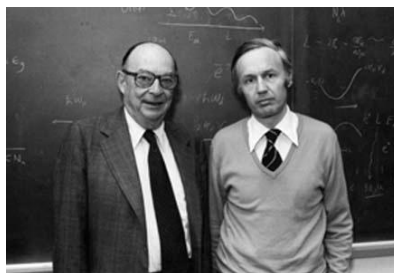
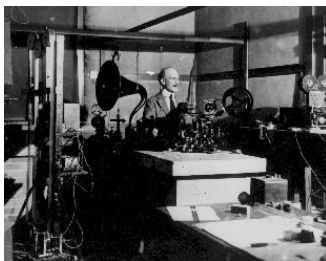
## RECENT RESEARCH EXAMPLES

- Center for Cellular Mechanics
  - Initial investment of \$300k
  - Led to \$25M shared center grant, others
- Information Trust Institute
  - Initial investment of \$300k, plus half-time support of an AP for three years
  - From a standing start in FY03, ITI has booked \$80M in research revenues





# A LEGACY OF EXCELLENCE ...





# A COMMITMENT TO THE FUTURE ...





# ENGINEERING AT ILLINOIS

## *Leadership, Collaboration, Impact*



UNIVERSITY OF ILLINOIS  
URBANA-CHAMPAIGN • CHICAGO • SPRINGFIELD