



Welcome

College Meeting
May 21, 2013

Reza Abbaschian

Campus and College of Choice

- UCR applications for 2013-14 academic year
 - 42,178 applications: 12.2% increase (UC system – 8.6% increase)
 - 33,809 freshmen: 13.2% increase
 - 8,369 transfers: 8.3% increase
- **BCOE applications for 2013-14 academic year**
 - 6,794 applications for 650 seats
 - 5,582 freshman: 21.0% increase
 - 1,211 transfers: 25.0% increase
 - More than double the growth of other UCR colleges and schools
 - Graduate applications (rolling) currently 1,942 for 158 seats (17% increase – also a new record)

Engineering and Natural Sciences Ranked Top Ten in World

The annual rankings by Leiden University in the Netherlands ranked UC Riverside's programs in engineering and natural sciences 10th in the world, ahead of institutions such as Princeton, Yale, and Caltech. The Leiden rankings objectively measure scientific impact based on research citations and collaboration worldwide.



U.S. News & World Report ranked BCOE 67th
in the nation (38th among public universities)



Bourns College of Engineering
May 21, 2013

Distinguished Faculty



- Number of faculty: 89
- Searches underway: 5
- Goal for 2020: 140
- Professional society fellows: 69
- NSF CAREER, BRIGE and other Young Investigator Awards: 42
- Members of NAE: 1
- New faculty 2012-13: 7



Bourns College of Engineering

May 21, 2013

New Faculty 2012-13



Zizhong "Jeffrey"
Chen (CSE)



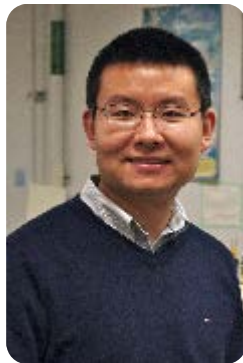
William H. Grover
(BIEN)



Juchen Guo
(CEE/MSE)



David Jassby (CEE)



Haizhou Liu
(CEE)



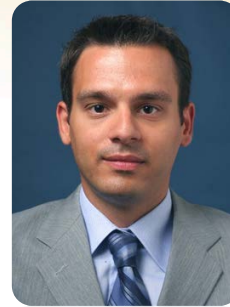
Sandeep Kumar
(ME)



Hamed
Mohsenian-Rad
(EE)

Young Investigator Awards 2012-13

Anastasios Mourikis (EE)
National Science Foundation CAREER Award



Masaru Rao (ME)
National Science Foundation CAREER Award

Ian Wheeldon (CEE)
Air Force Office of Scientific Research
Young Investigator Award



Faculty Recognition

- Matt Barth (CEE, CE-CERT) – Innovation Honoree, City of Riverside
- Phillip Christopher (CEE) – Young Scientist Award 15th International Congress on Catalysis
- Huinan Liu (BIEN) – Hellman Fellow 2012-13
- Elisa Franco (ME) – Hellman Fellow 2013-14
- Eamonn Keogh (CSE) – Dissertation Mentor Award 2012-13
- Zizhong Chen (CSE) – NSF CAREER Award 2012
- Hideaki Tsutsui (ME) – Gates Foundation Grand Challenges Exploration Prize, 2012
- Hamed Mohsenian-Rad (EE) – NSF CAREER Award 2012
- Wei Ren (EE) – Most cited Systems & Control Letters article published in the last five years, 2012
- Alexander Balandin (EE) – Fellow of IEEE and IOM3
 - Featured on podcast at Applied Physics Letters: <http://apl.aip.org/>



Bourns College of Engineering

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Faculty Even the Homecoming Series With 46-44 Win Over Alumni

The faculty prevailed and evened the series at one game apiece at the Second Annual BCOE Homecoming "Hoop It Up" basketball game on Saturday, March 2. In another highly competitive game, it came down to the wire as the faculty won 46-44.



Professors Ozkan and Barth in action against alumni

ABET Accreditation

Thanks to an army of participants, we earned outstanding reviews of our undergraduate programs and anticipate full accreditation in July 2013.



BCOE Hosts ASEE-PSW Conference

More than 150 educators from the Pacific Southwest Section of the American Society for Engineering Education gathered at the Bourns College of Engineering at UC Riverside April 18-20, to share innovative approaches to recruiting, retaining and educating students in engineering. The theme for the annual conference was “Engineering Education in a Global Context.”



Bourns College of Engineering

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Online Master's in Engineering Degree Launched

First cohort of students will begin in fall 2013 with a concentration in bioengineering. Additional specializations will be added in fall 2014 in materials at the nanoscale and environmental engineering systems (water).



Students can view lectures and participate in discussions online

BCOE Students Earn NSF Fellowship Recognition

Five bioengineering students from BCOE were honored by the National Science Foundation Graduate Research Fellowship Program.



Front row: Thanh Yen Nguyen and Maricela Maldorado
Back row: Tyler Backman (honorable mention)
Elbert Mai and Leopold Green

Student Professional Development

- 23 student professional organizations
 - Very active, with 952 members (48% of BCOE students)



Association for
Computing
Machinery

AICHE



ASQ



AIR & WASTE MANAGEMENT
ASSOCIATION



EWB



LUG



Community Outreach Highlights

- 177 professional development events last year
 - 6,145 students participated
- Bourns Engineering Day – 600+ local students on campus
- MESA Days – serves 24 schools in San Bernardino and Riverside Counties
- Wind Turbine Competition for region's community colleges
- IEEE Boy Scout Merit Badge Days
- Long Night of Arts and Innovation
- Design by Nature Demonstrations at Riverside Metropolitan Museum May 18



Students of Davis Kisailus at the
Riverside Metropolitan Museum, 2012

BCOE Students Win Startup Competition

Three BCOE computer science majors and two local community college students who will transfer to BCOE next fall teamed up to win the Riverside Startup Weekend competition for their smartphone application Fetchit. The event was held at the Culver Center in downtown Riverside May 3-5, 2013.



From left, UCR students Daniel Langridge and Chris Manghane, incoming UCR students Darrell and Daniel Peeden, Riverside Mayor Rusty Bailey, Inland Empire Tech Coast Angels President Molly Schmid, and Rajan Kasetty, CEO of Terrafore, Inc.



Bourns College of Engineering

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BCOE Students Earn Awards at NSBE National Convention

A delegation of students from the Bourns College of Engineering earned honors and awards for service and leadership at the national convention of the National Society for Black Engineers (NSBE) in Indianapolis, Ind., March 27-31. Roslyn Womble '13, president of the UCR chapter of NSBE, was named Region 6 Chapter President of the Year and Demetri Wilright '14 was elected NSBE Region 6 chair.



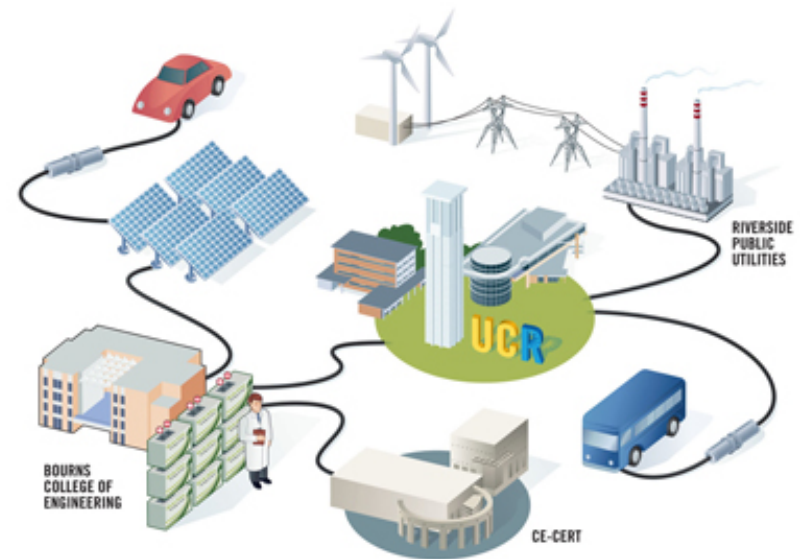
Dean Abbaschian with UCR's NSBE chapter members at the national convention

Major Research Initiatives

- Alexander Balandin, Alexander Khitun, Roger Lake, and Jianlin Liu are part of a team that will receive a total of \$5 million as part of a \$35-million research center called the Center for Function Accelerated nanoMaterial Engineering (FAME).
- A CE-CERT team led by Charles Wyman will receive more than \$3 million in DOE funding for biofuels research in collaboration with the Bio Energy Science Center led by Oak Ridge National Laboratory.
- Cengiz Ozkan is participating in the Center for Spintronic Materials, Interfaces, and Novel Architectures (C-SPIN) supported by a five-year, \$28-million grant. \$3 million is allocated to UCR.

AQMD Sustainable Transportation “New Grid” Project

- \$2-million grant from South Coast Air Quality Management District
- 500-kilowatt photovoltaic solar installation at CE-CERT and Bourns, Inc.
- 1.1-megawatt battery storage facility from Winston Chung
- Electric vehicle charging stations at CE-CERT and in Riverside
- Conversion of trolley from diesel to electric power
- Groundbreaking in spring 2013



College Mourns Passing of Rosemary Bourns

Rosemary Bourns, who co-founded Bourns, Inc. with her husband Marlan and for whom the Bourns College of Engineering is named, passed away September 26, 2012. She was 87 years old.

In 1994, The Marlan and Rosemary Bourns College of Engineering was named in honor of a generous gift from the Bourns family's foundation. In addition, the west engineering building was named Bourns Hall in honor of their support.



Marlan and Rosemary Bourns

Bourns College of Engineering

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College Establishes Suresh Kumar Memorial Fund in Electrical Engineering

The Suresh Kumar Memorial Fund in Electrical Engineering was established to honor the late Ph.D. student Suresh Kumar Ramachandran Nair, who died June 27, 2012. The memorial fund provides opportunities for international graduate students who share his passion for research in intelligent systems.

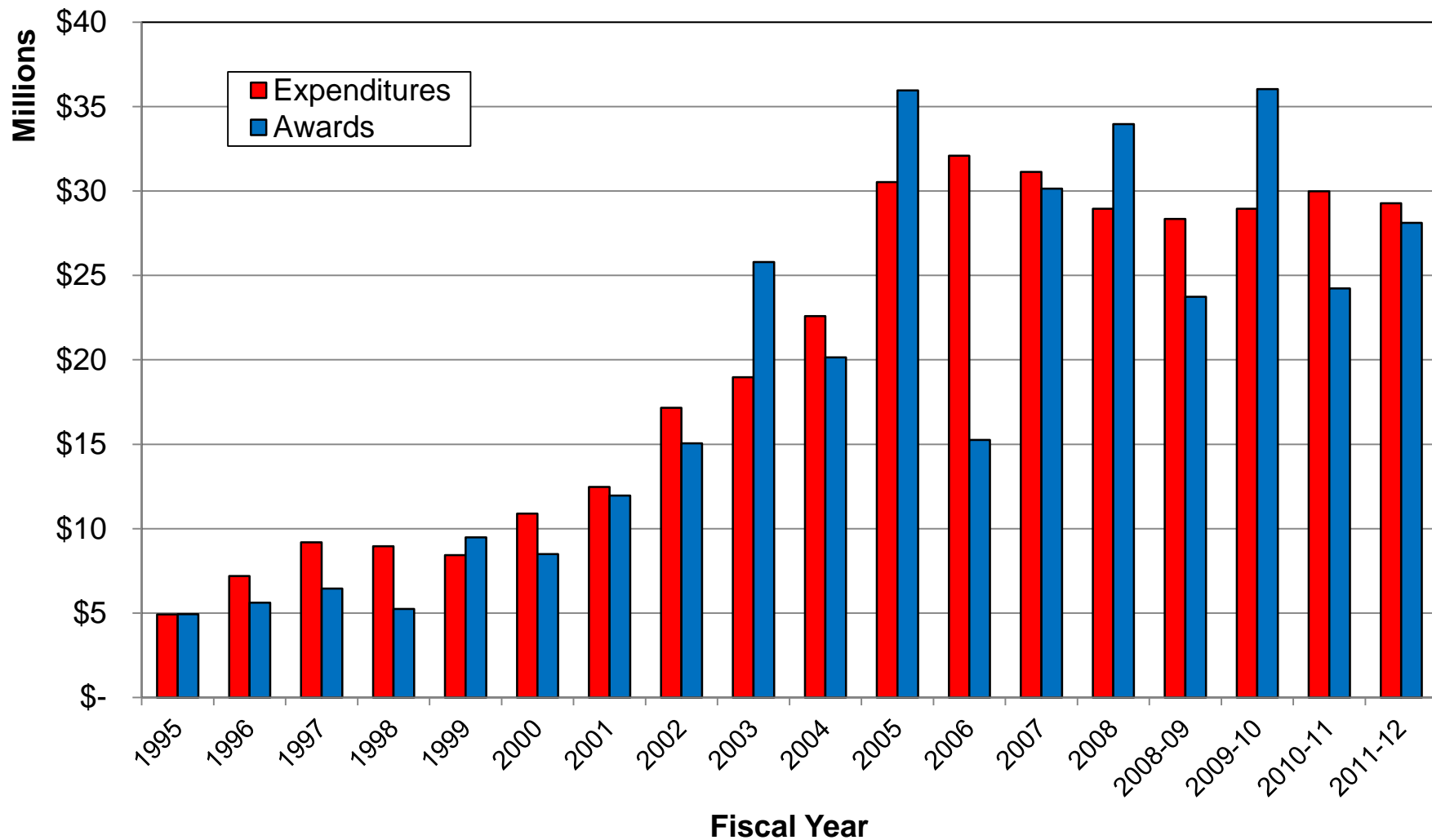




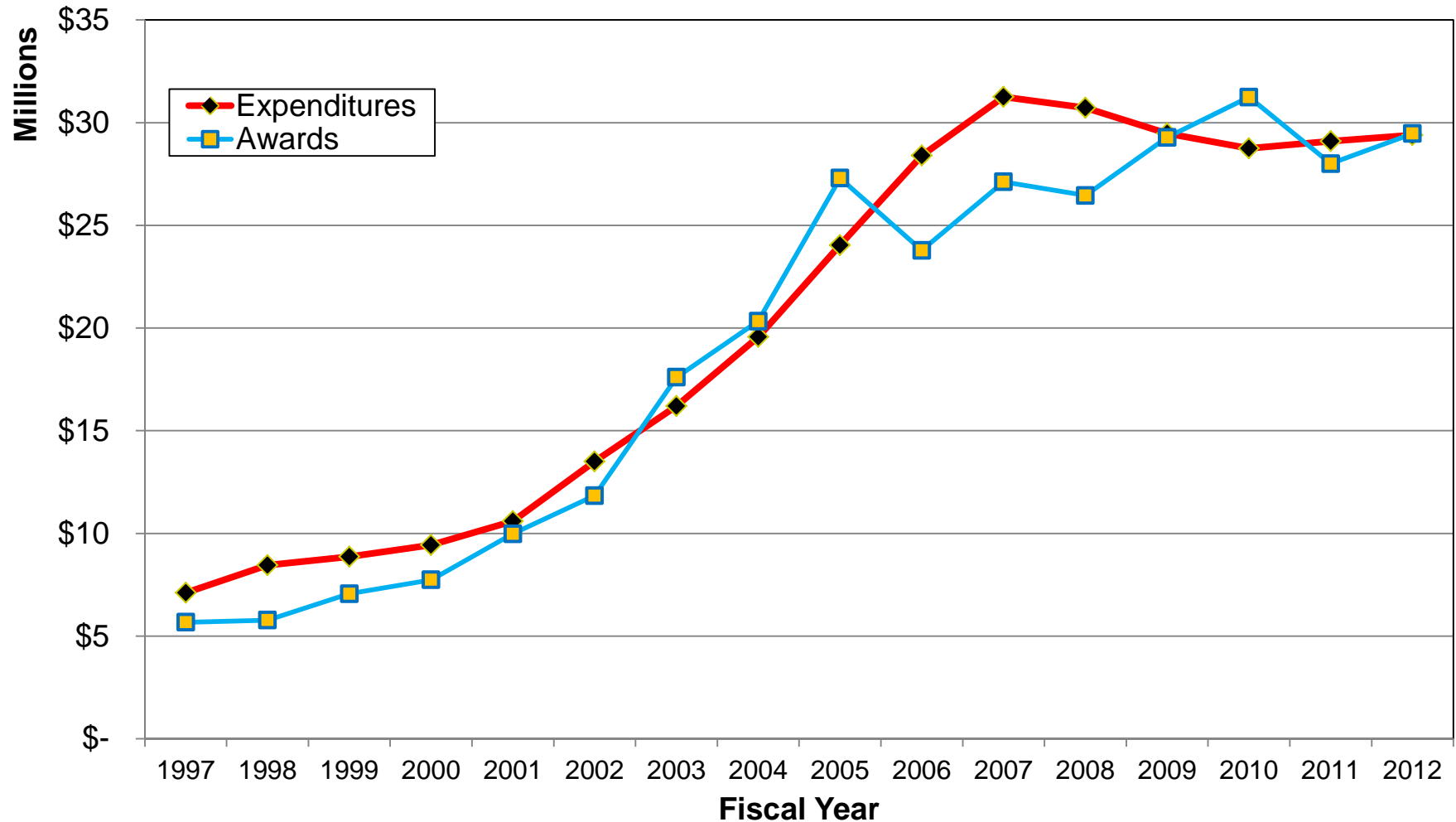
Research & Graduate Education

BCOE Faculty Meeting
May 21, 2012

Research Activity



Research Activity (3-Yr Averages)



Research Activity – 13AY

PIs with >\$500K in Awards

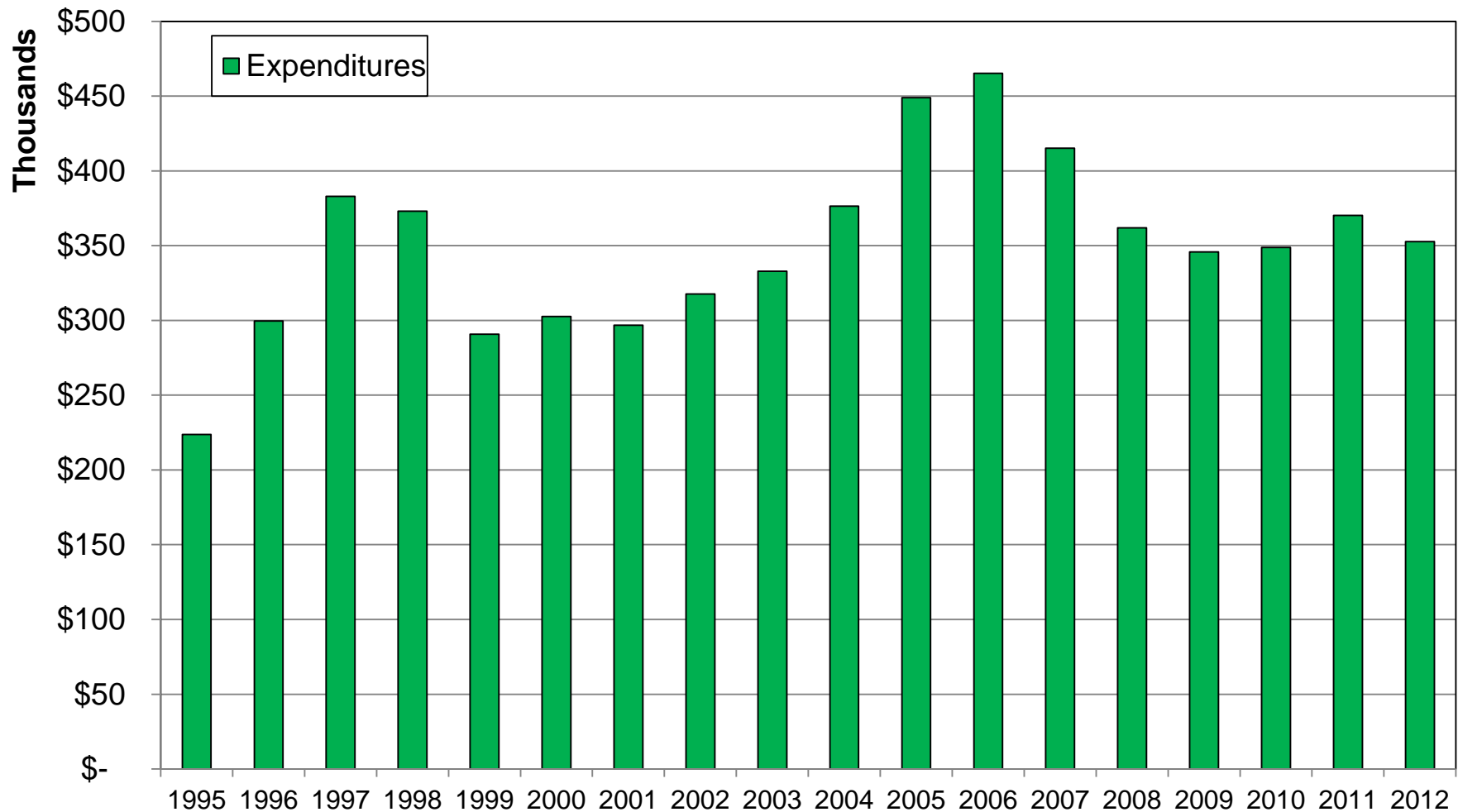
- › Alex Balandin (EE, MSE)
- › Matt Barth (EE, CE-CERT)
- › Laxmi Bhuyan (CSE)
- › Zizhong Chen (CSE)
- › Javier Garay (ME, MSE)
- › Heejung Jung (ME, CE-CERT)
- › George Karavalakis (CE-CERT)
- › Eamonn Keogh (CSE)
- › Srikanth Krishnamurthy (CSE)
- › Nosang Myung (CEE, MSE)
- › Chinya Ravishankar (CSE, Dean's Office)
- › Charles Wyman (CEE, CE-CERT)

Research Activity – 13AY

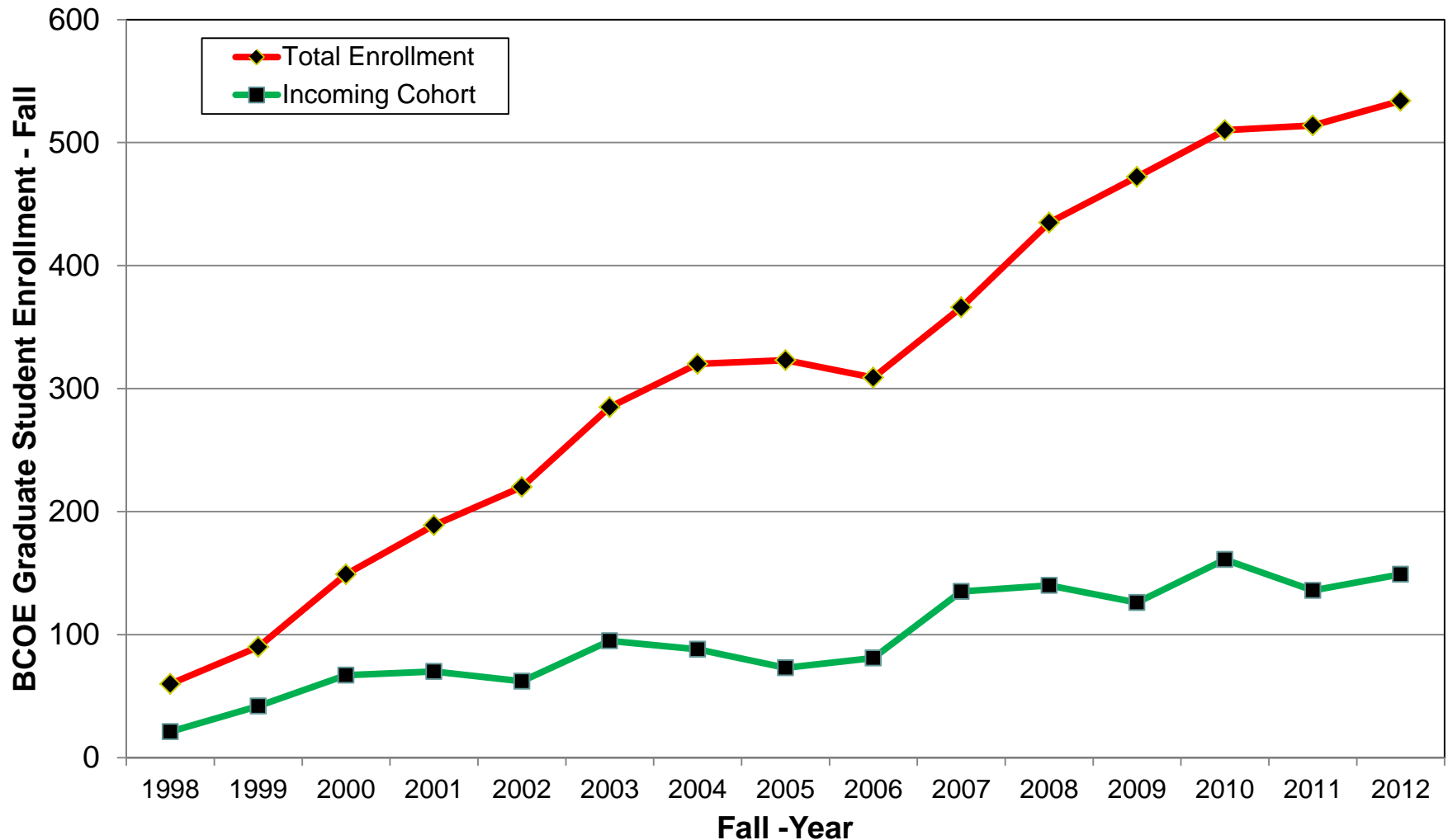
PIs with \$300K-\$500K in Awards

- › Tom Durbin (CE-CERT)
- › Elisa Franco (ME)
- › Yingbo Hua (EE)
- › Alex Korotkov (EE)
- › Lorenzo Mangolini (ME)
- › Wayne Miller (CE-CERT)
- › Hamed Mohsenian-Rad (EE)
- › Walid Najjar (CSE)
- › Masaru Rao (ME)
- › Amit Roy Chowdhury (EE)
- › Daniel Xu (EE)

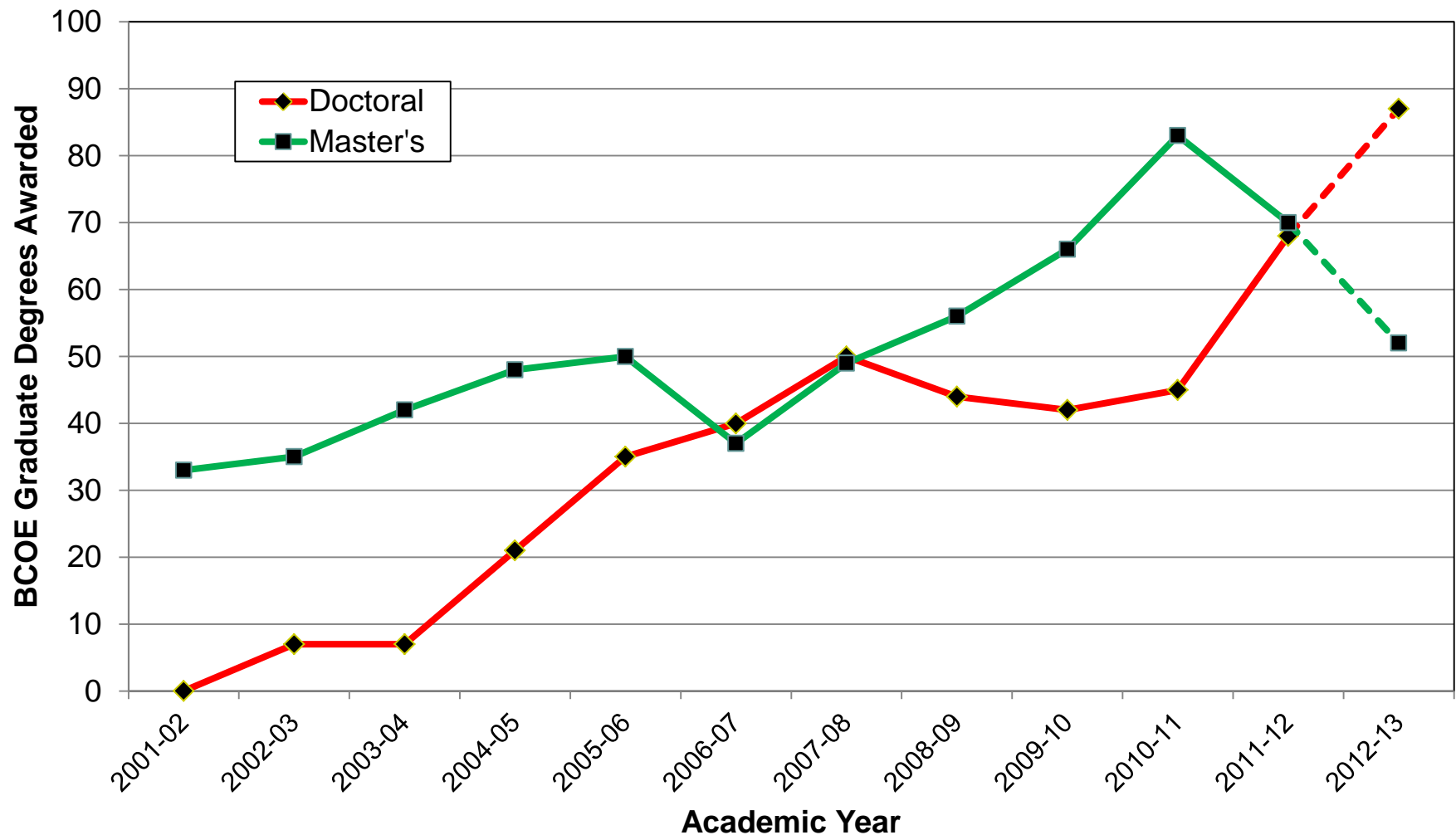
Expenditures per Faculty FTE



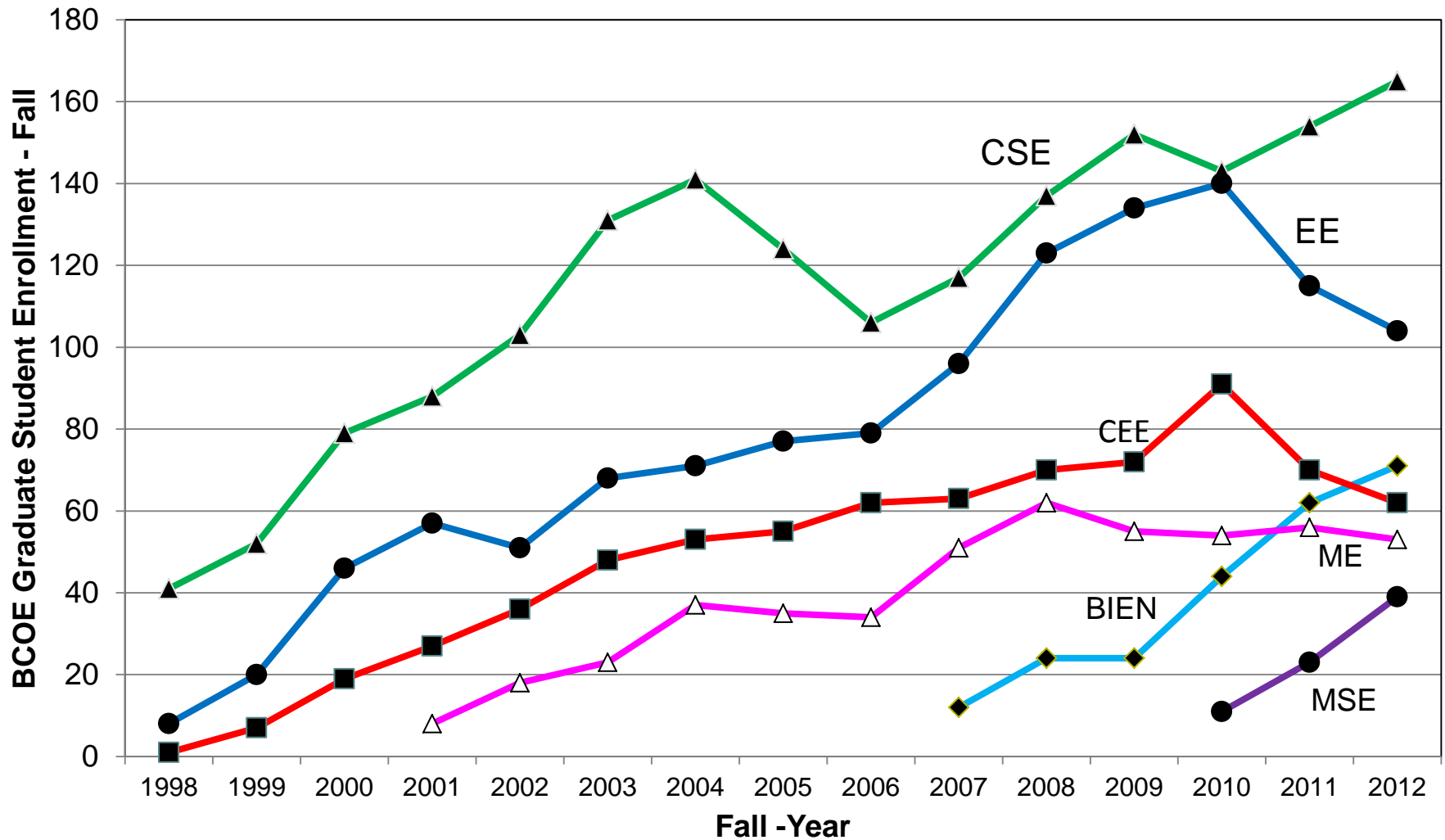
Graduate Student Enrollment



Graduate Degrees Awarded

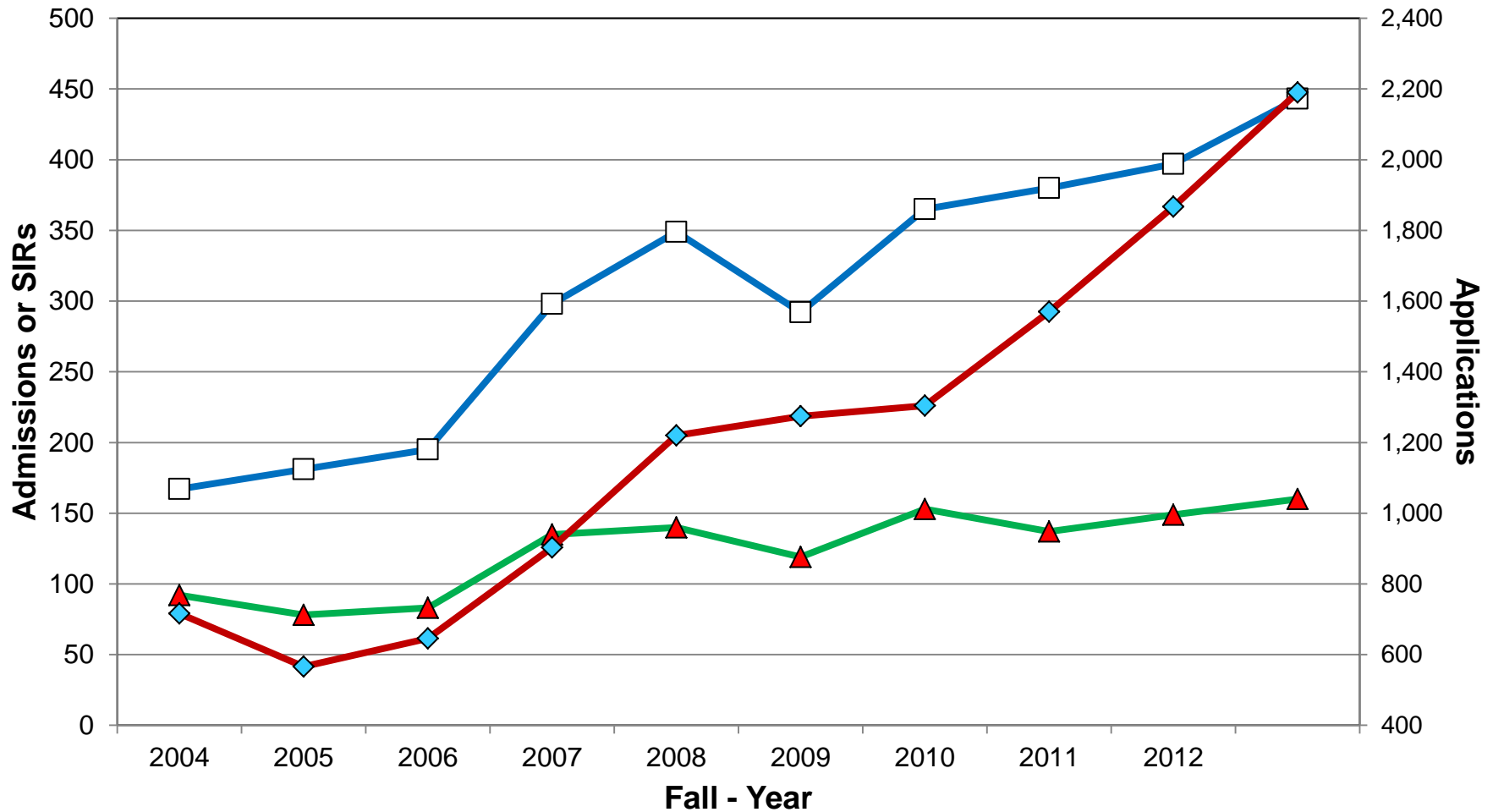


Total Graduate Students* by Department

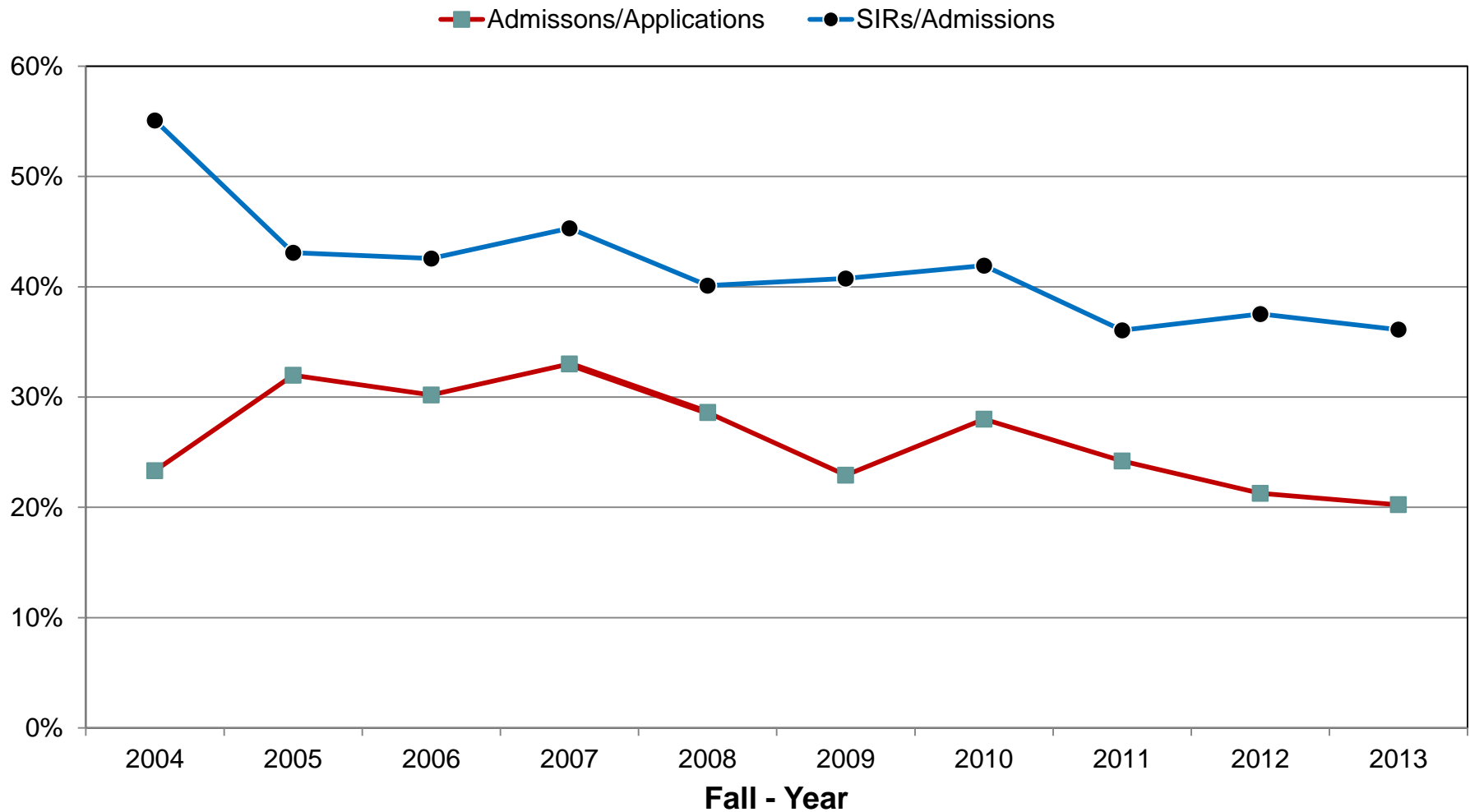


Trends in Recruitment

Admissions SIRs Applications



Trends in Recruitment



Undergraduate Education

C. V. Ravishankar



Graduating Undergraduate Numbers

Major	2012 Graduates	2013 Graduates (estimated)
Bioengineering	43	58
Business Informatics	4	4
Chemical Engineering	29	42
Computer Engineering	22	23
Computer Science	44	35
Electrical Engineering	33	36
Environmental Engineering	14	29
Materials Science & Engineering	4	7
Mechanical Engineering	64	95
Total	257	329

Number Of Graduates Is Up 28%

- Congratulations to our excellent students
- To our outstanding Academic Advising Staff
 - Rod Smith, Tara Brown, Nikki Measor, Luke Hoepfner, Alise Clouser, Terri Phonharath, Thomas McGraw
 - The Magnificent Seven

THE MAGNIFICENT SEVEN

They fought like seven hundred



ROD SMITH
"CHRIS ADAMS"

LUKE HOEFNER

LARA BROWN
"BRITT"

TERRI
PHONHARATH
"CHICO"

THOMAS MCGRAW
"HARRY LUCK"

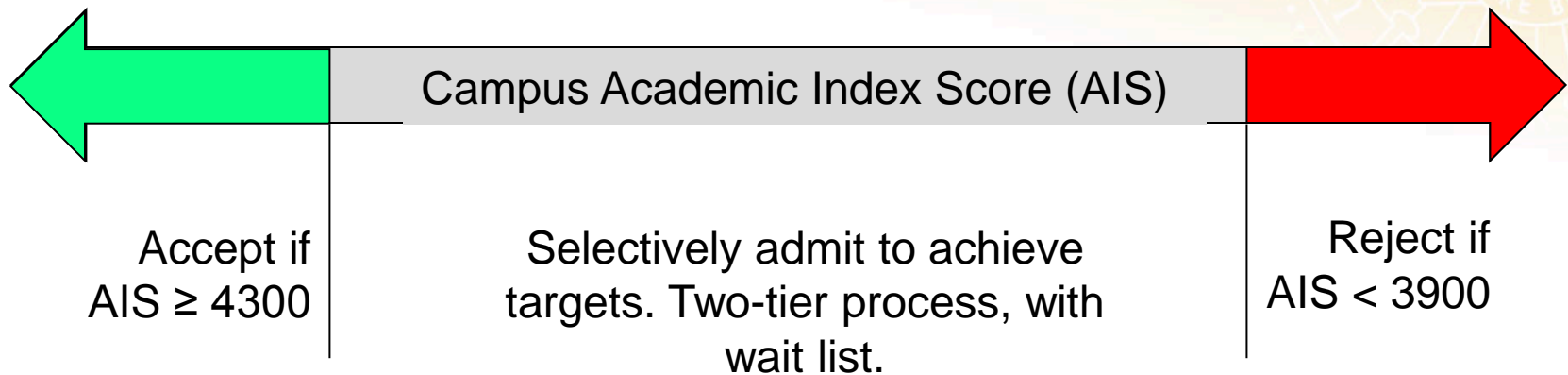
NIKKI MEASOR
"LEE"

ALISE CLOUSER
"BERNARDO
O'REILLY"



2013 Undergraduate Admissions

- More selective admissions process this year

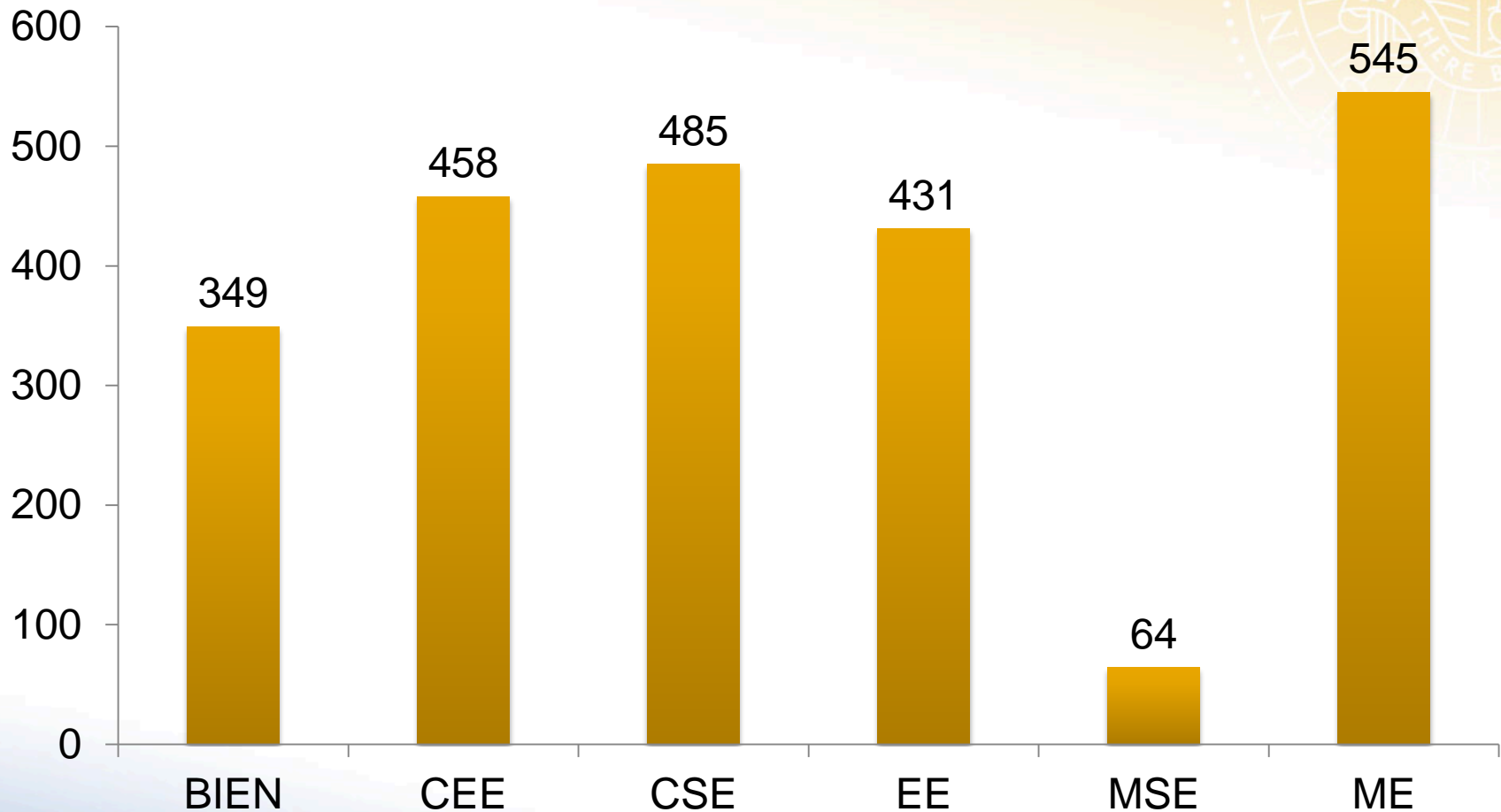


COLLEGE	Avg. AIS
BCOE	4352
CNAS	4232
CHASS	4061
UCR	4158

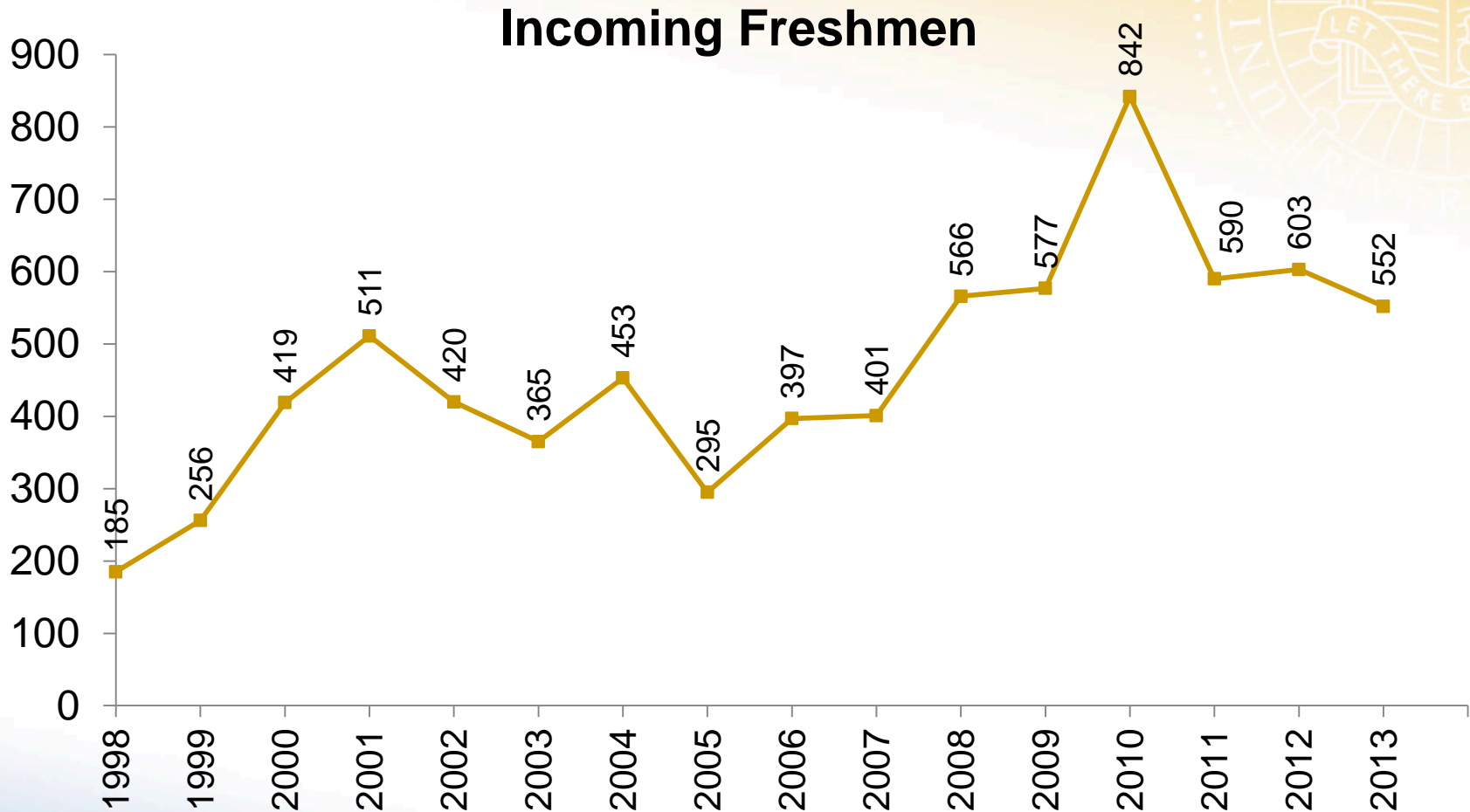
Continuing and Incoming Numbers

MAJOR	CONTINUING IN F'13	INCOMING FRESHMEN	INCOMING TRANSFERS	TOTAL IN FALL '13
Bioengineering	263	66	17	349
Business Informatics	28	15		43
Chemical Engineering	178	60	28	264
Computer Engineering	163	73	8	242
Computer Science	238	73	14	320
Electrical Engineering	216	85	16	310
Engineering Prep	4	0		4
Engineering Undeclared	24	0		24
Env. Engineering	127	61	6	193
MSE	35	28		64
Mechanical Engineering	413	101	28	545
Pre-Engineering	28	0		8
Total	1696	552	120	2368

Fall 2013 Enrollments by Department



Historical BCoE Freshman Numbers



Support Grants & Scholarships



- NSF S-STEM
 - Scholarships for improving STEM retention
 - \$120K/year for 5 years
- Hispanic Serving Institution (HSI) award
 - \$4M over 5 years
 - UG success, recruitment & outreach
 - UG research stipends
- Other endowed scholarships (donations)

\$210,922 Awarded in Scholarships

NAME	AWARD
Neri Lemus	\$10,000
Adam Block	\$10,000
Tom Tran	\$10,000
Tim Kwok	\$10,000
Rex Lu	\$10,000
Richard Copca	\$10,000
Crown Chen	\$10,000
Jonathan Wong	\$9,810
Edward Huang	\$9,761
Al Flores	\$9,720
Tyler Winn	\$9,662
Jason Ramirez	\$9,570
Sojin Ahn	\$9,472
Zachary Sells	\$9,295
Skye Johnson	\$8,769
Jahangir Ashraf	\$8,195
Shalin Patel	\$8,125
Kimberly Huynh	\$7,927
Dingli Qin	\$7,380
Andrew Hollist	\$7,356
Natalie Berner	\$7,071
Andrew Bernabe	\$6,836

NSF S-STEM Scholarships (\$198,949 awarded)

Endowed Scholarships (\$11,973 awarded)

Bilderback	Hamza Atcha	\$1,478
	Luis Lopez	\$1,478
Bourns & Various Donors	Adam Block	\$1,850
	Julianne Rolf	\$1,585
	Brandon Huynh	\$1,585
Babbage	Alex Gonzales	\$1,019
	Albert Chen	\$1,019
Gartzke	Andrew Hollist	\$1,961

Professional Development Activities

- A total of 23 Student Professional Organizations
 - Very active, with 984 members
 - 48.5% of BCoE students!
- 246 Professional Development events in '12-'13
 - Attendance to date is 7839 (3 × enrollment)
- 6436 Outreach hours
 - High School, Community College, etc.
- Congratulations to our students
 - To Jun Wang, Marc Donnhauser, Rosie Zhang
 - The Three Musketeers



Whatever happened to those muskets we were to get?
All we've been doing is building Wind Turbines!

Undergraduate Research



- 486 UG researchers
 - 23.94% of BCoE Spring'13 enrollment
 - 86 funded by college-level HSI grant
 - 46 funded under other research-oriented programs
 - MYBEST: 5, UCLEADS: 5, MSRIP: 3, CAMP: 15, NSF Career: 6, IRES-CHINA: 7, CaSGC: 5
 - 354 using other funds, course credit, or volunteering
- 72 Faculty research mentors (80% of college!)
- Outstanding job by our faculty!

Commencement 2013

- Monday, June 17, 2013
- 6 p.m.
- Pierce Lawn
- William R. “Bill” Johnson will be named Fellow of the Bourns College of Engineering
- Reception after the ceremony:
Winston Chung Hall

2nd floor patio and room 205/206

Reception will attract ~1,200 guests



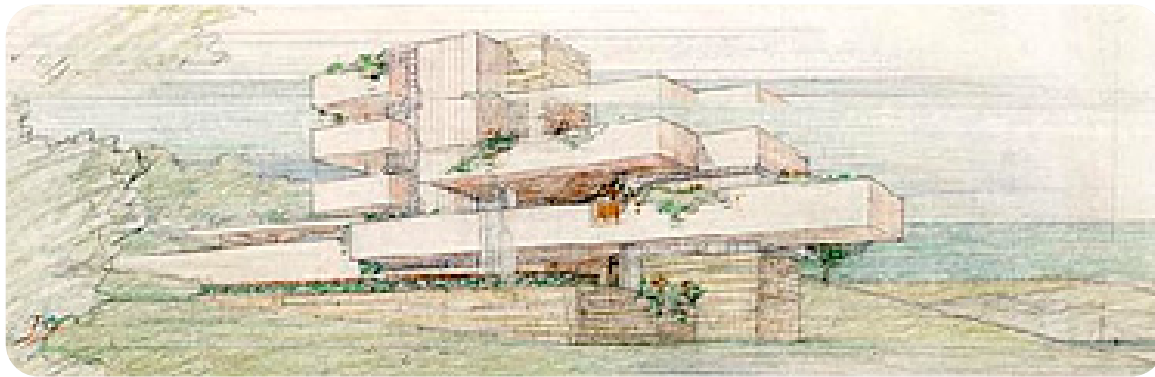
Photos from reception, Commencement 2012

Bourns College of Engineering

May 21, 2013

UCR's Newest Building

Engineering Building Unit 3 (EBU3)
Exploring Public-Private Partnerships



BCOE Students Score Two Wins at Environmental Design Competition

The team of BCOE students recently won two first-place awards at the WERC: A Consortium for Environmental Education and Technology Development competition in Las Cruces, N.M. They developed a device that replaces a lawnmower's muffler and reduces carbon monoxide by 87 percent, nitrogen oxides by 67 percent, and particulate matter by 44 percent.

[Press Enterprise story](#)
[YouTube video](#)



Team NOx-Out, from left:
Kawai Tam, their advisor, and students
Rosalva Chavez, Holly Clarke, Jonya
Blahut, Risa Guysi and Joshua Callihan.



Thank you



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