



# STATE OF THE DEPARTMENT

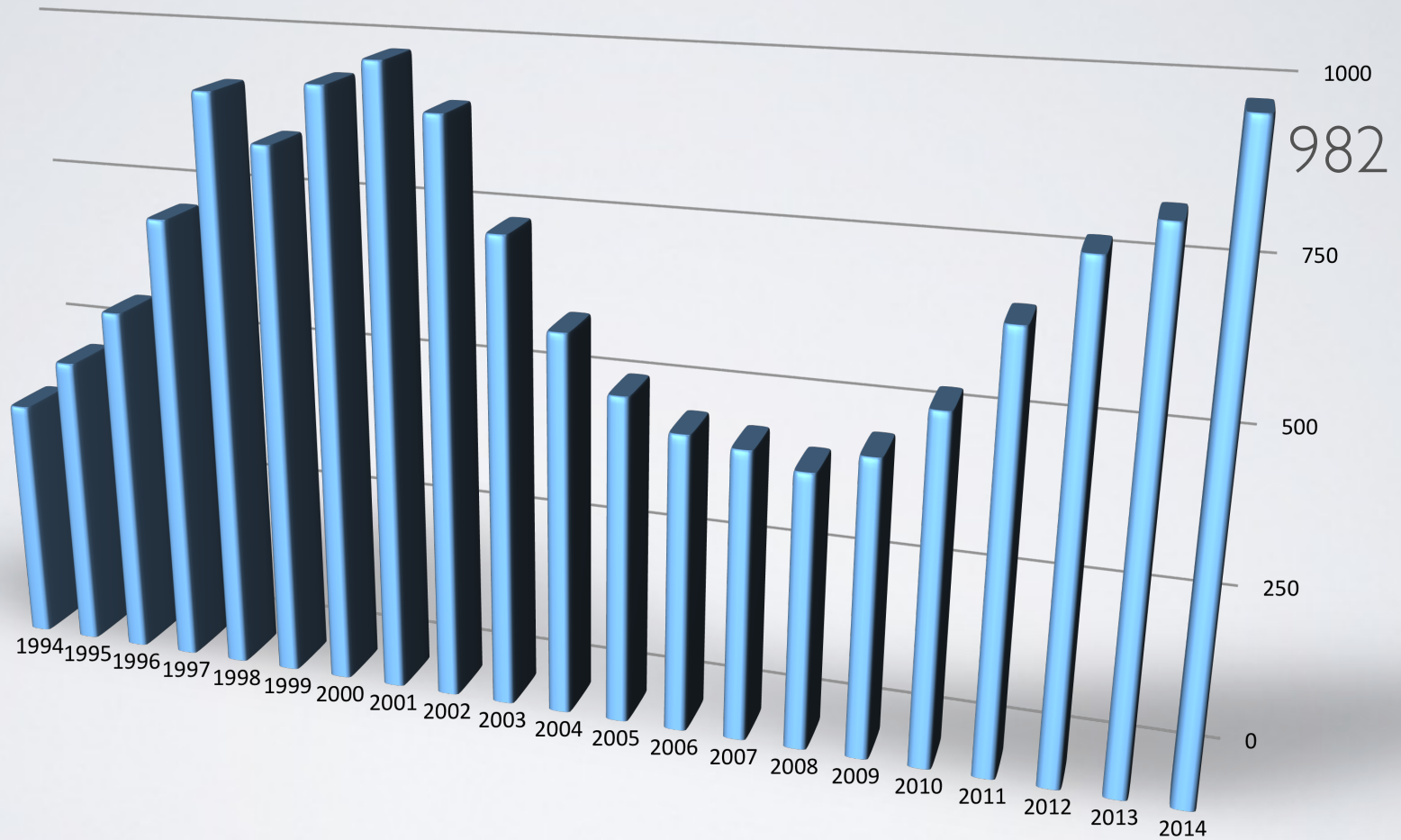
Sunil Prabhakar  
CPP, Spring 2015

# PERSONNEL

- Assistant Head
  - Vishal Lodha
  - Randy Bond
- Victory Soe: new Instructional Technologist
- Monica Shively, Academic Services Manager
- Scott Nelson, Administrator of Undergraduate Program & Services

# UNDERGRADUATE ENROLLMENT

1994-2014



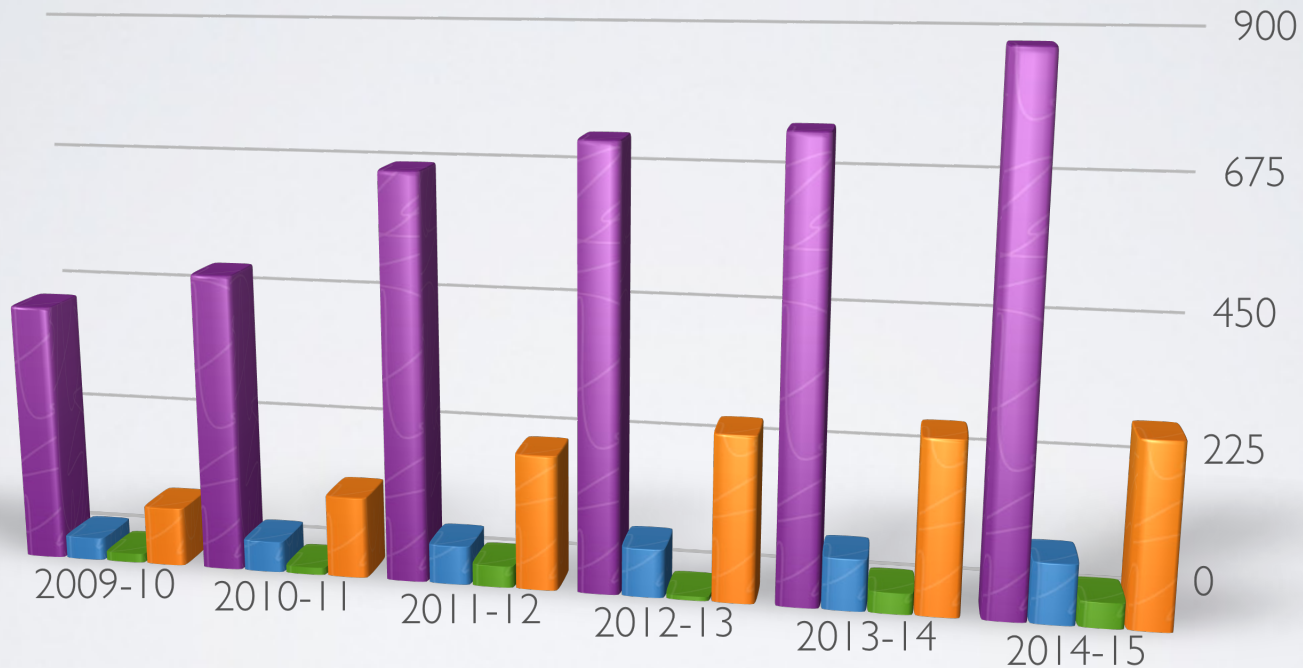
# DIVERSITY: UNDERGRAD

982 Total Undergrad Students

- 100 Female (10%)
- 42 Under Represented Minorities (4%)
- 360 In state (37%)
- 320 Out of state (32%)
- 303 International students (31%)

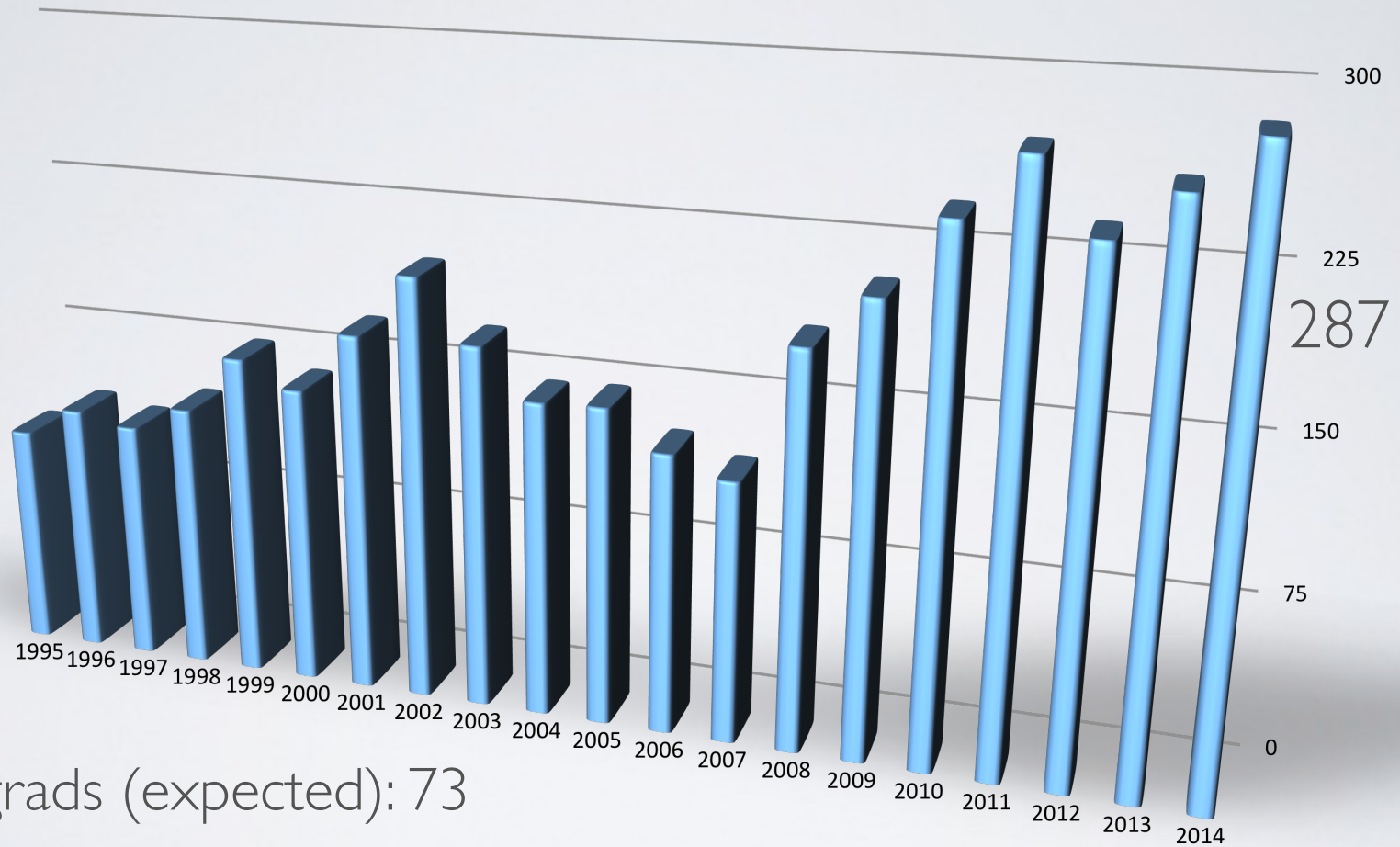
# UNDERGRADUATE DIVERSITY

Male Female URM International



# GRADUATE ENROLLMENT

1995-2014

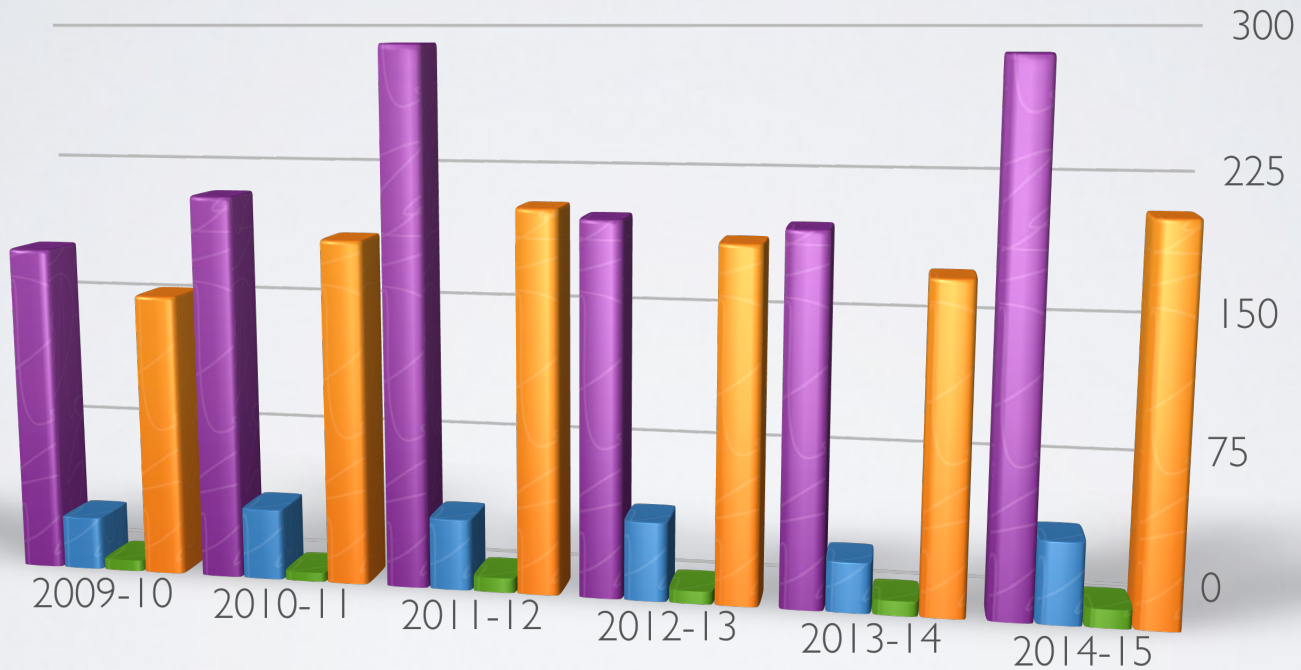


- New grads (expected): 73

\*Estimate as of 9/12/2014

# GRADUATE DIVERSITY

Male Female URM International



# DIVERSITY: GRADUATE

287 Total Grad Students

- 44 Female (15%)
- 10 Under Represented Minorities (3.5%)
- 79 US Citizens and Permanent Residents (27.5%)
- 208 International (72.5%)



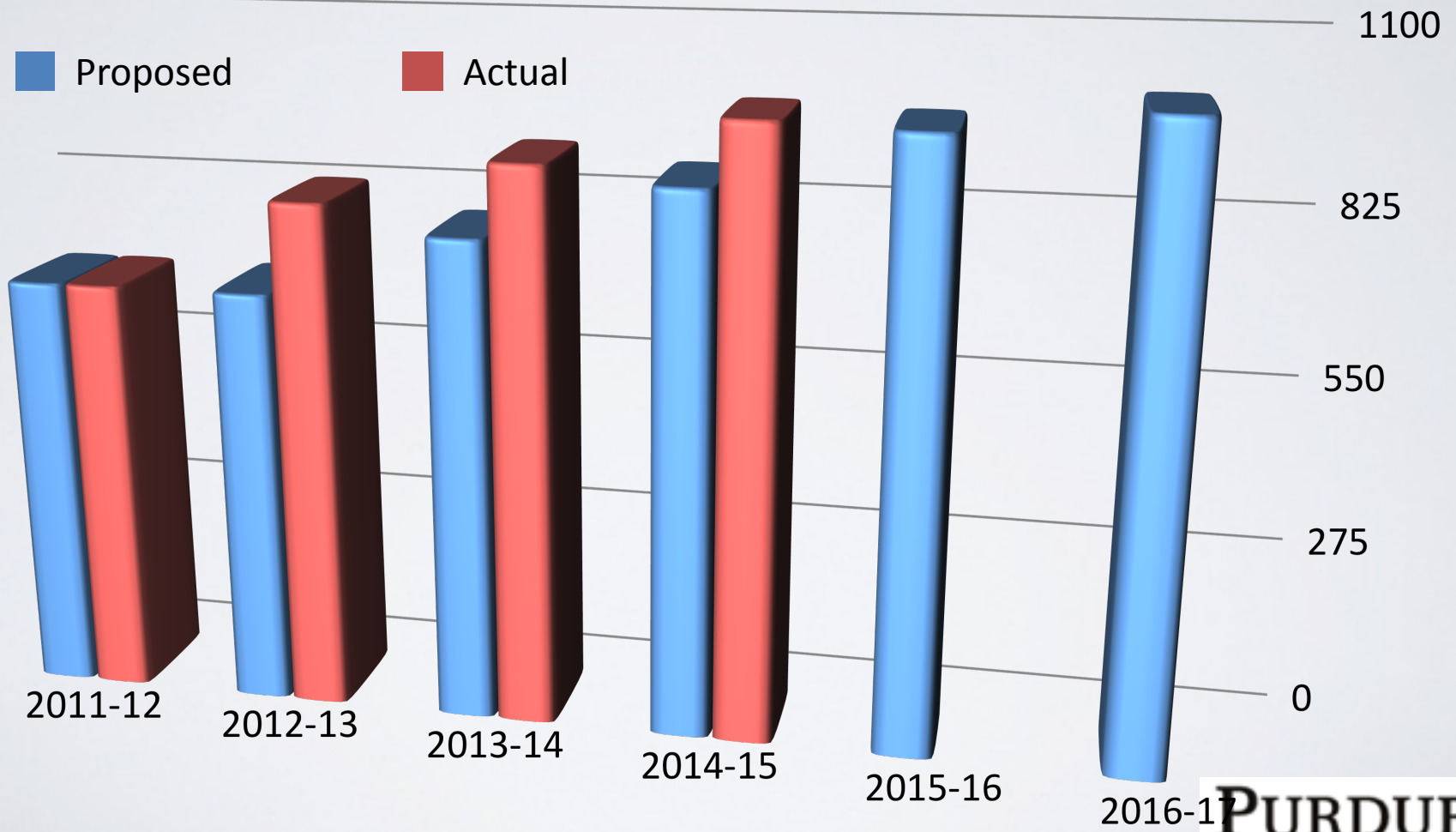
# CS EXPANSION

✓ Increase undergraduate enrollments by 27% to 1009 (982 at this time).

- Increase graduate enrollments by 27% to 311
- Hire faculty and staff to support growth in students
- Grow in stature by enhancing research in Cyber Sustainability
- Create a new Data Science degree program
  - Expediting a Professional MS in Cybersecurity

# UNDERGRAD ENROLLMENTS

Initial proposal from 2012



# CURRENT FACULTY HIRING

- Seven positions overall
- 36+ interviews this semester; Outstanding candidates
- 4 have already accepted
  - **Jeremiah Blocki**, Security PhD CMU
  - **Bruno Ribeiro**, Machine Learning, PhD UMass, Postdoc CMU
  - **Aniket Kate**, Security PhD Waterloo, Postdoc MPI, Prof. at Saarland, Head of Cryptographic Systems Research Group
  - **Hemanta Maji**, Security, PhD UIUC, Postdoc UCLA

# PROFESSIONAL MASTERS

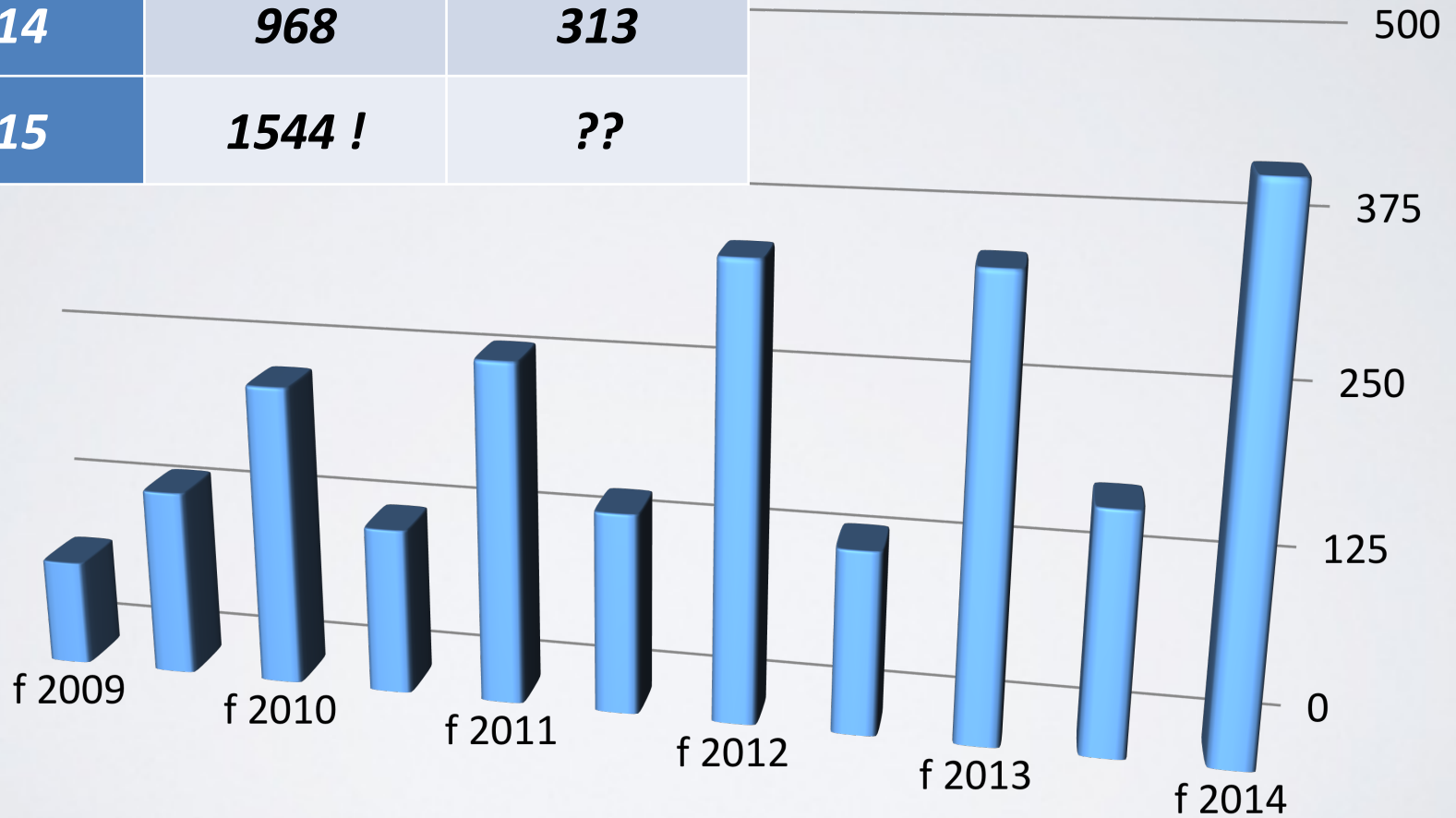
- Two Professional MS degrees are being developed
  - Cyber Security
  - Data Science
- Aggressively working to launch a Cyber Security MS in Summer 2016
- Data Science postponed by one year
- Creating four new courses in security

# ISSUES

1. Student experience
  - Managing large enrollments
2. Student success
  - Retention and diversity
3. Program quality
  - Faculty recruiting and retention

# CS I 8000 ENROLLMENTS

	<i>Admitted</i>	<i>Accepted</i>
<b>2014</b>	<b>968</b>	<b>313</b>
<b>2015</b>	<b>1544 !</b>	<b>??</b>



# MANAGING GROWTH

- Better support for students
  - More TAs supplemental instruction, student led help desk
- Increased summer course offerings
- New UG program manager, ombudsperson
- New instructional lab coordinator
- Laptop-based exams to curb dishonesty
- Multiple sections of freshman courses
- New retention and recruitment programs
  - Bridge program, NCWIT

# BRIDGE PROGRAM

- Programs designed to reach future Boilermakers and improve domain knowledge for successful transition to CS program
- “Bridge to CS 180”
  - Has grown from 20 to 60 students
  - First year retention rate: 79%
  - Students participate in a CS Bridge Learning Community
- Free course for all admitted CS freshmen over summer
- Free online CS 180 for all Indiana high school students
  - Same material as CS AP course
  - 233 students (51 women)
  - 14 Indiana teachers
  - 86 homeschooled students





# DIVERSITY

- Purdue is one of 10 universities chosen for an exclusive partnership with NCWIT (National Center for Women in Technology)
- NCWIT has provided a consultant to help organize recruitment and retention efforts
  - CS Learning Communities
  - Expanded external recruiting
  - Focused data collection
  - Mentors for Aspiring Girls in Computing (MAGIC)
- Google and NCWIT provide \$10,000 for initiatives that encourage recruitment and retention of women

# FACULTY RECRUITING

- Competition for top CS talent has increased dramatically
  - Enrollments in CS are up nationwide, as is faculty hiring
- In addition, industry is attracting faculty talent too
  - 3 CS faculty members have moved to Google over the past 2 years
- Universities are poaching
  - Six retention cases in CS over the last 6 months
  - Offers have been very aggressive

# DIFFERENTIAL FEE

- Part of original 2012 expansion proposal
- Proposal
  - Introduce a differential tuition fee similar to that in Engg.
- Goal
  - Directly enhance quality of our program
- Currently under review by the Board of Trustees

# PURDUE DAY OF GIVING

- April 29th
- All day online social media based fund raiser
- Numerous matches all day long
- CS gifts to go to scholarships