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
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>URM</th>
<th>International</th>
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<tbody>
<tr>
<td>2009-10</td>
<td>225</td>
<td>150</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>2010-11</td>
<td>275</td>
<td>200</td>
<td>75</td>
<td>75</td>
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<tr>
<td>2011-12</td>
<td>300</td>
<td>250</td>
<td>100</td>
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<tr>
<td>2012-13</td>
<td>350</td>
<td>300</td>
<td>150</td>
<td>150</td>
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<tr>
<td>2013-14</td>
<td>400</td>
<td>350</td>
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<td>200</td>
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<tr>
<td>2014-15</td>
<td>450</td>
<td>400</td>
<td>250</td>
<td>250</td>
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</table>
GRADUATE ENROLLMENT
1995-2014

*Estimate as of 9/12/2014

- New grads (expected): 73

*Estimate as of 9/12/2014
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

- 2011-12
- 2012-13
- 2013-14
- 2014-15
- 2015-16
- 2016-17

Proposed

Actual
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 18000 ENROLLMENTS

<table>
<thead>
<tr>
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<th>Admitted</th>
<th>Accepted</th>
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<tr>
<td>2014</td>
<td>968</td>
<td>313</td>
</tr>
<tr>
<td>2015</td>
<td>1544 !</td>
<td>??</td>
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</table>

The bar graph shows the enrollment trends from fall 2009 to fall 2014.
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