State of the Department 2003

- Introduction of Richard Jacobs-New CMPS Development Officer
- Financial Situation and Outlook
- Faculty Searches
- Reports from the Associate Chairs
- Miscellaneous Items
Richard Jacobs

• Our new college development (fundraising) officer

• Richard’s Background

  • Fundraising for several private schools most recently Cardozo Law School,
  • He has experience in national and international corporate finance.
  • J.D. in 1987 (Syracuse University College of Law)
  • M.B.A. in Marketing in 1987 (Syracuse University School of Management)
  • M. Phil. in 1984 and LL.M in 1983 (Cambridge University)
  • B.A. in 1981 (University of Pennsylvania).
Richard Jacobs

• Previous Experience - Lawyers

• Current Project - Us
Budget Issues

- **Fiscal Year (FY 02 and FY 03 – start July ‘01)**
  - Physics budget including CSR was reduced by $730,000 (4.7%)

- **This Fiscal Year (FY 04 – start July ‘03)**
  - Physics budget was reduced another $326K (3% including DRIF allocation)
  - 2.5% went to the Provost
  - .5% went to the Dean

- **Next Fiscal Year (FY 05 start July ‘04)**
  - Another 1% reduction requested by the Dean (101K) as down payment on future retirements

- Our share of reductions from FY 01- to FY 04 is 10% (~$1 million out of $10M)

- CMPS has a $2M structural deficit - we provide some ballast with drif
Budget Issues

- What have we done in past years to reduce expenses?
  - Eliminated 5 Ta Positions - $72k
  - Increased Buyout from Faculty Teaching from 40% to 50% of Academic Year Salary
  - Purchased much of the supplies and computer infrastructure required for 03/04 in FY 02
  - Reduced commitment to Physics shop by $42,000
  - Reduced budget for the labs by $67,000
  - Use FY 04 DRIF allocation to pay additional operating expenses $250k - Eliminated 1.5 FTE staff positions
  - CSR helped by not only by giving up their share but by taking over $100k of salaries
Budget Issues

• FY 04 Budget Projection
  – We will finish in the black without layoffs
  – This is due to the cooperation of the faculty and staff in reducing operation expenses

Thank you
What else do we have to do?

- What are we doing this year to further cut expenses?
  - Reduced phone costs
  - Eliminated distribution of DRIF to Faculty
  - Reduced staffing by another 2 FTEs
  - Further reduced subsidy to Physics shops and stores
  - Eliminated the use of instructors
  - People are helping with teaching.
What is the impact?

- Hiring will be delayed
  - Only absolute “must have” candidates
  - “Candidates the English department will say we must hire”
  - Use other resources for hiring - like IceCube support for 3yrs
- Reduced matching and startup
  - Startup will be an issue when we start hiring again
  - We will try and meet our/your needs for matching, but it will be harder.
- TAs will have to get into research support earlier
  - Long-term support with TAs will be hurt in theory groups
  - More recitation/lab sections will have to be taught by faculty
  - Less/ bigger sections of some classes
- Labs will be hurt /innovation may be limited if it’s costly
- Effect on shops
  - Long-term deterioration of shops
  - Consolidation of stores, etc
Financial Outlook (continued)

- There will probably be raises this year
  - We are expecting 2.5% allowance for merit
  - Salary Committee will look back over the last several years – (Faculty Review Forms)
  - This money will come from an increase in student tuition
    - Undergraduate tuition went up ~25% this year
    - The Board of Regents approved
      Another 9% increase for next year
  - Regent Hug’s proposal
  - Congressional legislation???
  - "College tuition and fees are getting out of control, and we need to do something about it," said Rep. Howard P. "Buck" McKeon (R-Calif.) who has proposed legislation that would penalize institutions that "repeatedly engage in exorbitant tuition hikes."
FACULTY SEARCHES

• Particle Astrophysics
• String Theory
• Gravity Wave
• Condensed Matter Theory
• Nano
• Lattice QCD
• AMO Theory
• Particle Theory
Status of Searches Last Two Years

- **AMO**
  - Hired Rolston & Orozco
  - Still working on theorist

- **Gravity Wave**
  - Working with GSFC, but there are issues

- **Dormant Faculty Searches**
  - Condensed Matter Theory
  - Lattice QCD – didn’t find an acceptable candidate
  - Particle Theory (Lost Wells to Michigan and Kaplan to Hopkins)
  - String Theory (postponed until Luty & Jacobson return from sabbaticals)
FACULTY SEARCHES (CONTD.)

• Active Search:
  – Particle Astrophysics: IceCube
    » The IceCube Collaboration has agreed to pay for the first 3 years of salary in exchange for a reduced teaching load during those years

NOTE: we are looking for creative ways to bring top faculty here while we are still experiencing financial difficulties.
FACULTY SEARCHES (CONT'D.)

• Search Committees will now be required to give a detailed itinerary for any candidates being interviewed
  – All meetings with faculty members
  – All lunch/dinner plans (where & who)
  – Where will they be staying?
  – How will they get to the hotel, university & airport?

• Why?
  – To make the right impression…
Undergraduate Education

Fred Wellstood

Undergraduate Program
Tom Gleason
Bernie Kozlowski
Fred Wellstood

State of the Department 2003
Undergraduate Physics Majors - Admissions

Applied to enter Physics in Fall 03 140
  Fall 02 120
  Fall 01 80
entered

Admitted Physics major for Fall 03 85 ----> 42 + 7 transf
  Fall 02  64
entered

Number B-K fellowship offers F' 03 7 ----> 4
  Fall 02  6 ----> 2

entering Fall 03  42 freshmen + 7 transfers = 49
  Fall 02  34 freshmen + 12 transfers = 46
  Fall 99  25 freshmen + 8 transfers = 33

Thanks to everyone who helped at recruiting events, including Maryland Day, open house last weekend, and high school visits
Physics Majors

Actual:
- 27 Phys B.S. for Sp 03
- ~ 29 total B.S. for year
- 42 freshmen + 7 trans. F 03 = 49 total F 03 entering

~190 majors

Total

Entering

Bachelors awarded

number of students

year

Physics Majors

- this fall’s entering class was strong
  - 4 B-K, ....
- large number of double majors (32%)
  - we need to be flexible to keep them
- Active SPS and undergrads making good use of new student lounge
- 5 in Education track, 1 in Meteorology track
- about 40% of graduating students went on to grad school last year
- Problems
  - attracting students and keeping them (still lots of turn over)
  - encourage students to do research (about 1/4 to 1/2 will)
  - winter-term courses (174, relativity, research)
  - need more fellowship support
  - need more research support ---> INCLUDE IN GRANTS
  - diversity low compared to university population
Budget and teaching issues

- Electronic Response Devices and Webassign
- No equipment upgrades in teaching labs
- No paid substitutes and more students
  - fewer special topics courses (700 and 800 level)
  - bigger sections
- 600 - 700 level issues
  1. Phys 721 and Phys 722 - AMO I and II
  2. Course rotation is essential but controversial
  3. Course times changed to facilitate TA assigning
- Fewer TA lines --> less grading and more faculty running discussion sections
Major Changes to the Program

Citation in Physics is being offered for the first time this semester. ---> intended for students who are not majoring in Physics or Astronomy

Since no one understands what a Citation is, the University may soon decide to convert all "citations" to "minors", perhaps with some changes in requirements.

Still working on Computation and Physics track - but held up because we still need support letter from AMSC.
Graduate Education

Nick Chant

State of the Department 2003
Application Statistics

- Sent ~ 695 letters to potential US applicants
- Offered to pay application fee
- Results

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>CHINA</th>
<th>OTHER</th>
<th>TOTAL</th>
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<tr>
<td>2003</td>
<td>258</td>
<td>235</td>
<td>176</td>
<td>669</td>
</tr>
<tr>
<td>2002</td>
<td>209</td>
<td>175</td>
<td>140</td>
<td>524</td>
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<td>2001</td>
<td>182</td>
<td>129</td>
<td>113</td>
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<tr>
<td>2000</td>
<td>98</td>
<td>140</td>
<td>104</td>
<td>342</td>
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</tbody>
</table>
# Admissions Statistics

## Fall 2003 – entering class

<table>
<thead>
<tr>
<th></th>
<th>Offers</th>
<th>Accept</th>
<th>fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellows – Grad School</td>
<td>27</td>
<td>5</td>
<td>0.19</td>
</tr>
<tr>
<td>Fellows - other</td>
<td>6</td>
<td>6</td>
<td>~0.33</td>
</tr>
<tr>
<td>US TA’s</td>
<td>67</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>RA’s</td>
<td>13</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Non-US TA’s</td>
<td>32</td>
<td>8</td>
<td>0.25</td>
</tr>
<tr>
<td>Total</td>
<td>145</td>
<td>42</td>
<td>0.29</td>
</tr>
</tbody>
</table>
# Graduate Program - Fellowships

<table>
<thead>
<tr>
<th>Fellowships</th>
<th>New</th>
<th>Existing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grad School ½ TA + Summer</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>GANN Women &amp; Minority</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>NSF</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>LHEA (NASA)</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>8</td>
<td>22</td>
</tr>
</tbody>
</table>

State of the Department 2003
# Entering Class

## Average GRE scores

<table>
<thead>
<tr>
<th>Year</th>
<th>GRE Q+V+A</th>
<th>GRE Physics</th>
<th>Total</th>
<th>gpa (US only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2086</td>
<td>750</td>
<td>2836</td>
<td>3.80</td>
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<tr>
<td>2002</td>
<td>2091</td>
<td>730</td>
<td>2821</td>
<td>3.69</td>
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<tr>
<td>2001</td>
<td>2008</td>
<td>770</td>
<td>2778</td>
<td>3.70</td>
</tr>
<tr>
<td>2000</td>
<td>1956</td>
<td>762</td>
<td>2718</td>
<td>3.71</td>
</tr>
</tbody>
</table>
Qualifier Exam - Aug. 2003

- **2002 & 2001 entering classes**
- **30 took the exam**
  - 22 passed entire exam 73.3%
  - 3 passed one Part 10.0%
  - 3 failed 10.0%
  - 2 oral 6.7%
- **Success rate**
  - 27 had some success 90.0%
  - 3 had no success 10.0%
Qualifier Exam - Aug. 2003

• 2003 entering class (Free Try)
• 17 took the exam
  – 4 passed entire exam 23.5%
  – 5 passed one Part 29.4%
  – 8 failed 47.1%

• Success rate
  – 9 had some success 52.9%
  – 8 had no success 47.1%
Facilities and Personnel

Drew Baden

State of the Department 2003
Facilities and Personnel

• AMO space
  – CSS building
    • Expect renovation completions by mid-Nov
      – Both 2nd floor and basement levels
  – Physics
    • Waiting on dominoes to finish falling…should be this month
      – Issues remain (e.g. a/c on 2nd floor, etc…TBD)
  – 10/27 is 1 year from 2002 fire
    • New switchgear servicing both N and S parts of building
    • Working on getting fuse panels replaced with breakers in S part
      – Money is the problem…campus wants to do it but money…
    • Fire alarm upgrade
      – 1st phase to connect 4 current systems is in procurement
        » Lecture halls, 1305+subbasement (Lobb/Wellstood), CSR
           (modern system), S+N all floors
Facilities and Personnel (cont)

- Electrical backup project
  - 1MW generator on top of Scub building (T lot)
  - Campus is building a transfer station for the fuel
    - Current system is on the roof, truck hoses are too short
  - Next round of outages
    - Mechanical stuff (conduit, etc) over Thanksgiving
    - Installation of panels and connection over winter term

- New stores (electrical and mechanical) website up
  - Adding Google search capability
“Starbuck’s”

• New Paint Job & New Flooring-Completed
• Plumbing is being scheduled
• Library plan approved which includes us!
  – Library (McKeldin) will get a big café, we are peanuts
• Drawings submitted to health dept for review
  – Dinning Services expect no problem
• Café will have
  – 2 secured carts, starbucks coffee, espresso machine, beverage cooler, deli cooler
• Expect this to really happen by Jan at latest
  – This time it WILL happen! 😊
• New coffee vending machine near 1322 (NW door)
Computer Services

• File Servers
  – Some died from fire, some damaged but limping
    • We are using the SAN now
      – Access is not yet optimal
      – 2 GHz switch had to be replaced…took some time
  – NSCP1 (IBM/AIX) to be retired in Dec
    • System is old, instable, and vulnerable
  – NSCP2 functioning, but some failures from fire
    • Still working on several nodes…will notify when restored

• Mail
  – Transfer to campus mail
    • http://www.oit.umd.edu/email
    • They will install anti-spam sometime next year

• Network
  – Wireless open network functioning
  – Server room upgrade
    • Cisco switch had to be cleaned, cabling upgraded to Cat 6
Computer Services

• Funding sources
  – Tech fees - $15k
    • Proposal to CMPS to fund more access points to support undergraduate students
    • Status unknown at this time
  – WDF (workstation deployment funds)
    • Status unknown

• Fire damage recovery
  – 2 SAN switches, 4 UPS, 4 DEC alpha, 7 DEC disk array, 2 DEC alpha servers…
  – Total original cost $128k
  – Negotiating replacements…
    • With Maryland insurance folks, Chubb folks…
      – Maryland is threatening to keep funds
Physical Science Complex

- The PSC is on the Master Plan for 2010
- The Provost wants to move it up to 2008
- A new committee has been formed by the campus to focus on the planning
  - Set scope of the 3 stages, especially the 1st stage
  - Details on renovations and staging
    - Non trivial – campus doesn’t want emptied space left empty for too long
  - Figure out ways to reduce cost and move it up…
  - First meeting next Monday, Oct 27
    - Physics (Goodman, Baden) + IPST (Roy, Hill) + CMPS (Lipsman, Falkinburg) + System (Falk)
Miscellaneous

- Major Faculty Awards this year
  - Yorke: Japan Prize
  - Williams: MRS Turnbull Award, Am. Fellow Academy of Arts & Sciences
  - Antonsen: IEEE Plasma Science and Applications Award
  - Ramesh: Distinguished University Professor
  - Orozco: Welcome Fellowship
  - Gates: Fellow Am. Assoc. for the Advancement of Science
  - Drake: Lifetime National Associate of the National Academies
- Retirements: Dragt & Goldenbaum at the end of the semester
  - Talk to me if you have any plans and I will see what I can do to help.
- Crash course for faculty on setting up course website
  - Many more faculty with a course web presence compared to a couple years ago
  (Contact Reka x55944 to set up an appointment)
Miscellaneous

• **Faculty must now fill out a form if they leave town**
  – Explains who is covering classes
  – Contact info
  – TA info

• **New Stores webpage**

• **2005 – centennial**
Important Dates

• Graduate Open House: April 3, 2004
• Physics Olympics: April 17, 2004
• Maryland Day: April 24, 2004
• Faculty Retreat: May 8, 2004 – at ACP
PLEASE HELP!

Please try to help us in the Chair’s Office to do our jobs.

- We will try to minimize requests
- Please submit forms and requests in a timely manner!