School of Engineering and Applied Science

Faculty and staff meeting
inaugurating AY 2011/12

August 19, 2011

SEAS Home Page: MY SEAS tab
August 19, 2011
SEAS faculty and staff meeting

Outline

1. Provost Bobby Gempesaw visiting
2. Introductions
3. Highlights of AY 2010-11
4. SEAS priorities in AY 2011-12
Provost and Executive Vice President for Academic Affairs

Conrado M. (Bobby) Gempesaw

Education

B.A., Economics,
Ateneo de Davao University,
The Philippines

M.S., Agriculture Economics,
West Virginia University

Ph.D., Agriculture Economics,
The Pennsylvania State University

Engineering, Computing, and Nursing in a student-centered, vibrant, interactive environment
Conrado M. (Bobby) Gempesaw

Provoest and Executive Vice President for Academic Affairs

Career outline

1985 – 2011 University of Delaware

93-99 Chair
99-06 Vice Provost
04-05 Acting Dean, College of Arts and Science
06-10 Dean, Lerner College of Business and Economics

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Dr. Cathy Bishop-Clark
Chair of Computer and Information Technology

- At Miami since 1989
- Associate Dean of Middletown campus (2007-2011)
- Project Director of Greentree Health Science Academy
- Recently completed a book on the Scholarship of Teaching and Learning
- Looking forward to launching the Health Information Technology degree
Dr. Justin Saul
Assistant Professor, Chemical and Paper Engineering

- BS in Chemical Engineering from Purdue University

- PhD in Biomedical Engineering from the Case Western University

- Assistant Professor in Biomedical Engineering, Wake Forest University, 2008 - 2011
Mr. Bob Setlock
Clinical Faculty, Mechanical & Manufacturing Engineering

• At Miami since 2005 as an Instructor
• Chief Departmental Advisor
• Coordinate MME Outreach Efforts
• Develop & Implement MME First Year Experience (MME 102)
• Coordinate EAS 101
Dr. Scott Campbell
SEAS Director of Technology and Instructor

- At Miami since 2000, since 2005 as Director of Computer Laboratories & Instructor
- Current responsibilities include:
  - Manage, plan, and supervise support personnel for SEAS IT division
  - Oversee computer labs
  - Interface with University IT
  - Identify and assess potential for use of emerging technologies (new!)
  - Promote technology adoption in teaching and research (new!)
  - Support and advance use of social media and distance learning (new)
Mr. Jeff Triplett
Systems Administrator

• Miami Class 2006
  – major Computer Engineering,
  – minor Computer Science

• Network Support Specialists since 2006

• Recently promoted to Systems Administrator
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Highlights of the 2010/11 Academic Year

- undergraduate education
- graduate programs
- faculty scholarship
- faculty awards and recognitions
- student projects and awards
- implementation of SEAS 2009 – 2013 strategic plan
- noteworthy developments and events
- outreach programs
New programs

- CIT: New Bachelor’s completion degree in Health Information Technology developed and approved (pending B of R approval)

- CPE: Bioengineering - First sizeable cohort of students enrolled; ready to offer sophomore experience

- CSE: Software Engineering major in its second year, first 2 graduates
Accreditation

Major Six-Year Cycle ABET Fall 2010 visit

• successful planning and execution
• clean bill of health for MME and CPE
• shortcomings identified by ABET in ECE and CSE majors; addressed by departments in so called 30-day reports
• final word expected from ABET in August/September
Other noteworthy developments

• CSE: 1306 students enrolled in CSE 148 Computing in Business
• NSG: admitted last AD class to MUM, taught last AD class at MUH
• ECE: significant changes of their curricula
• MME: review of all their courses to ensure that three key areas are addressed – design, research, leadership
• ENT: web-based content of all but two ENT courses significantly improved
• 15 new courses developed and approved
School of Engineering and Applied Science
Highlights
Academic Year 2010-11

Graduate programs
Graduate programs

• School-wide coordination of graduate programs implemented (SEAS Graduate Council established, several new policies developed and implemented)

• Computational Mechanics track launched in Computational Engineering and Science MS program

• Yet another attempt to increase number of graduate assistantships barely successful (from 22 to 24)
School of Engineering and Applied Science Highlights

Faculty Scholarship
## Publications (calendar year 2010 – Oxford only)

<table>
<thead>
<tr>
<th></th>
<th>Peer-reviewed journals</th>
<th>Peer-reviewed Conference proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>CPE</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>ECE</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>MME</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>67</td>
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## Publications (calendar year 2010 – regionals)

<table>
<thead>
<tr>
<th></th>
<th>Peer-reviewed journals</th>
<th>Peer-reviewed Conference proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>ENT</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>NSG</td>
<td>5</td>
<td>3</td>
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<tr>
<td>Total</td>
<td>15</td>
<td>23</td>
</tr>
</tbody>
</table>
Grants (Oxford only)

External funding: $2,365,775

- CSE  ~$1,047k
- ECE  ~$  666k
- MME  ~$  416k
- CPE  ~ $  236k
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Highlights
Academic Year 2010-11

Faculty awards and recognitions
Tenure and Promotion

Janet Burge, tenured and promoted to Associate Professor, CSE

Anna Dollár promoted to Professor, MME

Gerald "Jerry" Gannod, promoted to Professor, CSE

Dmitriy Garmatyuk, tenured and promoted to Associate Professor, ECE

Carter Hamilton, tenured and promoted to Associate Professor, MME

Paula Harrison, tenured and promoted to Associate Professor, NSG

John Karro, tenured and promoted to Associate Professor, CSE

Jeong-Hoi Koo, tenured and promoted to Associate Professor, MME
Andrew Olson Generational Teaching Excellence Award

The award was presented to Lukasz Opyrchal at the SEAS Recognition Ceremony on May 7, 2011.

Dr. Lukasz Opyrchal,
Assistant Professor
Computer Science & Software Engineering
SEAS Outstanding Researcher Award

• “Over the past five years, (her) research record (has been) outstanding. She has obtained over 2 million dollars external funding, published sixteen peer-reviewed journal papers and given 28 invited talks”. 
SEAS Outstanding Researcher Award

• “Dr. Jade Morton is an internationally recognized leader in the field of Global Navigation Satellite Systems (GNSS) and related technical areas.”

Dr. Jade Morton
Professor
Electrical and Computer Engineering
Elected to positions in professional organizations

- Jade was elected as the 2011 President of the International Association of Chinese Professionals in Global Positioning Systems (CPGPS)

- Vice Chair for the US Institute of Navigation (ION), Satellite Division in 2011-12
Faculty Service-Learning Award - MUM

Ms. Nancy Kern-Manwaring
Assistant Professor
Nursing

• Nancy has been awarded the inaugural Maamawi Award for Faculty Service-Learning at Miami University Middletown

• This award honors faculty members whose activities in the field of Service-Learning epitomize Miami University Middletown’s dedication to community engagement
Co-PI on a $2 Million Grant from US Department of Health and Human Services

- The HHS’s Office of Adolescent Health for the Teenage Pregnancy Prevention is providing the funds for the 5-year project: Keep Females on Course for US (FOCUS)

- The co-principal investigators are Sherrie Bluester, director YWCA, and Brooke Flinders. The curriculum will be delivered by third-year BSN students to community teens through connections with high schools, social service agencies and community centers

Ms. Brooke Flinders
Assistant Professor
Nursing
MU Distinguished Scholar Award

• Janet is one of four Miami University professors who received a Distinguished Scholar Award in 2010/11

• conferred on faculty members with a substantial and continuing record of outstanding scholarly or creative work

Dr. Janet Burge
Associate Professor
Computer Science and Software Engineering
Recipient of two prestigious awards

- Outstanding Teacher of the Year by the North Central Section of the American Society for Engineering Education (ASEE)
  - The North Central Section includes Michigan, Ohio, Pennsylvania, and West Virginia
- University System of Ohio’s Faculty Innovator Award
  - Anna is one of 10 statewide recipients of this award, which recognizes creative ways that reduce the cost of course materials while also improving educational content

Dr. Anna Dollár
Professor
Mechanical and Manufacturing Engineering

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Professional recognitions

• Chair, Mechanics Division, American Society for Engineering Education, 2010/11
• Plenary Speaker, Annual ASEE Meeting, Vancouver, Canada
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Highlights
Academic Year 2010-11

A sampling of undergraduate student projects/research
Augmented Reality System for Shelf Reading

Dr. Bo Brinkman and Matt Hodges (CSE)

- Undergrad research project—help librarians quickly sort books on the shelf
- Publicity of prototype
  - 63,000 hits on YouTube
  - Blog stories at Chronicle of Higher Ed, Fast Company, Read-Write-Web
- Development continues this year via CSE 448/449 capstone
2011 MUITDC – Winning Team

“Innovations in Autonomy: Miami Students Creating Smart Applications for Smart Phones” - Miami University Interdisciplinary Technology Development Challenge (MUITDC).
Advisors: Jerry Gannod and Jade Morton.

The my Metro app is designed to use GPS signals onboard Miami buses to track their location and estimated arrival at stops in real time.

Watch the video on the SEAS website
Miami’s “RedBlade” snowplow wins 2nd place

A team of our seniors placed second in the First Annual Autonomous Snowplow Competition with their RedBlade robotic snowplow.

The competition was held Jan. 27-31 in St. Paul, Minn., during the St. Paul Winter Carnival.
Advisors: Peter Jamieson and Jade Morton
M-Learning Center - Miami Mobile App

With the help of the SEAS students, Miami University launched an iPhone application that provides up-to-date campus news, events, and general information.

Advisor: Jerry Gannod, professor of CSE and director of Miami’s M-Learning Center

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Solar Cells on Paper

A team for CPE undergraduate students comprised of Felicia Daniels, Janet Dooley, Sheryl Kavetza and Scott Vasko succeeded in creating solar cells from paper!

It is the first time ever that this feat has been accomplished. Paper offers a compelling substrate for this energy conversion since it is flexible and inexpensive.

Advisor: Lei Kerr
Computer Science meets Bioinformatics

CSE majors Ryan Kelly and Han Wang worked as undergraduate summer scholars with Iddo Friedberg, assistant professor of microbiology and affiliate in computer science and software engineering.

Both students had the opportunity of using the Ohio Supercomputer Center for their research.
School of Engineering and Applied Science
Highlights
Academic Year 2010-11

Major student awards
Provost Student Academic Achievement Award

Robert Sinko
Double major: Mechanical Engineering & Statistics
NASA Glenn Research Center – Interned in the Tribology and Mechanical Components Branch
Student Tutor at the Rinella Learning Center

James Gung
Double major: Computer Science & Linguistics
NSF sponsored Summer Research on dynamically adaptable systems at Michigan State
Plays the violin in Miami’s Symphony Orchestra

Matthew Hodges
Major: Computer Science
Worked with Eric Bachmann on the augmented reality on smart phones for library book sorting
Miami University Student Ambassador

Note: In the last four years, 11 awards for SEAS students (out of 42 at Miami University)
President’s Distinguished Service Award

Erin Michelle Howe, 2011, Nursing, from Hamilton, Ohio, received the President’s Distinguished Service Award for contributing her tireless energy and medical expertise to the homeless community of Butler County, Ohio.
School of Engineering and Applied Science
Highlights
Academic Year 2010-11

Implementation of SEAS 2009-2013 strategic plan
SEAS 2009-13 strategic priorities

Focus on:

• Recruitment
• Experiential learning
• Undergraduate research
• Global presence
## Recruitment (Oxford)

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th># of confirmations as of May 5</th>
<th># of confirmed students who matriculated</th>
<th>% of confirmed students who matriculated</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
<td>214</td>
<td>175</td>
<td>82</td>
</tr>
<tr>
<td>2008</td>
<td>283</td>
<td>237</td>
<td>84</td>
</tr>
<tr>
<td>2009</td>
<td>258</td>
<td>236</td>
<td>91</td>
</tr>
<tr>
<td>2010</td>
<td>395</td>
<td>328</td>
<td>83</td>
</tr>
<tr>
<td>2011</td>
<td>362</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
Enrollment in ENT

<table>
<thead>
<tr>
<th>Semester</th>
<th>Number of majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2006</td>
<td>146</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>212</td>
</tr>
<tr>
<td>Fall 2008</td>
<td>239</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>258</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>280</td>
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<tr>
<td>Spring 2011</td>
<td>296</td>
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</tbody>
</table>
Experiential learning – a snapshot from CPE

Exit interviews (April 2011)

<table>
<thead>
<tr>
<th>Category</th>
<th># of students responding</th>
<th># of students reporting experience</th>
<th>% of students reporting experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internships/co-ops</td>
<td>21</td>
<td>11</td>
<td>52</td>
</tr>
<tr>
<td>Undergraduate research</td>
<td>22</td>
<td>17</td>
<td>72</td>
</tr>
<tr>
<td>Service learning</td>
<td>22</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td>Professional organizations</td>
<td>21</td>
<td>16</td>
<td>77</td>
</tr>
<tr>
<td>Professional training</td>
<td>23</td>
<td>8</td>
<td>35</td>
</tr>
<tr>
<td>Studies abroad</td>
<td>23</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Studied foreign language</td>
<td>23</td>
<td>4</td>
<td>17</td>
</tr>
</tbody>
</table>
Global experience – a snapshot from MME

- Carter Hamilton - summer school at and research collaboration with AGH University of Science and Technology in Kraków, Poland
- Jeong-Hoi Koo – study abroad program at and research collaborations with Korea Advanced Institute of Science and Technology (KAIST) and Samsung C&T Engineering and Construction Group
- Kumar Singh - research collaboration with the University of Liverpool, UK
Global experience – a snapshot from MME

• Michael Bailey-Van Kuren - Design Interactive Workshops in Dublin, Ireland (2010) and at the University of Lincoln, UK (2011)

• Amit Shukla collaborative program with and service on the Advisory Council of SV College of Engineering, Indore India
School of Engineering and Applied Science
Highlights
Academic Year 2010-11

Noteworthy developments and events
Support of university-wide strategic goals

• Efficiency of our core educational efforts
  – administrative support for academic units
  – faculty composition
  – workload policy
  – section size
  – viability of SEAS undergraduate programs
  – graduate programs

• New revenue-enhancing opportunities (planning process)
Development and alumni relations

• SEAS Leadership Institute

• Reinvigoration of PSE Foundation presence on campus

• Without SEAS Development Director since October 1

• Increased presence on Facebook, Linkedin, Twitter (CSE)

• Very successful Alumni Conference in March 2011 (CSE)
Other noteworthy developments

- Greentree building becomes a reality
- SEAS Governance document modified and approved
- SEAS IT strategic plan developed
- New SEAS administrative structure up and running
- Engineering and Computing day
- M-learning center established and approved
School of Engineering & Applied Science
Highlights
Academic Year 2010-11
Outreach Programs
Nursing Students – Health Awareness in Elementary Schools

Miami University Hamilton nursing and psychology students brought health education to third grade students at Wildwood Elementary School.

Some of the health areas covered was the importance of regular exercise, bike safety, and the significance of individuality.
The Myaamia Project

CSE teamed up with the Myaamia Project to revitalize Miami Indian tribal language

Doug Troy worked first with a graduate student to create a children’s book with Myaamia smartpen-enabled translation, along with a phrase book for adults

The ultimate goal is to create a “home learning kit” for use by Miami Tribe families to aid in learning the language
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SEAS priorities in AY 2011 - 12
Curriculum (goals in parenthesis)

- Health Information Technology (implement new program)
- Bioengineering (enhance infrastructure in support of the new program – faculty, labs, student activities)
- New +2 BS programs in Engineering Technology (conduct feasibility study)
- CSE 148 Computing in Business (secure future offering of this crucial computer literacy course)
- Graduate education (fully implement new non-thesis and 5-year BS/MS programs)
Implementation of SEAS 2009-2013 strategic plan

Focus on (goals in parenthesis):

• Recruitment (increase the number of SEAS confirmed students from 375 /as of 06/01/11/ to 425 /as of 06/01/12/)

• First year experience (refine and implement new first year experience for SEAS students)

• Global experience (capitalize on Miami Global Plan and increase the number of SEAS students studying abroad by about 20% compared to 2010-11, including summer)

• Undergraduate research (increase the number of undergraduate students involved in research by 20% compared to 2010-11, including summer)
Other priorities (goals in parenthesis)

- SEAS Leadership Institute (launch the Institute and implement Phase I of its Strategic Plan)
- Public relation issues (increase SEAS visibility by improving our Web presence and capitalizing on the establishment of the Leadership Institute)
- Engineering Scholars’ incentive (brainstorm the concept and develop a program aimed at attracting more high-achieving students to SEAS)
Other priorities (goals in parenthesis)

- Assessment (develop learning outcomes and assessment plans for CIT associate and SEAS graduate programs)
- Course evaluation (finalize new SEAS questionnaire and go on-line)
- Graduate assistantships (increase the number of assistantships from OARS and faculty grants)
- Promotion to Full Professor (implement new policy; encourage and facilitate promotion of associate professors to full professorship)
Support of university-wide strategic goals (goals in parenthesis)

- Efficiency of our core educational efforts (continue addressing MU priorities related to administrative support for academic units, faculty composition, workload policy, section size, viability of programs offered by SEAS, and graduate programs)
- New revenue opportunities (finalize SEAS revenue enhancing initiatives planning and start implementation phase in the summer of 2012)
- Engineering course and program fees (conduct feasibility study)
SEAS priorities in 2011-12

To be further discussed

- in departmental meetings
- in a SEAS faculty and staff meeting in September

Have a fruitful and rewarding academic year!