WRIGHT STATE UNIVERSITY

BITS & PCs

A Newsletter for our Students, Faculty, Staff and Friends

College of Engineering and Computer Science NEWS

January 2004
Volume 20, No. 3

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www.engineering.wright.edu

Women Join Together in Engineering

High school girls worked in teams to design towers made out of straws and spaghetti.

The College of Engineering and Computer Science held its first ever Women in Engineering Day on November 21, 2003. The event introduced high school aged girls to the field of engineering, and was sponsored by the WSU chapter of the Society of Women Engineers.

Over 100 girls from as far away as Findlay, Ohio arrived early that morning at the Student Union Multipurpose Room, where they were greeted by members of SWE, and soon began a team-building activity, constructing towers from a limited supply of materials. During the day, participants listened to guest speakers Dr. Karen Townsend, owner of Advanced Management Solutions and Dr. Jennie Gallimore, of the BIE Department. They also participated in an egg drop contest held in the Russ Center atrium, and were able to question a panel of engineering students about their field.

The event provided prospective female engineering students with a great way to learn about college in general, meet current women in engineering, and learn about the opportunities available to them.

At the end of the event, participants were asked to fill out a survey rating their experiences during the day. The results from the surveys are being analyzed for future improvements and plans are already underway for next year.

Student Organizations Retreat to Camp Kearn During Post-Exam Weekend

Exam week can be a hectic time for many students, especially engineers, so a couple CECS student groups decided to take advantage of the first weekend of winter break to help students wind down.

The Wright Engineering Council and the Tau Beta Pi Engineering Honor Society each held independent retreats at Camp Kern in Lebanon, Ohio during post-exam weekend, November 22-23, 2003.

The WEC members used the time to get to know each other, have fun and relax after the quarter, and listen to the Dean discuss goals for the college and ways they would help accomplish those goals.

Dean Brandeberry came to discuss future plans for the college with the students, and WEC members thanked him by treating him to dinner at the Outback Steakhouse.

The 17 members also played problem-solving games, hiked in the woods, and built a campfire for s'mores.

Tau Beta Pi held the first of what it hopes to be an annual event at Camp Kern in order to bring the group together and become more active during the school year. The members had several team-building activities, went on a hike, and climbed Pete's Tower.

Both groups also took time out to watch the football game between Ohio State and Michigan.

Each group would like to thank their respective planning committees for all their hard work leading up to a great weekend.

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Faculty Facts

Below is a□
by our faculty.

Amer, Maher S. (MME)
Process Quality Control and Repair Techniques for the Next Generation HgCdTe Infrared Focal Plane Arrays
Thot, LTD.
8/14/03-2/14/04.....$27,978

Amer, Maher S. (MME)
Molecular Modeling of Polymeric Nanocomposite Materials
Universal Energy Systems, Inc. (UES, Inc.)
11/12/03-11/11/04.....$104,700

Bourbakis, Nikolaos G. (ITRI)
Presented two papers on Object Recognition Using Local-Global Graphs and An L-G-based Model for Brain Biometrics at the 2003 IEEE International Conference on Tools with Artificial Intelligence held in Sacramento, CA, November 3-5. The conference was co-sponsored by ITRI.

Bourbakis, Nikolaos G. (ITRI)
Co-General Chair for the ACM Workshop on Biometrics on November 8. The Workshop is part of the 11th Annual ACM International Conference on Multimedia held in Berkeley, CA, November 2-8.

Bourbakis, Nikolaos G. (ITRI)
Brandeberry, James E. (CECS)
Priorities in Graduate Education
Ohio Board of Regents
7/1/03-6/30/04…….....…$65,240

Brandeberry, James E. (CECS)
Priorities in Graduate Education (Computer Science)
Ohio Board of Regents
7/1/03-6/30/04…….....…..$91,210

Cox, Michael T. (CSE)
Distributed Collaborative Decision Support Technology
Ball Aerospace
10/1/03-6/30/04..….....….$24,983

Cox, Michael T. (CSE)
Goal-Based Plan Management for Emergency Response
Science Applications International Corporation (SAIC)
1/1/03-9/30/04…….....…….$20,000

Emmert, John (EE)
Hardware Design of Real Time, Highly Adaptable Control for Intelligent Radio Frequency Front Ends
Department of Defense, Air Force, Air Force Research Laboratory
6/27/02-10/26/04…….....$150,000

Garber, Fred D. (EE)
Sensor ATR Technology
Sverdrup Technology, Inc.
2/21/03-8/20/03.....…..$2,287

Grandhi, Ramana V. (MME)
Penmetsa, Ravi C. (MME)
Multidisciplinary Design Optimization for High Reliability and Robustness
Department of Defense, Office of Naval Research
10/1/02-9/30/05…….....….$120,000

Hangartner, Thomas N. (BIE)
Evaluation of a Novel Treatment for Osteoarthritis of the Knee
Procter & Gamble Company
8/6/99-9/30/05…….....…$22,003

Hangartner, Thomas N. (BIE)
Postmenopausal Evaluation and Risk Reduction
Pfizer, Inc.
1/1/02-12/31/04…….....…$7,977

Hill, Raymond (BIE)
Narayanan, Sundaram (BIE)
Modeling Sortie Generation, Maintenance, and Inventory Interactions for Unit Level Logistics Planners
University of Arkansas
9/5/03-1/29/05…….....…….$42,826

Kazimierczuk, Marian (EE)
Co-authored several papers for IEEE Transactions on Circuits and Systems: Part I, Vol. 50. "Effect on a Current Sensing Resistor on Required MOSFET Size" (May, 2003), "ZVS Condition Prediction Sensor for the Class E Amplifier" (June, 2003), and "Comparison of Class E Amplifier with Nonlinear and Linear Shunt Capacities" (August, 2003).

Narayanan, Sundaram (BIE)
Kight, Amanda C. (BIE)
Diverse Data Fusion, Information Theory, and Evaluation Techniques
Anteon Corporation
10/1/03-9/15/04…….....…..$6,000

Quek, Francis (CSE)
From Video to Information: Cross-Modal Analysis of Planning Meetings
Department of Defense, Maryland Procurement Office
9/30/03-9/29/05…….....….$794,586

Shaw, Arnab K. (EE)
Performance Assessment for Foliage Penetrating Radar Target Detection
Dayton Area Graduate Studies Institute (DAGSI)
7/2/01-6/30/04…….....…..$6,091

Wolff, J. Mitch (MME)
Ohio Space Grant Consortium Campus Allocation 2003-04
Ohio Aerospace Institute
9/1/01-8/31/04…….....….$4,000

National Engineers Week Coming in February

Plans are underway for this year's National Engineers Week, to be held February 16-20 under a new international theme.

National Engineers Week is an annual celebration involving thousands of engineers, teachers, students, and leaders in government and industry. Founded in 1951 by the National Society for Professional Engineers, its goal was to increase public awareness and appreciation for engineering. This still holds true today.

The College and many of its student organizations are planning a variety of events for the week, including:

- Nerd Fashion Show
- Trebuchet Contest (High Schools)
- CECS Open House
- Mocktail Competition
- Penny Wars
- Mr. & Ms. Engineer Competition

Student organizations are encouraged to participate in these activities and add to the list in order to contribute as much as possible to the festivities.

Next month's BITs & PCs will feature a complete schedule of events including times and locations. For more information, or to schedule an event for E-Week, contact Jenny Garringer via e-mail at jgarring@cs.wright.edu or by phone at (937) 775-5001.

February 16-20, 2004

Dean's List
Fall 2003

Biomedical Engineering

Austin Balogh	High Honors
Kelly Barrett	High Honors
Chet Closson	Highest Honors
Marie Craig	High Honors
Allison Gadd	Highest Honors
Jennifer Garber	High Honors
Michael Jean	Highest Honors
Carmelo Lamancusa	High Honors
Georg Lastoskie	Honors
Adam Lenger	Highest Honors
Andrew Maley	Highest Honors
Shannon Mayne	Honors
Vestine Mukanshimiye	Highest Honors
Zane Omler	High Honors
Muhammad Qureshi	Honors
Grant Roush	High Honors
Anthony Sabatini	High Honors
Michael Varney	High Honors
Catherine Zelnio	Highest Honors

Computer Engineering

Paul Anderson	High Honors
Rohit Bhat	High Honors
John Bielas	Honors
Jason Boudi	Highest Honors
Peter Buxa	Highest Honors
Andrew Dittes	High Honors
Chad Erisman	High Honors
Thomas Fordon	Honors
Peter Gibbs	Honors
Jason Horsman	Honors
Joseph Juhasz	Honors
Hardik Lagad	High Honors
Luke Mckellar	Honors
Linda Moore	Highest Honors
Ghesu Ndefru	Highest Honors
Lalu Patel	Highest Honors
Alexey Semjonovs	High Honors
Pride Starnes	Highest Honors
Samuel Stone	Highest Honors

Computer Science

Mohammad Ali	High Honors
Kossi Aloeyi	Honors
James Antisdel	High Honors
Nathaniel Ayres	High Honors
Jonathan Ball	Highest Honors
Chaitanya Bandlamudi	High Honors
Brian Bartizek	Honors
David Best	Highest Honors
Robert Bever	Honors
Craig Birkemeier	Highest Honors
Jeffrey Bissantz	Highest Honors
Kyle Bledsoe	Highest Honors
David Boles	Highest Honors
Robert Budde-Albrecht	Highest Honors
Robert Crabtree	High Honors
George Harlan	High Honors
Matthew Hazen	Highest Honors
Peter Holm	High Honors
Khanh Huynh	High Honors
James Knapp	High Honors
Adam Kubach	Highest Honors
Eric Maxwell	Honors
Brian Mcraven	Highest Honors
Robert Molnar	High Honors
Thomas Patterson	Honors
Richard Rose	High Honors
Stuart Sergeant	Highest Honors
Benjamin Sutcliffe	Highest Honors
Adam Timmerman	Honors
John Tobe	High Honors
Christopher Ward	High Honors
Jeremy Warren	Honors
Gary Wooddell	High Honors
Aneta Zeppettella	High Honors

Electrical Engineering

Michael Anderson	Honors
Jason Blackaby	Highest Honors
David Blubaugh	Highest Honors
Dave Brown	High Honors
Nghi Bui	High Honors
Clifton Bullmaster	Honors
Mark Chaplin	Honors
Daniel Featherstone	Highest Honors
Matthew Graham	High Honors
Henry Griffith	Highest Honors
Anthony Halley	Highest Honors
Matthew Judd	Highest Honors
Heung-su Kim	High Honors
Andrew Kondrath	Highest Honors
Julie Lee	Honors
Benjamin McClurg	Honors
Ryan McGinnis	Highest Honors
Brian Ore	Highest Honors
Brian Poling	High Honors
Simarpreet Rattan	High Honors
Matthew Rickey	Honors
Joe Sharp	High Honors
Joshua Smith	Honors
Thomas Steffen	Honors
Brian Wirick	Highest Honors

Engineering Physics

Dean Brown	Highest Honors
Orelle Fogle	Highest Honors
William Ford	High Honors
David Fultz	Honors

Industrial & Systems Engineering

Lisa Denson	Honors
Christine Esperanza	Highest Honors
Karen Heitkamp	Honors
Renecia Joseph	High Honors
Kelly Loughlin	Highest Honors
Matthew Neme	High Honors
Krystal Thomas	Honors
Andrea Thompson	Honors

Materials Science & Engineering

David Fortener	Honors
Joshua James	Highest Honors
James Ryan	Highest Honors

Mechanical Engineering

Mark Arlinghaus	Highest Honors
Devin Bohn	Highest Honors
Andrew Brackman	Highest Honors
Mark Brooks	Honors
Joshua Burger	High Honors
Jack Burke	Honors
Mary Combs	High Honors
Michael Corbett	Highest Honors
Jonathan Coyle	High Honors
Bobby Dean	Honors
Andrew Dwenger	Highest Honors
Levi Elston	Highest Honors
Andrew Fleming	Highest Honors
Jennifer Froelich	High Honors
Joseph Fuhr	Honors
Joshua Fuhr	Honors
Shane Gaerke	High Honors
David Gerschutz	High Honors
Tye Gietzen	Honors
Carlos Gutierrez	Honors
Eric Heinrich	Honors
John Holtkamp	Honors
Justin Hughes	High Honors
Adam Huwer	High Honors
Lucas Jacobs	Honors
Jason Johnson	Honors
Joshua Kossler	High Honors
Jeffrey Laubenthal	High Honors
Jeffrey Lichty	High Honors
Brian Lovewell	Honors
Scott Magoteaux	Honors
David Neff	Highest Honors
Gregory Palm	Highest Honors
James Potters	Honors
Rebekah Puterbaugh	Highest Honors
Aaron Reinhart	High Honors
Matthew Riley	Highest Honors
Jason Robinson	Highest Honors
Matthew Saunders	High Honors
Adrienne Schaab	Highest Honors
Donald Schenck	High Honors
Kristen Shiverdecker	Honors
Scott Stanfield	High Honors
Randy Tobe	Highest Honors
Jeremy Tumpak	Honors
Justin Van Horn	High Honors
Aric Wagner	High Honors
Lindsay Walthall	Highest Honors
Jessica Williams	High Honors

Pre-Biomedical Engineering

Stephanie Auld	High Honors
Ryan Foster	Highest Honors
Lisa Griffith	High Honors
Christina Schrider	Highest Honors
Steven Wood	High Honors

Pre-Computer Engineering

Davide Bianca	Honors
Anthony Edgar	Honors
Daniel Garling	Highest Honors
Tyler Magistrelli	High Honors
Andrew O'Connor	High Honors
Brandon Reinhart	Highest Honors
Jonathan Roach	Honors
Brad Turner	Highest Honors
Toshia Wenning	High Honors
Daniel Whitman	Honors

Pre-Computer Science

Chris Borland	Highest Honors
Sam Canfield	High Honors
Jesse Corns	High Honors
James Dagg	Highest Honors
Todd Dobmeyer	High Honors
Emily Ernst	High Honors
Amanda Hanes	Highest Honors
Robert Hoos	Highest Honors
Benjamin Irvin	Honors
Romeao Jennings	Honors
Daniel Klima	Highest Honors
Brandon Mills	High Honors
Benjamin Murray	Highest Honors
Paul Nieberding	Highest Honors
Gregory Parks	Honors
Paul Tarka	Honors
James Uphaus	Highest Honors
Joshua Varner	High Honors
Seth Wilhelm	Highest Honors

Pre-Electrical Engineering

Nicholas Baine	Highest Honors
Nicholas Gale	Highest Honors
Terry Kolakowski	Highest Honors
Andrew Lingg	Highest Honors
Jonathan Magin	High Honors
Kiron Mateti	Highest Honors
Kevin Scholl	High Honors
Jeffery Sparks	Honors
Sean Stevens	Highest Honors
Adam Webb	Highest Honors
Paul Webb II	High Honors
Anne Zelnio	Highest Honors

Pre-Engineering

Craig Smith	High Honors
Nicole Theisen	Highest Honors

Pre-Engineering Physics

Nick Chenoweth	Honors
Christopher Venema	High Honors

Pre-Industrial & Systems Engineering

Amy Foltz	Highest Honors
Andrew Via	Highest Honors

Pre-Mechanical Engineering

Shawn Gargac	Highest Honors
Brent Kerns	Honors
Matthew Kijowski	High Honors
Brandon Kirby	Highest Honors
Eric Musengimana	High Honors
David Whalen	High Honors
Jason Wilson	Honors
Timothy Znidar	High Honors

College News

New CSE Department Chair Named

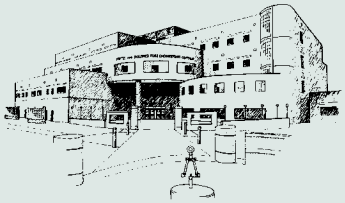
Forouzan Golshani

The College of Engineering and Computer Science gained a new department chair over the winter break. **Dr. Forouzan Golshani** is the new Chair for the Department of Computer Science and Engineering. He comes to WSU from Arizona State University where he was Co-Director of the Arts Media Engineering program. He worked at ASU for twenty years, teaching 18 undergraduate and graduate computer science courses and developing eight new courses. Dr. Golshani has worked with such hi-tech firms as Motorola, Intel, Boeing, and American Express. He has received 10 U.S. patents and has published over 180 works. He is currently the Editor-in-Chief of *IEEE MultiMedia* and a Managing Editor for *Frontiers of Biosciences*.

BITs & PCs

College of Engineering and Computer Science

Wright State University



Dean
James E. Brandeberry, Ph.D, P.E.

Managing Editor
Jenny Garringer

Editor
Samantha Hundt

BITs & PCs is a monthly newsletter published by the College of Engineering and Computer Science to inform students about activities, news, opportunities and changes occurring in the College. It reports on the achievements of faculty and students; changes in organization, policy and curriculum; scholarship and employment opportunities; and engineering and computer science student club activities.

The current issue of *BITs & PCs* is available on the Web at **http://www.cs.wright.edu/bitsandpcs/**. Copies are also available in the College office, any Department office, literature rack in the Russ Center Atrium, Russ Center Study Lounge, or the Student Club Room.

The next issue of *BITs & PCs* will be published the week of February 2, 2004. To submit items for this issue, call the College of Engineering and Computer Science at **(937) 775-5001**, or send email to **jgarring@cs.wright.edu** by January 19, 2004. The College of Engineering and Computer Science reserves the right to edit all material for publication.

Research Spotlight

New Alliance Encourages Minorities in Engineering

Louis Stokes Alliances for Minority Participation - Ohio Science and Engineering Alliance

Ruby Mawasha (CECS)
Michele Wheatly (CoSM)

Wright STEPP students watch a demonstration at Scitex Digital Printing. Programs such as Wright STEPP will help OSEA engourage minority participation in math and science fields.

CECS Assistant Dean Dr. Ruby Mawasha, in conjunction with College of Science and Mathematics Dean Dr. Michele Wheatly, has joined an alliance of 15 universities to promote minority education.

The National Science Foundation granted the Ohio Science and Engineering Alliance (OSEA) $700,000 per year for five years for the implementation of a project congruent with the foundation's Louis Stokes Alliances for Minority Participation (LSAMP) Program. LSAMP, named after the former congressional representative who played an important part in the civil rights movement, offers grants to institutions with the aim of increasing minority participation in the fields of science, mathematics, engineering, and technology. OSEA formed in order to meet this need in institutions within Ohio, Stokes' home state.

This need stems from continuing reports of high dropout rates for ethnic minorities within the science and math fields. Although the racial gap is not large upon entry to college, statistics show that minority students drop out of these fields at a much higher rate than other students, possibly due to isolation or lack of opportunities.

As a result, OSEA has approached this problem with the central goal of doubling the number of minority students earning bachelor's degrees in these fields, and increasing the number of those that go on to pursue graduate degrees.

Upon collaboration, the Alliance universities agreed that the implementation of this goal should center on four specific areas. Focusing on the transition between high school and college will allow educators to engage potential engineering students early on, while creating programs for students during their first year of classes will continue this process. Providing research grants for minority students will keep them interested while increasing their opportunities, and the development and edification of faculty and staff involved will increase the quality of the programs sponsored by the Alliance.

Each university involved in the alliance has contributed ideas about their prior successes in this area in order strive for the central goal. Wright State, for example, discussed CECS's Wright STEPP and Academic Advantage Program, which draw minorities and other students into the field of engineering early on, and contributed the effective aspects of these programs to the Alliance.

In return, Wright State has gained ideas about other possible programs. The College of Science and Mathematics will develop its own summer bridge program to transition minority students into the college environment, which will connect to AAP. First year learning communities will be formed as well, in order to continue retaining minority students.

The Alliance is now in the process of developing several collaborative programs, such as workshops for mentors and program coordinators, as well as scholarship opportunities for minority students. A statewide student research conference is also being planned, for which students will be encouraged to apply for research internships and prepare presentations of their results.

Faculty Spotlight

CSE Professor Pictures the Future of Medical Software

Dr. A. A. Goshtasby
Department of Computer Science and Engineering
Winter Quarter Courses: CEG725 - Computer Vision II, CEG777 - Computer Aided Geometric Design

Computer Science is often considered a rather hands-off field, but Dr. A. A. Goshtasby's career has proved how physically important software and programming can be.

Since 1989, the computer imaging professor has been working with medical professionals on projects that have without a doubt saved countless lives.

Although Dr. Goshtasby sees himself as a "steady guy" who has enjoyed consistency throughout his life, his career as an engineer has brought him to many places, both spatially and academically. He began his education at the University of Tokyo, working mostly with hardware, but as his education progressed, he realized that software design was far less expensive, and more personally appealing. "Software is easy because you can see it in you mind," he said. "I enjoy designing things. I see what is needed, and I can produce those solutions."

Once he graduated, Dr. Goshtasby moved his academic work to the United States in order to begin graduate work at the University of Kentucky, and by December of 1975, he had graduated with a Master's degree in Computer Science. He made another move to Michigan State, where he graduated in 1983 with a Ph.D. in Computer Science.

Dr. Goshtasby has spent his 20 years since then teaching, but his research endeavors have continued to change. In 1989, he began working with medical imaging when the University of Illinois, Chicago Medical School contacted him with a project. Since then he has worked with The Ohio State University's School of Medicine, Miami Valley Hospital, and Kettering Medical Center on a variety of medical imaging projects. He has been highlighted as a WSU "Point of Pride" for his Brain Image Fusion Project, which he began in 1998. He worked with the Kettering Medical Center and several students to design a software system that aligns images of a brain's anatomy with images of its activity in order to help surgeons to better diagnose and treat brain tumors. Recently, he has expanded this project to apply the same concept to the spine.

A. A. Goshtasby

Dr. Goshtasby says he enjoys this work because "the result immediately becomes available to patients." He can combine computer science and programming with a more result-oriented field, and now doctors are using his software in surgery.

Along with working in the medical field, Dr. Goshtasby also works with other facets of computer imaging. He is the director of the Intelligent Systems Laboratory located in 304 Russ. Here, he works with engineering students, dealing with the design of intelligent software systems. Projects have dealt with everything from detecting and tracking humans in videos to constructing electronic dental casts.

Dr. Goshtasby's career choice has brought him far, and he believes it can bring others far as well. "Engineering is a very good field," he says. "Good engineers are always in demand." He emphasizes the word *good*. In order to excel in their fields, Dr. Goshtasby says that good engineers must "finish the job you start. Unless one finishes a job, one cannot feel accomplishment."

ITRI Hosts Summer Institute for Advanced Computation

The Information Technology Research Institute in cooperation with the Ohio Supercomputer Center hosted the Fifth Annual Summer Institute for Advanced Computation at Wright State, August 27-29, 2003. This year's topic focused on Homeland Security Computing. Eighty professionals from academia, industry, and government attended the three-day Institute. Distinguished speakers from Eon Reality, the Air Force Research Laboratory, the Ohio Supercomputer Center, Ohio State, Purdue, Notre Dame, Texas A&M, University of Cincinnati, and Wright State gave presentations on topics such as Surveillance Systems, Security versus Privacy, Information Secuirty, Secure Mobile Computing, Secure Knowledge Management and Database Secuirty. Dr. Nikolaos Bourbakis, ITRI Director, said suggestions made by this year's attendees will determine what topics people are most interested in for next year's Summer Institute.

OSPE Seeks Nominations for Awards

The Ohio Society for Professional Engineers (OSPE) is now accepting nominations for the outstanding engineering teachers and students. The deadline for nominations is February 1, 2004.

The *Outstanding Engineering Student Award* is presented to an engineering student from an ABET-accredited Ohio engineering school. Either an engineering faculty advisor or the dean of engineering must make nominations. The nominee must be a full-time undergraduate or graduate student and must have completed the junior year of undergraduate school. The OSPE Awards Committee bases their judgment on criteria such as scholastic achievement and participation in professional, technical, and other college activities. The nominations should be made on the prescribed formed and must come through a chapter.

The *Outstanding Engineering Educator Award* is presented to a member of the engineering faculty of an ABET-accredited engineering program in an Ohio school. The dean of the engineering school must make the official nominations. The educator shall have at least five years of experience subsequent to graduation from an accredited engineering school and must be teaching an engineering course during the current term. The nominee must have been employed at the school of the nominating dean for at least three years. Accomplishments at that institution, and in Ohio are most important in the evaluation.

For more information please contact the Dean's Office in room 405 Russ.

Club News

Wright Engineering Council (WEC)

In most recent WEC news, our new officers for the 2003-2004 school year have been elected.

Congratulations to:
President, Joshua Keener
Director of Engineering Activities, Todd Dobmeyer
Director of Finance, David Neff
Director of Industrial Relations, Michael Corbett
Director of Publicity, Michael Gessner
Director of Freshman Relations, George Diehl
Director of Graduate Relations, Thomas Howell
Director of Internal Affairs, Kevin Miklavcic
Web Director, N/A

We would like to give a special thanks to the 2002-2003 WEC Board of Directors for all of their hard work throughout the year. Last year's directors were: President – Thomas Howell, Director of Engineering Activities – Michael Gessner, Director of Finance - Andrea Thompson, Director of Industrial Relations- Nick Campbell, Director of Publicity - Cayti Zelnio, Director of Graduate Relations- Renecia Joseph, Web Director – Anthony Halley, Director of Internal Affairs – Todd Dobmeyer, Director of Freshman Relations – Linda Moore.

Special congratulations go out to the Fall Quarter Member and Director of the Quarter, Nicholas Baine and Todd Dobmeyer respectively.

WEC is pumped for National Engineers Week and is planning lots of fun activities. Be prepared for the Nerd Fashion Show, High School Egg Drop Competition, Breakfast with the Dean, Movie Night, WEC/SWE Dance, Mocktails, and a Mr. and Ms. Engineer Competition.

Don't forget to come to the WEC Winter Quarter meetings; we will keep you posted for dates and times. To be added to the WEC email list, just contact Michael Gessner (gessner.4@wright.edu). For further questions about WEC or WEC activities, please contact Todd Dobmeyer (dobmeyer.2@wright.edu). Feel free to check out our website at:

www.cs.wright.edu/cecs/clubs/wec

Tau Beta Pi (Engineering Honor Society)

Tau Beta Pi's Initiation will be held Friday, February 20, 2004.

Several group activities are in the planning stages:

- Tau Beta Pie-eating contest (during E-week)
- Club Fair (during E-week)
- 5k run (or Pi-mile run)

Congratulations to this years' officers:
President: Cayti Zelnio
Vice President: Maria Kahle
Cataloguer: Cliff Bullmaster
Corresponding Secretary: Shawn Uhlenhake
Recording Secretary: Andy Kondrath

Questions about Tau Beta Pi? Contact Cayti Zelnio at zelnio.2@wright.edu or visit the national website at www.tbp.org.

American Society of Mechanical Engineers (ASME)

National Engineers Week – February 16-20, 2004
ASME is now accepting event ideas for the Club Fair that will be taking place on the 16th. We will also participate in the 3rd Annual CECS vs. CoNH (College of Nursing and Health) Volleyball Competition.

Regional Conference – April 2-3, 2004 at The Ohio State University
More info will come as the date approaches. For more information visit:

http://regions.asme.org/regionv/
http://relsgi.eng.ohio-state.edu/~asme/

Other Events
ASME is looking for ideas for events to hold during winter quarter. See what local ASME groups are doing at:

http://www.asme.org/sections/dayton/
http://www.asme.org/sections/cincinnati/

- **Looking for the latest JAVA tools book?**
- **Want a quick description of a network protocol?**
- **A straightforward guide to circuits?**

Find applied, technical information in the University Libraries' electronic book collections: ***Safari*** and ***netLibrary***.

Safari TechBooks Online

http://proquest.safaribooksonline.com/?uicode=ohlink

- Technical books from O'Reilly, Sams, Que, Microsoft, Sun and others
- Available on any computer in the wright.edu domain
- Available on computers using WSU proxy settings

Advantages of online books include searchability and desktop availability.

NetLibrary Ebook Collection

http://netlibrary.com/

- Technical books from MIT, O'Reilly, Que, McGraw-Hill, Sams and others
- Available to anyone, anywhere, with a netLibrary account
- Create an account from any wright.edu domain computer

For more information finding electronic books, contact:

Phil Flynn
Engineering Librarian
phil.flynn@wright.edu
(937) 775-2533

Phil has winter quarter office hours in the:

Periodical Reading Room
404 Russ Engineering Center
Thursdays
2:00 pm to 4:00 pm
or by appointment

DAGSI Scholarships

Applications are now being accepted for

DAGSI Competitive Scholarships

for the 2004-2005 academic year.

Visit **www.dagsi.org** to apply.

Scholarships provide full tuition for both full-time and part-time study in the M.S. and Ph.D. programs. Full-tuition scholarships with an annual assistantship ($18,000) are available for full-time Ph.D. students.

Applicants must be admitted into the WSU School of Graduate Studies in the engineering or computer science program of study before their DAGSI application can be processed. **Please note:** The graduate school admission process may take 2-3 weeks to complete.

Completed DAGSI Competitive Scholarship applications must be submitted on-line by **5:00 pm on March 15, 2004**. Supporting documents must be submitted by that date to room 405 Russ Engineering Center.

For more information, contact:

College of Engineering and Computer Science
Office of the Dean
405 Russ Engineering Center
Phone: (937) 775-5001
dean@engineering.wright.edu

Important Information for Seniors

Do you have plans to attend grad school in Fall 2004?

You are encouraged to apply for a full tuition scholarship from the Dayton Area Graduate Studies Institute (DAGSI). Applications and complete details are available at www.dagsi.org.

IMPORTANT: You must apply and by accepted to WSU's *School of Graduate Studies* (SOGS) before the **March 15, 2004** scholarship application deadline.

To apply to SOGS please see:

www.cs.wright.edu/gs/admissioninfo.html

No DAGSI applications will be accepted from students who have not received "Conditional" or "Regular" admission from SOGS by March 15, 2004.

Suggested timeline for seniors interested in applying for DAGSI:

ASAP:
Apply to the School of Graduate Studies

Mid January:
Check with your department and/or advisor to make certain you admittance status is either "Regular" or "Conditional"

Late January:
Begin making requests for letters of reference from professors/advisors/employers. You must turn in 2 reference letters with the DAGSI scholarship application no later than March 15, 2004

Early February:
Finalize paperwork required by SOGS to ensure that you have been admitted to your program of study, as either "Regular" or "Conditional"

Mid February:
Complete DAGSI Scholarship Applications and forward it to the Dean's Office, 405 Russ Engineering Center (See applications for complete mailing address)

March 15, 2004:
Final deadline for scholarship application forms

Late March:
Receive notification of your award from the DAGSI office

Scholarships & Fellowships

Described below are scholarship, fellowship, and grant programs available to students of the College of Engineering and Computer Science at Wright State University.

The **American Syringomyelia Alliance Project (ASAP)** has announced the availability of research grants for 2004. Proposals are especially encouraged in certain areas of syringomyelia research, but other related topics are welcomed. Grants up to $50,000 are available and proposals are due by April 1, 2004 for funding beginning September 1. For more information regarding suggested proposal topics and application procedures, see www.asap.org/Research.cfm, or visit room 405 Russ.

The **Institute of Hazardous Materials Management (IHMM)** is currently accepting applications for its research grant program. Any graduate or senior undergraduate student interested in conducting research in the field of hazardous materials management may apply. Graduate applicants must be enrolled in a masters or doctoral program during the research period. IHMM will award $10,000 per annual grant, and awardees are expected to submit quarterly research updates, prepare a final research report, and attend the annual meeting of the Academy of Certified Hazardous Materials Managers in order to be recognized and present a paper on their research. More information and applications are available in 405 Russ, and online at www.ihmm.org.

The **U.S. Navy** is looking for bright, well-rounded engineers to participate in its *Nuclear Propulsion Officer Candidate* (NUPOC) program. Those interested may apply as early as the second semester of their sophomore year, and as late as post-graduation, and must attend a personal interview with a Navy Admiral. Accepted applicants will train to be officers and leaders on-board the Navy's nuclear carriers and submarines. Benefits include:

- $10,000 signing bonus
- Military pay while you complete your education at WSU
- Competitive salary with guaranteed pay increases as you advance in rank
- Full medical and dental insurance
- 30 days paid vacation per year
- Postgraduate education opportunities

In addition to the NUPOC program, the Navy is also offering positions for qualified individuals teaching at the Nuclear Power School in Charleston, SC. Participants would be commissioned officers in the US Navy, with no sea duty obligation. For information please contact LTJG Teri Lawson at 800-553-1146 ext. 127, or e-mail her at lawsont@cnrc.navy.mil.

The **United Nations Educational, Scientific and Cultural Organization (UNESCO)** and **DaimlerChrysler** have joined forces to offer an opportunity to engineering students to address the challenge of sustainable development. The *Mondialogo Engineering Award* calls on young engineers to team up in order to apply their skills and expertise in order to help improve the living conditions of people in developing countries. Teams will form a proposal with the goal of developing practical solutions that demonstrate excellence in the application of engineering by addressing such basic needs as:

- water supply
- sanitation
- affordable housing
- transport
- communication
- food production and processing
- health services
- technological infrastructure

Proposals should particularly address the United Nations' Millennium Development Goals, especially poverty eradication and sustainable development. Initial applications are due February 28, 2004, and final proposals must be submitted by December 31, 2004. For an application form and more information about proposal procedures visit www.mondialogo.org or come to room 405 Russ.

The **American Society of Mechanical Engineers (ASME)** has announced its *Federal Government Fellow Program* for 2004-2005. The program allows ASME members to work for one year with the staff of a congressional committee, U.S. Senator or Representative, working in the process of public policy development. Fellows come away with an understanding of the governmental process and an extensive network of contacts in Washington, and bring an insider's perspective on government decision making back to their employers. They may serve from September 2004 to August 2005, or from January 2005 to December 2005. Any interested ASME member is encouraged to apply before the April 1, 2004 deadline by contacting Allian Pratt at the ASME Washington office at (202) 785-3756 or pratta@asme.org. More information and an on-line application are also available at www.asme.org/gric.

NASA and the **Ohio Aerospace Institute (OAI)** are currently accepting applications for their *Lewis' Educational and Research Collaborative Internship Program* for the summer of 2004. Internships will provide introductory professional experience with assignments in research and development, technical, and administrative projects under the guidance of a NASA staff member. This will help students to expand their understanding of possible career choices available at NASA. To be eligible, students must be U.S. citizens who are full time students pursuing a baccalaureate or higher degree in a field of science, engineering, math, technology, and business administration, and must have a cumulative GPA of 3.0 on a 4.0 scale. Internships last for ten weeks, beginning either May 24, June, 7, or June 14, and salaries range from $800 to $1,500 bi-weekly, depending on academic standing. Applications are due no later than January 31, 2004, and are available, along with other information at www.grc.nasa.gov or at www.oai.org.

The **Ohio Aerospace Institute (OAI)** is currently taking applications for its *Ohio Aerospace Internship Program*. The program places Ohio residents at Ohio academic institutions into internship opportunities with companies pursuing aerospace related enterprises within the State of Ohio. The internships offer at least 13 weeks of full-time employment or at least 26 weeks of part-time employment with wages ranges from $13-$15 per hour, and the State of Ohio will provide up to $3,000 matching funding for each internship. Participating companies for 2003 include Delphi, General Electric, Goodrich Corporation, Rockwell Automation, Sierra Lobo, Swagelok Company, UES, Inc., WebCore Technologies, Inc., and ZIN Technologies. In order to qualify, applicants must be Ohio residents in good academic standing as sophomores or juniors in a math, science or engineering curriculum of study. Applications are due by February 13, 2004 and are available along with more information at www.oai.org/internships, or www.grc.nasa.gov.

The **Ohio Space Grant Consortium** is now taking applications for its *Junior and Senior Scholarships*, awarded to those studying in aerospace-related engineering and science. In

Employment Opportunities

order to apply juniors and seniors must expect to complete the requirements for their BS degree no latter than August, 2006, and August 2005, respectively. As part of their application juniors must include a one-page personal objective statement, and must attend the annual Spring Research Symposium. The Junior Scholarship is a one-year award of $2,000, beginning with the Fall, 2004 term, and renewable upon good academic and research performance for the Senior Scholarship. Senior applicants must include a proposal for a research project to be conducted under the guidance of a faculty member. Scholarship winners must participate in the research in a campus laboratory, and must attend and make a brief oral presentation of their research at the annual Spring Research Symposium. The Senior Scholarship is a one-year award of $3,000, paid during the 2004-2005 school year

Also available is the *Graduate Fellowship Program*, offered to students who are United States citizens and have demonstrated the ability and aptitude for advanced study in aerospace-related engineering and science. Applicants to the Master's Degree and Doctoral program must expected to have completed their Bachelor's or Master's Degrees, respectively, before the Fall 2004 term. Master's Fellowship recipients are required to select a thesis option for their program and to demonstrate the aerospace relationship of their thesis before the end of the first year. This award includes a stipend of $14,000 per calendar year, plus tuition and begins in the Fall of 2004 with a maximum tenure of 18 months. Doctoral Fellowship recipients are required to choose a dissertation research area of technical interest and importance to the NASA Glenn Research Center or another research center, and must collaborate with a government laboratory scientist/engineer. This award includes stipend of $18,000 plus tuition, and begins in the Fall of 2004 with a maximum tenure of three years. Both the Master's Degree and Doctoral Fellows are required to present their research at the annual Research Symposium.

For more information on any of these programs and their applications, contact Campus Representative, Dr. Ruby Mawasha in 405 Russ, or Program Manager, Laura Stacko, at 1-800-828-OSGC, or visit www.osgc.org.

SOCHE Student Research Program

- Flexible work schedules:
  - 12-14 hours per week during academic year and 40 hours per week during summer
  - Full-time alternating terms
  - 20 hours per week year round
  - We will work with you!
- Career related work experience in state-of-the-art labs
- Earn while you learn (Soph.$11.70/hr; Jr. $13.15/hr; Sr. $14.50/hr; Grad. $17.90/hr; PhD $21.60/hr)
- Degree seeking students in good standing
- Must be a U.S. Citizen
- No experience necessary

Project No. 36.1 - Nanoscopic Surface Preparation and Sensor Materials Characterization
Majors - Physics, Chemistry, Materials Science
Description - Methods to influence the organization of atoms at the surface and interface of materials will be investigated. This work may include the deposition of materials, the operation of materials characterization equipment (X-ray, electron and/or ion spectroscopy, AFM, etc.) under the direction of senior engineers to determine the chemistry, morphology and/or structure of the deposited materials, as well as, the design or modification of software on lab automation or data reduction computer systems.

Project No. 37 - Atomistic and Continuum modeling of quantum dot structures
Majors - Physics, Electrical Engineering, Materials Science, Computer Science
Description - Perform finite element calculations to determine the minimum energy shape of quantum dots as a function of dot volume, using commercially available finite element software. Repeat these calculations at the atomic level by performing molecular dynamics calculation using a valence force field (VFF) potential. Develop this molecular dynamics code in MATLAB.

Project No. AFIT 58 - New Defenses Against Steganography
Major - Computer Science
Description - Steganography may be used to encode a hidden message in a digital image without apparent effects on the image. However, subtle effects are present, and they may be detected using new techniques based on optimal roughness and related metrics. This research will investigate these techniques for detecting, resisting, and otherwise defending against steganograpy and related information warfare attacks, and it will evaluate their effectiveness relative to existing methods. Specific tasks include the following (1) acquire a database of images that contain steganographic messages with various known encodings, (2) develop candidate procedures that employ optimal roughness and related metrics to detect steganographic encoding or to prophylactically resist such encoding, and (3) evaluate the effectiveness and robustness of the optimal roughness techniques relative to existing methods.

Students must submit:
SOCHE Application (available at www.soche.org)
Resume
Transcript/Advising Report
For more information, call (937) 258-8894.

First Weekend 2004 Peer Leader

Wright State University is recruiting 100 positive, energetic and motivated students to become "**First Weekend 2004" Peer Leaders. "First Weekend " Peer Leaders** will mentor a group of first year students through the new student orientation program called "First Weekend" scheduled for the four days prior to the start of classes – September 3-6, 2004. "**First Weekend 2004"** is designed to help new students get off to a great start at Wright State, both academically and socially.

Qualifications (for first consideration): Must have completed at least two quarters at WWSU by the end of the Winter 2004 term; must have a minimum CUM GPA of 2.25 (2.50 preferred); must be in good academic, judicial and fiscal standing during the summer and fall quarters of employment; must be able to fulfill the job responsibilities and participate in the mandatory training program. Must possess strong communication skills, both verbal and written; demonstrate solid decision-making and problem solving skills; as well as, be able to work independently or in a team environment with minimal supervision. Must possess basic computer skills and knowledge of the WSU e-mail system. Must be able to facilitate group discussions on a variety of levels and be comfortable with diversity initiatives.

Application Process: Application forms and additional information are available in 180 University Hall or on the web at:
www.wright.edu/uc
For first consideration, please submit the following items to Pamela Wallace-Stroble in 180 University Hall, by March 12, 2004:
(1) a personally written letter of interest in the position of Peer Leader; and
(2) a completed and signed First Weekend Peer Leader application form.
Qualified applicants will be invited to interview on Friday, April 2, 2004, or Friday, April 9, 2004.

FE Exam Sees Changes as Deadline Approaches

New testing rules for the Fundamentals of Engineering (FE) exam will be in effect forthe April 2004 test date. The FE exam for students will no longer be given at universities in Ohio. The National Council of Examiners of Engineering and Surveying (NCEES) will give the exam in Cincinnati, Columbus, and Cleveland. Exact locations within these cities are not known at this time.

In addition, the cost has increased and the application process has changes. Students will initially submit their application with the Dean's Letter and the $25 application fee to the State Board in Columbus. After approval by the State Board, students will then pay an additional $140 to NCEES to be registered to take the exam at their choice one of the three testing locations.

The application deadline for the April 17 FE exam is January 17, 2004.

For more information, visit the Ohio State Board website at www.ohiopeps.org or the NCEES website at www.ncees.org. You may also talk with Dick Rathbun in the Dean's Office for additional information.

Engineering and Computer Science Co-Op Day

Thursday, January 22, 2004

1:30 PM – 4:30 PM

Russ Engineering Center

If you are interested in participating in a co-op during spring or summer quarter, then the Engineering and Computer Science Co-Op Recruiting Day is just right for you.

Approximately 25-30 area companies will have tables set up in the atrium of the Russ Engineering Center.

In order to participate in the co-op day, you **must** be registered with Career Services.

For more information contact Kim Gilliam in Career Services at (937) 775-2556, or via email at kim.gilliam@wright.edu.

For an updated listing of companies scheduled to attend the Co-op Recruiting Day, visit:

http://career.wright.edu/engday/companylist.html

Important Dates

January 19	UNIVERSITY CLOSED Martin Luther King, Jr. Day
January 22	CECS Co-Op Recruiting Day – 1:30pm-4:30pm
February 16-20	National Engineers Week
March 1	Last day to apply for June graduation
March 13	Last day of winter quarter classes
March 15-20	Final examinations
March 29	First day of spring quarter classes
May 25	Last day to apply for August graduation
May 31	UNIVERSITY CLOSED Memorial Day
June 5	Last day of spring quarter classes
June 7-12	Final examinations
June 11	CECS Awards Ceremony - 4:30 PM Order of the Engineer Ring Ceremony - 7:00 PM

WRIGHT STATE UNIVERSITY
College of Engineering and Computer Science
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Dayton, OH 45435-0001
Office of the Dean