



# BITS & PCs

**COLLEGE OF ENGINEERING AND COMPUTER SCIENCE**

**March 2002 Wright State University Dayton, Ohio 45435 Vol. 18 No. 6**

## Important Dates

- March 11  
Last day of W02 classes
- March 12-16  
Final Exams Week
- March 25  
Spring Quarter classes begin
- April 26  
Last day for all but freshmen to drop a class with a grade of "W"
- May 17  
Last day for freshmen to drop a class with a grade of "W"
- May 27  
NO CLASSES,  
Memorial Day Holiday
- June 1  
Last day of S02 classes
- June 3-8  
Final Exams Weeks
- June 8  
Spring Quarter Commencement
- June 10  
Summer Quarter "A" and "C" classes begin
- June 19  
Last day to drop an "A" Term class without a grade
- June 25  
Last day for all but freshman to drop an "A" Term class with a grade of "W"

## Successful National Engineers Week at WSU

The College of Engineering and Computer Science celebrated National Engineers Week, February 17-23, 2002. The week was kicked off by the Penny Wars Competition. Each department brought in their loose change throughout the week and competed with the other departments to be declared the winner. The competition raised almost \$180 that will go towards a College scholarship. This year's winner was the Dean's Office.

The Open House held for high school students and their parents allowed visitors to learn more information about the College and WSU. Students had the opportunity to meet faculty, tour the Russ Engineering Center, see demonstrations in the labs, and really get an idea of what Wright State had to offer.

One of the highlights of the week was the annual Nerd Fashion Show. Eleven students competed for the coveted "Golden Pocket Protector Award" by strutting their nerdiness to a variety of musical selections. Each contestant provided a brief bio about their nerdy interests and hobbies. The 2002 winner was Tom Cliett, a senior majoring in Electrical Engineering. Mandy Campbell, a senior studying Industrial & Systems Engineering, won the Silver Pocket Protector while Beth Wirick, a senior Biomedical Engineering student, took home the Bronze.



**Pictured:** (above) 2002 Nerd Fashion Show Participants pose with the winners and Assistant Dean Dick Rathbun; (below): Winners of the Nerd Fashion Show (l to r): Beth Wirick - Bronze Pocket Protector, Tom Cliett - Gold Pocket Protector, and Mandy Campbell - Silver Pocket Protector



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## National Engineers Week (cont.)

In addition to their awards, each winner received a WEC T-Shirt and a gift certificate to a local restaurant.

Several other activities went on during the same afternoon as the Nerd Fashion Show. Wright Engineering Council held a Mouse Pad Slide, Tau Beta Pi held a Pie Eating Contest and the Institute of Industrial Engineers held a "Mocktail" Competition. The winners of each competition are listed below.

### Mouse Pad Slide

1<sup>st</sup> - Julie Jackson  
2<sup>nd</sup> - Andrea Bolds  
3<sup>rd</sup> - Clyde Ham

Each received an engineering T-

shirt and a gift certificate to a local restaurant.

### Tau Beta "Pie" Eating Contest

Female Division - Maria Kahle  
Male Division - Rob Warnecke

Each received a \$25 gift certificate to Meijer.

### Mocktails

The Society of Women Engineers were the winners with their tropical mocktail creation.

National Engineers Week concluded with the Second Annual Trebuchet War held in the McLin Gym at the Ervin J. Nutter Center. Over 150 high school students participated in the contest where schools constructed an army of trebuchets, a type of

medieval catapult, and battled other high school teams to win. Centerville High School won the competition by beating Washington Senior High School from Washington Court House, Ohio. Kenton Ridge High School received the third place award.

Overall, the National Engineers Week activities were very successful. A special thanks goes out to all of the College departments, CECS clubs, and all of the students, faculty, and staff that helped make the week great. Plans are already underway to make next year's E-Week an even bigger success. If you have any ideas or suggestions for next year please email them to [jgarring@cs.wright.edu](mailto:jgarring@cs.wright.edu). ■

Applications are being accepted for



**DAGSI**  
**Competitive**  
**Scholarships**

for the 2002-2003 academic year.

Visit

**[www.dagsi.org](http://www.dagsi.org)**

to get a downloadable application form.

For more information, contact:

College of Engineering and Computer Science  
Office of the Dean

405 Russ Engineering Center

Phone: (937) 775-5001

Email: [dean@engineering.wright.edu](mailto:dean@engineering.wright.edu)

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 (\$15,000) are available for full-time Ph.D. students.

Applicants must be admitted to the WSU School of Graduate Studies in an 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). Two letters of reference are required with each application. Reference letters can be forwarded directly to the Dean's Office, separately from the application. Please see your advisors early.

Completed DAGSI Competitive Scholarship applications **must** be submitted by

**5:00 PM on**

**March 15, 2002,**

to Room 405 Russ Engineering Center.

\* If you have not been admitted in your program of study by March 15, 2002, your DAGSI application will not be reviewed.

# FACULTY

A  
C  
T  
S

**Nikolaos Bourbakis, Ph.D., ITRI**, has made several trips recently to the National Science Foundation in Washington, DC to promote ITRI and Wright State University on several issues. He also attended the Biometrics Consortium Conference in Crystal City, VA, February 13-15, 2002.

**Ardeshir Goshtasby, Ph.D., CSE and Martin Satter**, have received \$110,000 in funding from Ohio Medical Instruments, Inc. for their proposal entitled "Non-Linear Brain Shift Correction."

**Ramana Grandhi, Ph.D., ME**, has received funding from the Dayton Area Graduate Studies Institute (DAGSI) in the amount of \$17,000 for his proposal entitled "Computational Mathematics for Determining Uncertainty Bounds in Multi-Valued Engineering Design."

**Chandler Phillips, Ph.D., BIE**, has received funding in the amount of \$10,000 from Sytronics, Inc. for his proposal entitled "Modeling and Control Support for Development of Information Theroretic Systems."

**Ling Rothrock, Ph.D., BIE**, has received funding from the Department of Defense in the amount of \$45,000 for his proposal entitled "Design and Development of the Team Wright State Aegis Simulation Platform (TWASP) to support Modeling for Effective Team Training."

**Arnab Shaw, Ph.D., EE**, has received funding in the amount of \$36,957 for his proposal entitled "Controlling the Apparent Vocal Effort of Synthetic Speech" from Veridian Engineering.

## THE COLLEGIATE INVENTORS COMPETITION

The Collegiate Inventors Competition is an international competition designed to encourage college students active in science, engineering, mathematics, technology and creative invention, while stimulating their problem-solving abilities.

Each winning student or student team receives a \$20,000 cash prize and a \$2,000 gift certificate to Hewlett-Packard's website at <http://www.hpshopping.com>. Advisors each receive a \$10,000 cash prize.

Watch upcoming issues for more detailed information or visit the competition website at <http://www.invent.org/collegiate/index1.html>.

***The submission deadline is May 31, 2002.***



**Pictured (L to R):** Raghavan Srinivasan, Professor in the Department of Mechanical and Materials Engineering, College of Engineering and Computer Science; Christopher Hayhurst, Graduate Student in the Raj Soin College of Business; Kay Wick, Instructor in the Department of Marketing, Raj Soin College of Business; and Roopa Narayan, Graduate Assistant in the Department of Mechanical and Materials Engineering, College of Engineering and Computer Science. Not pictured: David Adams, Graduate Student in the Raj Soin College of Business and Keith Muny, Vice President, ChemInstruments

## Wright State Team Among First Winners of Dayton i-Zone Business Plan Challenge

For their proposal to manufacture and market a new quality control product for the paper goods manufacturing industry, a team of Wright State University students and faculty is one of 10 winning teams in the first phase of the \$100,000 Business Plan Challenge sponsored by the Dayton i-Zone. WSU was the only team among the 10 winners entered as a university team.

The device is the invention of Raghavan Srinivasan, Ph.D., professor of mechanical and materials engineering at Wright State. Paxar/Monarch Marking Systems, a leading manufacturer of pressure sensitive labeling products, observed that the blades on die cutting and slicing machines used to make labels wore out much faster with certain types of paper stock. The company asked Wright State's College of Engineering and Computer Science to develop a method for testing the abrasivity of paper stock before it is run through a label-making machine.

The product tests the paper by making a series of punches in a sample sheet that allows the ma-

chine operator to estimate the abrasivity of the paper sample. Currently, companies either live with the problem of premature wear and tear on their dies and blades, or only use paper stock that doesn't cause unreasonable wear. The testing device developed by WSU will create new options for the paper industry. Paper producers can develop paper with different levels of abrasivity, which will give paper stock consumers more choices. Knowing how the paper will affect their dies and blades will also give consumers the opportunity to proactively maintain their equipment.

Though a patent has been applied for, the device's market potential had not yet been explored. Now it has, thanks to the combined talents of the College of Engineering and Computer Science, the Raj Soin College of Business, and an area business.

"The i-Zone Challenge was a great incentive for us to get the ball rolling on getting this product introduced to the marketplace," says Christopher Hayhurst, a Wright State MBA student and

team member.

The primary market for the product will be paper goods manufacturers whose manufacturing processes include die cutting, slicing, perforating and slitting of paper. More than 150 companies in Ohio alone are potential users of the product, ranging from small businesses to multi-national corporations.

Along with Srinivasan and Hayhurst, the Wright State team included Kay Wick, a marketing instructor in the Soin College of Business; David Adams, an MBA student and part-time NCR employee; Roopa Narayan, a graduate student in materials engineering; and Keith Muny, vice president of ChemInstruments of Fairfield, Ohio, which will produce commercial models of the product and may elect to manufacture the product.

"Everyone was committed to the idea and the product," Hayhurst says. "We all had skills that really complemented each other, and as a result everyone was able to work quite well together to produce a good initial plan."

The next phase of the contest requires each team to put together a detailed business plan. As the team completes its business plan, the engineering component, led by Srinivasan, will perform additional product testing and begin to develop required industry testing standards.

The marketing component of the team, led by Wick, will complete

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## ITRI NEWS

On March 1<sup>st</sup>, ITRI and the Department of Computer Science and Engineering hosted the Governor's Regional Representative Anthony Whitmore's Region 4 Advisory Board meeting. The new Ohio Department of Development Director, Bruce Johnson, served as the keynote speaker. Prior to the meeting, ITRI held a luncheon in the Russ Engineering Center to welcome Director Johnson. Dr. Leo Finkelstein gave a presentation to the Director and his guests regarding current research projects within the College of Engineering and Computer Science.

### Annual Spring Workshop

Mark your calendar for the 5<sup>th</sup> Annual ITRI Spring Workshop and the WSU Technology Showcase 2002 on April 11, 2002. This year, ITRI and the Office of Research and Sponsored Programs have joined forces to bring local businesses and University researchers together for a one-day interactive exhibition of new inventions. ITRI's workshop will focus on "The Role of Government in the Academic-Industry-Government Partnership." Guest speakers from Wright-Patterson Air Force Base, the State of Ohio, National Science Foundation, and NASA will be presenting. This spring's workshop will be just a half-day in length to allow attendees to tour the Technology Showcase. ■

The College of Engineering and Computer Science celebrated February as *Black History Month* with a display of African American Space Scientists and Engineers. The display is on loan from the NASA - Ohio Space Grant Consortium office in Cleveland. The purpose of the display is to encourage students, faculty, and staff at Wright State University to continue to appreciate and understand the importance of African American history and culture, especially in the areas of science and engineering.

The display is located in the lobby of the Russ Engineering Center and will be there through March 8, 2002.

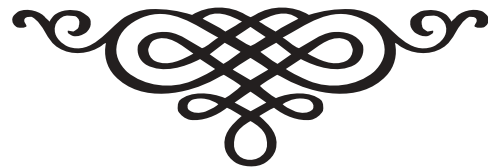
Continued from Page 4

a market assessment which includes identifying target markets, contacting potential customers and developing a marketing plan and long-term sales strategy. They will finish by recommending a plan for long-term expansion into additional markets.

"This project is providing the team's graduate students the opportunity to apply what they are learning in their graduate studies to a potentially viable business opportunity," says Wick.

The competition won't get any easier for the i-Zone team. All of the approximately 75 teams that entered the first phase may enter the second and third phases. The 10 first round winning teams each received \$1,000. The second phase will award six prizes of \$2,500 each. The final phase will award the grand prize winner \$50,000, with \$15,000 for the first runner-up and \$10,000 for the second runner-up.

"They want to encourage people to develop their ideas and give them incentives to do it," Hayhurst says of the competition. "There's a lot of talent in the Dayton area." ■



### BITs & PCs

College of Engineering and Computer Science  
Wright State University



#### Dean

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

#### Editor

Jenny Garringer

*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 racks 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 April 1, 2002. To submit items for this issue, call the College of Engineering and Computer Science at (937) 775-5001, or send email to [jgarringer@cs.wright.edu](mailto:jgarringer@cs.wright.edu) by March 18, 2002. The College of Engineering and Computer Science reserves the right to edit all material for publication.

# SCHOLARSHIPS AND FELLOWSHIPS

**The American Public Power Association (APPA)** awards scholarships each year of its DEED (Demonstration of Energy-Efficient Developments) Program. APPA will award one Technical Design Project each year intended to promote the involvement of students studying energy related disciplines and geared towards engineering students. Deadline is October 15, 2002. For more information and an application visit DEED's website at <http://www.APPAnet.org>. You may also call Elizabeth Sullivan at (202) 467-2942 or email her at [DEED@APPAnet.org](mailto:DEED@APPAnet.org).

**The Hispanic Scholarship Fund(HSF) and the Ford Motor Company Fund** have partnered to continue the HSF/Ford Motor Company Corporate Scholarship Program. Scholarships are available on a competitive basis to full-time Junior students of Hispanic heritage pursuing a degree in engineering, computer science, or business. Application packets must be postmarked by March 15, 2002. For more information and applications, visit the Dean's Office, 405 Russ.

**The NSF/SRC Engineering Research Center for Environmentally Benign Semiconductor Manufacturing** is accepting applications for summer research internships for undergraduates. The program will place undergraduate engineering and science students in research labs at the University of Arizona, University of California (Berkeley), Massachusetts Institute of Technology (MIT), Stanford, Arizona State University and Cornell for ten weeks from June 3 to August 9,

2002. Students will have the opportunity to work with professors and graduate students involved in multidisciplinary research in environmentally friendly semiconductor manufacturing in the fields of chemical and environmental engineering, materials science and engineering, optical science, electrical and computer engineering, and chemistry. A student stipend, housing and travel costs will be paid. The deadline for applications is March 15, 2002. Students may visit their website at <http://www.erc.arizona.edu> or contact Sally Clement, Education Coordinator via email at [sclement@erc.arizona.edu](mailto:sclement@erc.arizona.edu) for more information.

**The Society of Automotive Engineers (SAE)** is currently accepting applications for the SAE Doctoral Scholars Forgivable Loan Program (for Ph.D. students), the Yanmar/SAE Scholarship, and the SAE Long Term Member Sponsored Scholarship.

The SAE Doctoral Scholars Forgivable Loan Program provides funding to assist in the development of promising engineering graduate students and encourages them to pursue careers in teaching at the college level. The program is designed to help alleviate the increasing shortage of engineering college faculty by providing forgivable loans in amounts up to \$5,000 per year for three years. One year's loan is forgiven for each year the recipient teaches engineering on the faculty of an accredited engineering school upon graduation. (Applicants must be citizens of the U.S., Canada, or Mexico.)

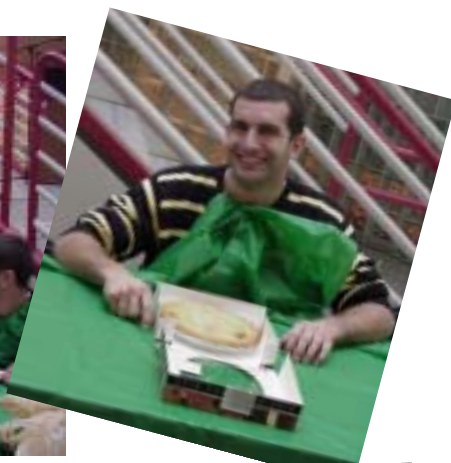
The Yanmar/SAE Scholarship will be awarded to an upcoming college senior or graduate student pursuing a course of study or research related to the conservation of energy in transportation, agriculture and construction, or power generation, with emphasis on the internal combustion engine. One \$2,000 scholarship will be awarded to the recipient at the rate of \$1,000 per year. (Applicants must be citizens of the U.S., Canada, or Mexico.)

The SAE Long Term Member Sponsored Scholarship is open to all SAE student members who will be entering their senior year of undergraduate engineering studies between August 2002 and February 2003. It recognizes SAE student members who actively support SAE, the collegiate chapter or the local SAE Section and its programs. Students who are involved in the collegiate design competitions and *A World In Motion* programs are also eligible. Student grade point average is not a determining factor within the scope of this scholarship. Recipients receive a \$1,000 nonrenewable scholarship. The number of scholarships awarded will be determined by funding levels at the time of selection. (Open to all SAE student members worldwide.)

Printable applications are available on the SAE website at <http://www.sae.org/students/stuschol.htm>. For more information regarding any of the SAE scholarships, please contact Connie Harnish at [connie@sae.org](mailto:connie@sae.org). The submission deadline for all applications is April 1, 2002. ■

# *More Pictures from National Engineers Week*

## **Tau Beta "Pie" Eating Contest**



## **Second Annual Trebuchet War**





Office of the Dean

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