



# BITS & PCs

## COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

March 2003 Wright State University Dayton, Ohio 45435 Vol. 19 No. 5

### Important Dates

- March 15
- Last day of winter quarter classes
  - DAGSI applications due by 5:00 PM to 405 Russ
- March 17-21  
Final Exam Week
- March 31  
First day of spring quarter classes
- May 26  
UNIVERSITY CLOSED - Memorial Day
- May 27  
Last day to apply for August graduation
- June 7  
Last day of spring quarter classes
- June 9-13  
Final Exam Week
- June 13
- CECS Awards Ceremony
  - Order of the Engineer Ring Ceremony
- June 14  
Spring Quarter Commencement
- June 16  
First day of "A" and "C" term summer quarter classes
- July 4  
UNIVERSITY CLOSED - Independence Day
- July 17  
Last day of "A" term classes
- July 21  
First day of "B" term summer quarter classes

### National Engineers Week: Another Successful E-Week



**Pictured:** (above) 2003 Nerd Fashion Show Participants pose with the winners and Assistant Dean Dick Rathbun; (below): Winners of the Nerd Fashion Show (l to r): Dick Rathbun, Asst. Dean and Emcee, Allison Gadd - Silver Pocket Protector, Gene Smith, Jr. - Gold Pocket Protector, Linda Moore - Bronze Pocket Protector, and Cayti Zelnio, Emcee



criteria (each worth 5 points): nerd strut, nerdy fashion, attitude, and overall nerd appeal. This year's winner of the coveted golden pocket protector award was Gene Smith, Jr., a senior majoring in industrial and systems engineering. The silver pocket protector went to Allison Gadd, a biomedical engineering major, and the bronze pocket protector was awarded to Linda Moore, a computer engineering major.

Following the Nerd Fashion Show, Tau Beta Pi held their annual Pie Eating Contest where men and women were

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Despite the fact that WSU was closed on February 17th due to inclement weather, the College of Engineering and Computer Science (CECS) celebrated another successful National Engineers Week, February 16-22, 2003. The festivities began with the American Society of Mechanical Engineer's Penny Wars competition between the five offices in the College. The amount of money collected this year greatly surpassed last year's results with the final amount collected being \$411.45. All of the money raised will go towards the Isaac Weiss Memorial Scholarship. The winner of this year's competition was the Department of Mechanical and Materials Engineering. They will receive a dessert party as their prize from ASME.

The highlight of the week was the annual Nerd Fashion Show sponsored by the Wright Engineering Council (WEC) on Wednesday. This competition is a great opportunity for students in the College to show off their true nerdy style. The judge's for this year's competition were Jay Davenport (ECS), Travis Doom (CSE), and Fred Garber (EE). The participant's were judged on the following



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separated into groups and then had a specified time to eat their pies. Each category had a first place winner who received a \$20 gift certificate to Best Buy and second place winner who received a \$10 gift certificate to Krogers.



**Pictured:** Participants and organizers in the Engineering Olympics (above, back row) Katie Schnelle, Abby Maloney, Josh Williams, Rahel Rudd, Goutham Rangaswamy; (above, kneeling) Tamara Walker, Heather Fleishman. Not pictured: Daylond Hooper

On Thursday, the first annual Engineering Olympics, sponsored by the Biomedical Engineering Society, gave students the opportunity to build the tallest self-standing structure with the materials provided inside a brown paper bag. First place went to Goutham Rangaswamy, a graduate student in the Electrical Engineering department. Second place was given to Josh Williams, a sophomore biomedical engineering major, while Heather Fleishman, a freshman computer engineering major, took home third place.

During the National Engineers Week Party held at Wallaby's, sponsored by the Wright Engineering Council and the Society of Women Engineers, the week's activities ended with the crowning of the first Mister and Miss Engineer. The nominees included the following students:

### Mister Engineer

Thomas Howell - Wright Engineering Council  
Andrew Kondrath - Tau Beta Pi  
Gene Smith, Jr. - National Society of Black Engineers

### Miss Engineer

Maria Kahle - Tau Beta Pi  
Linda Moore - Wright Engineering Council  
Andrea Thompson - Society of Women Engineers  
Tamara Walker - National Society of Black Engineers

Thomas Howell and Linda Moore were voted the 2003 Mister and Miss Engineer by students in the College

throughout National Engineers Week.

Thomas Howell was nominated by WEC. He is a junior and majoring in biomedical engineering. Thomas currently coaches a N.I.S.A. soccer team and serves as the president of WEC. He has worked as an intern for Congressman Tony Hall's Office as well as an engineering aide in the jet propulsion lab at Wright-Patterson Air Force Base.



**Pictured:** (above, l to r) Linda Moore, 2003 Miss Engineer and Thomas Howell, 2003 Mister Engineer

Linda Moore was also nominated by WEC. She is a junior majoring in computer engineering. She is actively involved in WEC, the Society of Women Engineers, and the Wright-Patterson Air Force Base Red Cross Youth Crew. Along with a crown and sash, both received a \$100 gift certificate to the WSU Bookstore.

Overall, the National Engineers Week activities were very successful. A special thanks goes out to all of the CECS departments and clubs, and all of the students, faculty, and staff that helped to 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 e-mail them to [jgarring@cs.wright.edu](mailto:jgarring@cs.wright.edu).

## College of Engineering and Computer Science **Canned Food Drive**

March 10 - 14, 2003

Deposit your non-perishable food items into any of the boxes located in the atrium of Russ, any department office or 405 Russ.

All donations will go to DePaul House.

## Blair Rowley Receives ASC Education Award



The Affiliate Societies Council (ASC) recently awarded Dr. Blair Rowley, the Director of the Freshman Engineering and Computer Science Program at WSU, the Outstanding Engineers and Scientists Award in Education at their 43rd Annual Awards Banquet on February 20th at Sinclair Community College.

Every year, the Affiliate Societies Council and the Engineering and Science Foundation of Dayton recognize many of the engineers and scientists in the Greater Dayton area who have made incredible contributions in their specific professions.

Awards were given for achievements to individuals in five different categories: 1) Education, 2) Research, 3) Technical Leadership, 4) Engineering Design and Development and 5) Manufacturing, Production, and Quality Control.

Rowley was given this award due to his distinguished academic career and commitment to excellence in engineering education over the past 30 years. While at Wright State, Rowley has made tremendous impacts in engineering. He is responsible for introducing all freshman students in the College to the concepts of engineering and computer science. He incorporates the complete range of educational media involving books, music, the

Internet, video, computers, and instrumentation. He designed the freshman program to help students better understand themselves, how to study, and how to begin thinking as engineers and computer scientists.

His past assignments at WSU have included the Chair of the Department of Biomedical Engineering for seven years, the Director of a unique rehabilitation engineering training program, and creating a masters program in rehabilitation engineering.

Dr. Rowley has received over \$3,000,000 in grants and contracts during his academic career. He has over 80 publications on his research and educational efforts. Nationally, he has been the Chair of the Biomedical Engineering Division of the American Society for Engineering Education (ASEE), Education Chair of the Institute of Electrical and Electronics Engineers (IEEE) Engineering in Medicine and Biology Society (EMBS), and an elected member of the administration board as well as a member of the IEEE Standards Board and the IEEE Committee on Education, member of the Standards Committee of the Society of Computer Medicine, and Chair of the EMBS Standard Committee. Dr. Rowley was also recognized through the 1996 Innovation Award from the Ohio Rehabilitation Technology Association and the prestigious Mentor Award in 2000 from the Rehabilitation Engineering Society of North America.

The ASC of the Engineering and Science Foundation (ESF) of Dayton represents 53 engineering, scientific, and other technical societies with a combined total membership of over 10,000.


## ACM-IEEECS LexisNexis Student Tour

By Todd V. Rovito

The ACM-IEEECS and Dr. Harris, from the Information Technology Research Institute at WSU, organized a tour of LexisNexis on January 24th. Fifteen Computer Science and Engineering majors attended the tour. LexisNexis provides authoritative legal, news, public records, and business information, including tax and regulatory publications in online, print or CD-ROM formats.

Dennis Smith from LexisNexis led the tour, which started in the LexisNexis data center. The data center is a spacious area with fifteen giant mainframes and over 350 Unix servers. Adjacent to the data center is the "Operations Controls Center" which looks like a scene from a military command center. The "Operations Control Center" holds two gigantic screens which report various real time statistics about the LexisNexis operation. Operating 24/7 the "Operations Control Center" allows LexisNexis employees to control their entire worldwide

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<b>BITs &amp; PCs</b> College of Engineering and Computer Science <b>Wright State University</b> 	
<b>Dean</b> James E. Brandeberry, Ph.D., P.E.	<b>Editor</b> 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 <a href="http://www.cs.wright.edu/bitsandpcs/">http://www.cs.wright.edu/bitsandpcs/</a> . 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 7, 2003. To submit items for this issue, call the College of Engineering and Computer Science at (937) 775-5001, or send email to <a href="mailto:jgarringer@cs.wright.edu">jgarringer@cs.wright.edu</a> by March 24, 2003. 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 \$5,000 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, 2003. For more information and an application visit DEED's website at [www.APPAnet.org](http://www.APPAnet.org), and select DEED from the menu bar. You may also call or email Bethany Luna at (202) 467-2993 or send an e-mail to [DEED@APPAnet.org](mailto:DEED@APPAnet.org).

The **Doctoral Scholars Forgivable Loan Program** provides funding to assist promising engineering graduate students and encourages them to pursue careers in teaching at the college level. Provides forgivable loans in amounts up to \$5,000 per year for 3 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. Deadline is April 1, 2003. Printable applications are available on the SAE website at [www.sae.org/students/stuschol.htm](http://www.sae.org/students/stuschol.htm).

**Culture Works** is now accepting applications for the Leonard P. Roberts Memorial Scholarship. Candidates must be enrolled full-time in one of the Miami Valley four-year college programs. Only students entering their junior or senior year of study will be considered. Students must be concentrating their studies in one of the following areas: performing arts; business administration; or engineering.

In reviewing the candidates, the Roberts Scholarship Committee will consider the following weighted criteria for a possible 100-point score:

- GPA in the Student's Major (30 pts.)
- Overall GPA (20 pts.)
- Financial Need (20 pts.)
- Involvement in the Arts (5 pts.)
- Goals & Accomplishments (15 pts.)
- Letters of Recommendation (10 pts.)

All materials (nominations and applications) are due to Cathy Bussen in the Office of Financial Aid by Wednesday March 26, 2003. Students interested in applying should contact the Office of Financial Aid at (937) 775-5721.

The **SAE Long Term Member Sponsored Scholarship** is open to all SAE student members entering their senior year or undergraduate engineering studies between August 2003 and February 2004. Student grade point average is not a determining factor within the scope of the scholarship. Recipients receive a \$1,000 nonrenewable scholarship. Deadline is April 1, 2003. Printable applications are available on the SAE website at [www.sae.org/students/stuschol.htm](http://www.sae.org/students/stuschol.htm).

The **U.S. Air Force Bioenvironmental Engineering Scholarship Program** is offering full-tuition scholarships for seniors and graduates students within one year of graduation. The Air Force will also reimburse for textbooks and other supplies as well as supply the recipients with a monthly stipend of over \$1,100. Recipients are guaranteed employment for three years as a Bioenvironmental Engineer after graduation. U.S. citizenship is required.

For more information, contact:

MSgt Doug Fields  
2940 Presidential Drive, Suite 160  
Fairborn, OH 45324-6210  
E-mail: [douglas.fields@rs.af.mil](mailto:douglas.fields@rs.af.mil)

The **Yanmar/SAE Scholarship** is awarded to college seniors or graduate students pursuing a course of study 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 awarded at the rate of \$1,000 per year. Applicants must be citizens of the U.S., Canada, or Mexico. Deadline is April 1, 2003. Printable applications are available on the SAE website at [www.sae.org/students/stuschol.htm](http://www.sae.org/students/stuschol.htm).

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operation. During the day of our visit the LexisNexis systems were serving 120 queries per second with an average response time of less than 4 seconds.

Michelle Pinsky and Tamara Korblick from Human Resources spoke to the club about Career opportunities within LexisNexis. All employees of LexisNexis are offered training to keep their skills up to date. LexisNexis believes in offering its employees exciting career opportunities. One of their most rewarding opportunities is the internal mentoring system. This mentoring system allows senior employees to groom their juniors, who eventually pass the information through the chain of command. Another exciting program is the company's new co-op program. In this program LexisNexis will hire students and give them responsibility for a given project. This real world co-op experience will give opportunity for the co-op student to grow and learn real world skills. LexisNexis hopes to retain more of its co-ops after they graduate.

Maria Schoonover shared with us information on the LexisNexis network. Their network is global and it supports an average of 1.5 million searches a day. She emphasized the company's commitment to well-known industry standards and tools, and to "keep it simple" with all network designs. The challenge of the LexisNexis network is serving its worldwide customer base of 3 million with its variance in data types, from HTML documents to multimedia.

The software technology overview was given by Amy Bloebaum, who explained that the company's software focus is on Java. All new software development and critical pieces of the old system are being

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The **SOCHE Student Research Program** has several positions for undergraduate and graduate students available in the Materials Lab at Wright-Patterson Air Force Base. They offer flexible work schedules, career-related work experience in their state-of-the-art labs, and competitive wages while you learn (Sophomore: \$11.25/hr, Junior: \$12.65/hr, Senior: \$14.00/hr, Graduate: \$17.20/hr, Ph.D.: \$20.80/hr). Applicants must be degree seeking students in good standing with U.S. citizenship. No experience is necessary. The following positions are currently available at SOCHE:

**Project No. 28.1 - Infrared Materials Characterization**

Majors: Materials Science, Physics, Computer Science  
Description: The student shall develop experimental techniques to characterize linear and non-linear infrared optical materials. The materials shall be characterized as a function of wavelength and temperature. The student must be able to use data automation software and become familiar with optical characterization techniques.

**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. 45 - Surface Analytical Studies of Aircraft Coatings**

Majors: Chemical Engineering, Materials Science  
Description: The work involves hands-on, in-house research of metallic corrosion phenomenon and new coating materials. The new materials to be investigated included substrates sol-gel based surface treatments, hybrid sol-gel based thermal control coatings, and a variety of organic paint systems. The work includes surface chemical analyses (XPS, AES) of coating materials, analysis of the effects of various treatments on aluminum alloys, a variety of analytical studies directed to elucidate corrosion protection mechanisms, and chemical analysis (FTIR, Raman, ESR, etc.). These surface studies include chemical analysis of alloy surfaces, analysis of chemistry, and investigation of corrosion inhibitor mechanisms, all aimed at development of high performance corrosion protection systems.

**Project No. 52 - Research in Organic Optical Waveguides**

Majors: Physics, Electrical Engineering  
Description: Synthesis, deposition and characterization of thin film waveguides. Characterization of waveguides

will be carried out using a variety of techniques including model analysis, absorption measurements, ellipsometry, and profilometry. Data to be obtained may include refractive indices, nonlinear coefficients, electro-optic coefficients, and absorption coefficient.

Interested students can get an application via the SOCHE website at:

[www.soche.org](http://www.soche.org)

Applications must be submitted with a résumé and transcript. For more information, call the SOCHE office at (937)258-8894.

The **Space Career Fair** offers both undergraduate and graduate students the opportunity to discuss a potential career in the space industry. Company representatives will give various presentations. Also, students are able to e-mail their resume to leading space companies for a possible interview.

Who: All undergraduate and graduate students

What: Attend the Space Career Fair

Where: 19th National Space Symposium at the Broadmoor Hotel in Colorado Springs, Colorado

When: April 10, 2003

How: Register via the Internet at:

[www.spacesymposium.org/national03](http://www.spacesymposium.org/national03)

Cost: Admission is free with a valid college ID

**Wright State University** is looking for students with strong communication skills, both verbal and written, to apply to be a peer leader for "First Weekend," a new program that gives incoming freshmen students the chance to speak to a mentor before school begins.

Students interested in applying must have completed at least two quarters at WSU by the end of the Winter 2003 term; must have a minimum CUM GPA of 2.25 must be in good academic, judicial, and fiscal standing during the summer and fall quarters of program. They also need to be able to demonstrate solid decision-making and problem solving skills; as well as, be able to work independently or in a team environment with minimal supervision. Student must possess basic computer skills and knowledge of the WSU e-mail system. Facilitating group discussions on a variety of levels and be comfortable with diversity initiatives is a must for the position.

Students must undergo approximately 20 hours of paid student leadership training that will be held in two phases. During the duration of the program, students will be paid \$6.30 per hour.

Application forms are available in 180 University Hall or on the web at:

[www.wright.edu/univ\\_college](http://www.wright.edu/univ_college).

Complete, sign and return applications to Pamela Wallace-Stroble in 180 University Hall by March 10, 2003 for first consideration. Include 2 references and a written statement of your interest in the position of Peer Leader. Interviews will be held in early April.

done in IBM's Websphere product. LexisNexis is a large company with a huge software infrastructure so other languages are supported as well including C, C++, PERL, and Assembler. Most LexisNexis data reside on their mainframes in a proprietary database format. The core of the LexisNexis search systems is Assembler as that programming language allows them to efficiently use every CPU cycle in their IBM Big Iron servers.

Wrapping up the tour was Mike Affourtit and John Black who spoke about hardware technology and integration. An operation like LexisNexis requires different computer systems to be integrated from various vendors with different operating systems. Again Mr. Affourtit and Mr. Black emphasized using standard components and simple designs. Operating systems used by LexisNexis included major flavors of Unix (Solaris, RedHat Linux, HP-UX, and IBM's AIX) and Microsoft Windows.

In conclusion, LexisNexis told the group to "learn how to learn computer technology because what ever is taught in school today will be different tomorrow". It is good to learn a good balance between Unix and Windows and sample different areas of computer programming. LexisNexis believes that Wright State's Computer Science and Computer Engineering programs provide a good foundation for future employees.

The ACM-IEEECS is always looking for new members visit:

<http://www.cs.wright.edu/~csclubs>

for details, membership is free. Watch the website for a company tour of Gasper Corp sometime in March.

## Faculty Facts

### Dong, Guozhu (CSE)

*A Collaborative Project: Development of an Undergraduate Data Mining Course*  
National Science Foundation: Course, Curriculum and Laboratory Improvement  
1/1/03 - 12/31/03.....\$20,489

### Hangartner, Thomas (BIE)

*Postmenopausal Evaluation and Risk Reduction*  
Pfizer, Inc.  
1/1/02 - 12/31/04.....\$39,388

### Hangartner, Thomas (BIE)

*Evaluation of a Novel Treatment for Osteoarthritis of the Knee*  
Procter & Gamble Company  
8/6/99 - 1/26/05.....\$3,429

### Phillips, Chandler (BIE)

*REU Supplement - Bioengineering Design Projects for the Disabled*  
National Science Foundation: Research Experiences for Undergraduates  
1/1/03 - 6/30/04.....\$10,000

### Shang, Joseph (ME)

*Investigation of Microwave Attenuation in Plasma*  
Department of Defense, Air Force Office of Scientific Research (AFOSR)  
1/1/03 - 12/31/03.....\$148,923

### Shaw, Arnab (EE)

*Controlling the Apparent Vocal Effort of Synthetic Speech*  
Veridian Engineering  
1/2/01 - 9/30/03.....\$36,262

### Srinivasan, Raghavan (ME)

*Processing and Characterization of Aluminum Alloys Produced by the CSPD Process*  
Oak Ridge National Laboratory  
1/1/03 - 3/31/03.....\$10,010

## INTERNSHIP OPPORTUNITIES

The **Naval Research Laboratory Postdoctoral Fellowship Program** is offered for students who have received their Ph.D.'s, are US citizens or permanent residents, and are interested in applying themselves in a challenging, creative and progressive scientific environment. Each participant must present evidence of having received a Ph.D., Sc.D., or other earned research doctoral degree recognized in US academic circles as equivalent to a Ph.D. The applicant must submit a 5-10 page research proposal that relates to a specific research opportunity. Fellowships are awarded for one year and may be extended for a second and third year. For application material and detailed information visit the website at [www.asee.org/nrl](http://www.asee.org/nrl).

The **NSF/SRC Engineering Research Center for Environmentally Benign Semiconductor Manufacturing** is offering a summer research internship 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 9 weeks from June 2 to August 1, 2003. A student stipend, housing, and travel costs will be paid. Applications due March 15, 2003. For more information visit [www.erc.arizona.edu](http://www.erc.arizona.edu) or call or e-mail Sally Clement at (520) 626-6781 [sclement@erc.arizona.edu](mailto:sclement@erc.arizona.edu).

# Deadline is March 15 at 5:00 PM in 405 Russ

Applications are now being accepted for



for the 2003-2004 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 into 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.

Completed DAGSI Competitive Scholarship applications must be submitted by **5:00 PM on March 15, 2003**, to Room 405 Russ Engineering Center.

## 2003 Russ Prize Awarded

The National Academy of Engineering established the Fritz J. and Dolores H. Russ Prize in 1999 to recognize outstanding achievement in an engineering field. Modeled after the Nobel Prize, The Fritz J. and Dolores H. Russ Prize, awarded biennially, recognizes outstanding achievement in an engineering field of critical importance that contributes to improving the human condition. It was established to honor the profession of engineering and attract more men and women to the field.

Named for the benefactors of WSU's Russ Engineering Center and the founders of Dayton, Ohio-based Systems Research Laboratories, the Fritz J. and Dolores H. Russ Prize was presented for the first time in 2001. The Russ Prize is one engineering's highest honors, awarding winners \$500,000.

In its initial years, the Russ Prize will set the standard for recognizing the achievements of engineers in bioengineering. The prize consists of a gold medallion and a \$500,000 cash award.

The 2003 Russ Prize was awarded to Dr. Willem Kolff for his pioneering work on artificial organs. He is considered the "father" of the field of artificial organs, which has led to the modern era of "substitutive medicine." Dr. Kolff engineered the first dialysis machine - or, as he prefers to call it, the artificial kidney - out of sausage

casings and part of a Ford automobile water pump during World War II while in Nazi-occupied Holland. Since then, he has also worked on the heart-lung machine, the intra-aortic balloon pump heart assist device, the artificial eye, and the artificial heart. Today, thanks to Kolff's groundbreaking work on the artificial kidney, more than 1.2 million patients worldwide are maintained through the life-sustaining therapy of hemodialysis. At the age of 91, Kolff is currently working on his next invention - the wearable artificial lung.



Rhine McLin, the Mayor of Dayton, is in the driver's seat of the College of Engineering and Computer Science's electric race car at the Dayton Auto Racing Fan Club car show at Lang's Chevrolet in Beavercreek on March 1st. Also in the picture are Ronald McDonald, Carl Day of WDTN Channel 2 News, and Steve Demeter, the car's driver. For more information on joining the Raider Lightning racing team, contact Dr. Russ Hannen at (937) 775-5183 or at [rhannen@cs.wright.edu](mailto:rhannen@cs.wright.edu).

## Get a Free Graduate Education at AFIT

*The Air Force can send you to graduate school as your regular job and pay for it.*

To begin, apply for the Officer Training School (OTS). This fast-paced school is located at Maxwell Air Force Base in Alabama. If you are selected, you will be challenged at every turn. Your studies will include classes in professional knowledge, leadership and management, defense studies, and communication skills. You will take part in organized sports and physical conditioning to develop your confidence and teamwork abilities.

To be eligible for OTS you must be a U.S. citizen, 18-34 years of age, and meet certain physical requirements. You must have excellent moral character and score competitively on the Air Force Officer Qualifying test. In addition, you must be a graduate of an accredited college or university. You may apply for OTS if you are within 365 days of graduation.

For more information, contact:

Douglas Fields  
Officer Accessions  
2940 Presidential Drive, Suite 160  
Fairborn, OH 45324  
(937) 427-3158  
E-mail: douglas.fields@rs.af.mil

AFIT offers MS degrees in the following areas:

- Acquisition management
- Engineering physics\*
- Aeronautical engineering\*
- Information resource management
- Applied mathematics\*
- Logistics management
- Applied physics\*
- Materials science and engineering\*
- Astronautical engineering\*
- Meteorology
- Computer engineering\*
- Nuclear engineering\*
- Computer systems\*
- Operational analysis
- Electrical engineering\*
- Operations research\*
- Electro-optics\*
- Systems engineering\*
- Engineering and environmental management
- Space operations

\* AFIT offers the doctor of philosophy degree in this area

AFIT is just one of the several competitive educational programs the Air Force has to offer.

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Office of the Dean

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Dayton, OH 45435-0001  
College of Engineering and Computer Science

