



BITS & PCs

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

May 2001 Wright State University Dayton, Ohio 45435 Vol. 17 No. 8

Important Dates

- May 25
Last day to apply for August graduation
- May 28
NO CLASSES,
Memorial Day
- June 1
Last day of Spring Quarter classes
- June 4-9
Final Exam Week
- June 9
Spring Commencement
- June 11
First day of class, Terms "A" and "C"
- June 19
Last day to drop "A" class without a grade
- June 28
Last day to drop "C" class without a grade
- July 4
NO CLASSES,
Independence Day
- July 12
Last day of classes, Terms "A" and "C"
- July 16
First day of class, Term "B"
- July 24
Last day to drop "B" class without a grade
- August 16
Last day of classes, Terms "B" and "C"

Order of the Engineer Ring Ceremony



The Order of the Engineer (OOE) was established to promote professionalism among engineers and graduates of accredited engineering programs.

An induction ceremony will be held on Friday, June 8, 2001 at 7:00 PM in the Student Union Multipurpose Room. Engineering seniors, graduate students, alumni, and faculty are encouraged to register and participate.

The \$10 registration fee covers membership and the ring. Registration and fees must be received by the Office of Conference and Events no later than May 25th.

For a registration form or more information about OOE or the ring ceremony, visit the "What's New" link on the College homepage at www.cs.wright.edu or contact the Dean's Office at (937) 775-5001.

College of Engineering and Computer Science Annual Recognition and Awards Ceremony

Friday, June 8, 2001

4:30 PM

Student Union Multipurpose Room

*Join us as we honor outstanding students, faculty, staff, and friends.
Reception immediately following the ceremony.*

Don't forget to RSVP by May 25th to (937) 775-5001 or email dean@engineering.wright.edu.

Visit us on the Web at <http://www.engineering.wright.edu>

FACULTY

A
C
T
S

Clark Beck, ECS, has been reappointed to the Environmental Advisory Board for the City of Dayton. He will serve a term of three years expiring January 1, 2004.

Oscar Garcia, Ph.D., CSE and Nikolaos Bourbakis, Ph.D., ITRI, have received funding in the amount of \$35,000 for their proposal entitled "Summer Institute for Advanced Computation (SIAC) 2001" from the Ohio Supercomputer Center. They have also received additional funding from the Ohio Board of Regents in the amount of \$215,839 for their proposal entitled "Priorities in Graduate Education."

Ramana Grandhi, Ph.D., ME, has received additional funding in the amount of \$26,254 from the Department of Defense, the Air Force, and the Air Force Research Laboratory for his proposal entitled "Object-Oriented Multidisciplinary Design."

Thomas Hangartner, Ph.D., BIE, has received additional funding in the amount of \$17,559 from the Procter and Gamble Company for his proposal entitled "Evaluation of a Novel Treatment for Osteoarthritis of the Knee."

Scott Thomas, Ph.D., ME, has received additional funding from the Department of Defense, the Air Force, and the Air Force Research Laboratory in the amount of \$15,000 for his proposal entitled "Aircraft Mechanical/Thermal Technology Research."

J. Mitch Wolff, Ph.D., ME, and Hiroshi Kobayashi (BSME '97, MSME '99) coauthored a journal paper entitled "Optically Interrogated MEMS Pressure Sensors for Propulsion Applications" in *Optical Engineering*, Vol. 40, No. 4, April 2001, pp. 598-604, with J. Zhou, S. Dasgupta, H. Jackson, and J. Boyd from the University of Cincinnati.

J. Mitch Wolff, Ph.D., ME, has received additional funding from the Department of Defense, the Air Force, and the Air Force Research Laboratory in the amount of \$102,250 for his proposal entitled "Cooperation HCF Research in AFRL Facilities."

***Are you looking for a challenging career? Do you want to use your engineering skills?
Are you having trouble finding that worthwhile job? Do you want to work for a company
that can take you to the leading edge of technology?***

Maybe you have what it takes to be an Air Force officer.

If you are:

- ✿ Between the age of 17-34
- ✿ Have a bachelors degree or are within 365 days of your degree
- ✿ A U.S citizen
- ✿ Able to meet certain physical requirements
- ✿ Of excellent moral character

The Air Force Officer Training School (OTS) is located at Maxwell Air Force Base in Montgomery, Alabama. The 13-week school is small and highly specialized. You will be challenged personally and as a team member. Your OTS courses will include military history, management techniques, physical education, Air Force customs and courtesies, and much, much more. At graduation, you will be commissioned a second lieutenant in the United States Air Force.

For more information contact:

MSgt Doug Fields by phone at (937) 427-3158 or by email at douglas.fields@rs.af.mil

SCHOLARSHIPS AND FELLOWSHIPS

The National Collegiate Inventors and Innovators Alliance (NCIIA) is accepting applications for its Advanced E-Team Grants. These grants fund innovative student team projects for product, technology and venture creation up to \$20,000. NCIIA grants help student teams:

- Develop and prototype new products and technologies with commercial potential
- Research the market and develop a business plan
- Perform patent searches
- Purchase equipment and supplies

Application deadlines for this year are May 15th and December 15th. Application forms are available on the NCIIA website at:

<http://www.nciia.org>

The National Inventors Hall of Fame is sponsoring The Collegiate Inventors Competition. The program is open to both undergraduate and graduate students. The goals of the programs are: to promote scientific problem solving and technology; to fuel a passion for economic prosperity; and to increase understanding of U.S. patent laws and intellectual property rights. The Collegiate Inventors Competition provides \$20,000 to the top student inventors/teams and \$10,000 to their advisors. Each year, up to six winners/teams are recognized. For entries to be eligible, the invention, idea or pro-

cess must be the original work of a student team and an advisor. Judging is conducted by a panel of nationally recognized mathematicians, scientists, environmentalists, biologists, and patent experts. Applications and information can be downloaded at:

<http://www.invent.org/collegiate>

The deadline for submissions is June 1, 2001. For more information, call (330) 849-6887 or e-mail collegiate@invent.org.

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 \$1,000. Recipients are guaranteed employment for three years as a Bioenvironmental Engineer after graduation. U.S. citizenship is required. For more information, contact:

TSgt Ed Lackey
2940 Presidential Drive, Suite 160
Fairborn, OH 45324-6210
Email: ed.lackey@rs.af.mil
(937) 427-3158

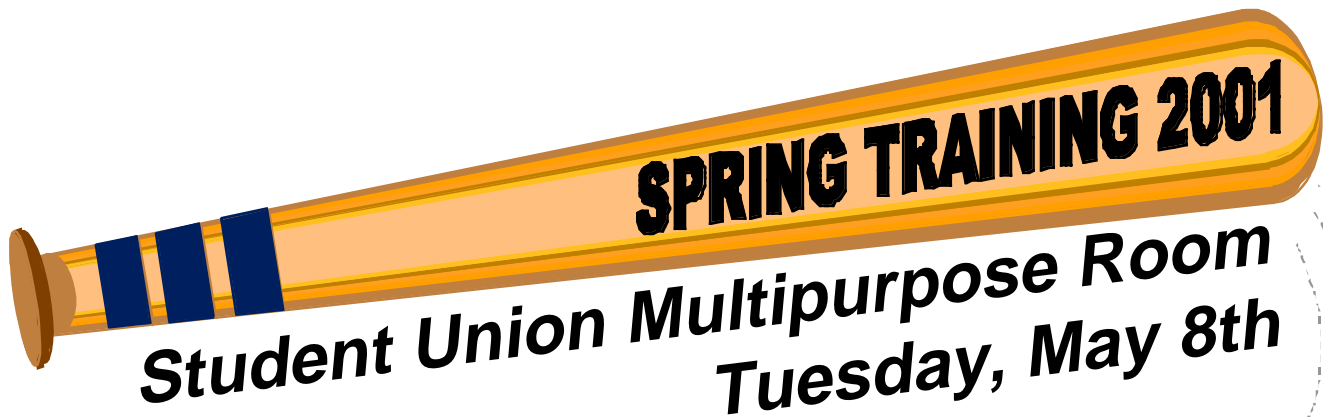


The National Society of Black Engineers (NSBE) invites you to join them at their general meetings, held on Wednesdays (May 2nd, 16th, and 30th) at 7:00 PM in W169C Student Union. NSBE has many activities planned for the remainder of Spring Quarter, including:

- Company Presentation Speedway SuperAmerica, Friday, May 11th, 1:00-3:00 PM
- NSBE Banquet, Friday, June 1st, 7:00 PM Spaghetti Warehouse (Downtown Dayton)

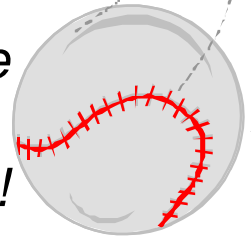
NSBE would like to congratulate five of its members for volunteering at the Mathcounts Competition at Cedarville College on February 10, 2001. The chapter was presented a 'Special Recognition Award' from the Dayton Society of Professional Engineers (sponsors of the competition).

If you are interested in joining NSBE, please contact:
Shannon Griffin, President at griffin.9@wright.edu or
Gene Smith, President-Elect at smtih.43@wright.edu.



SPRING TRAINING 2001
Student Union Multipurpose Room
Tuesday, May 8th

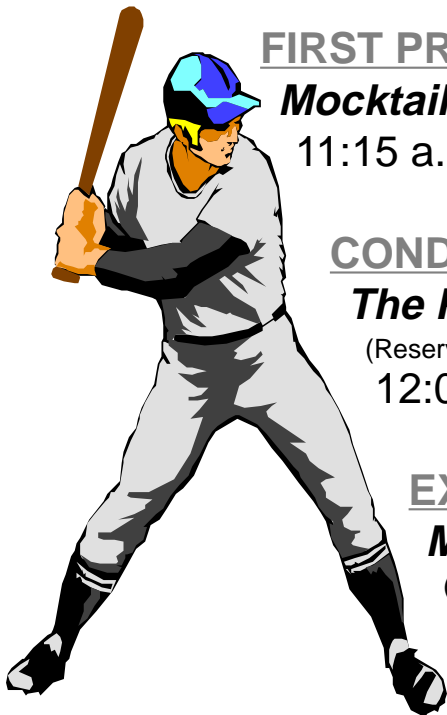
*step up to the plate
and swing with confidence
when you compete for jobs!*



PRE-SEASON WARM-UPS

Mixin' & Minglin' with Ray Angle

10:00 a.m. – 11:15 a.m. in 156 Student Union



FIRST PRACTICE

Mocktail Hour with WSU Alumni

11:15 a.m. – 12:00 p.m. in the Skylight Lobby

CONDITIONING AND TRAINING

The Power Meal with DTN Productions

(Reservations Require \$10 Pre-Payment)

12:00 p.m. – 1:30 p.m. in the Multipurpose Room

EXHIBITION GAME

Mock Interviews with Corporate Recruiters

(Sign-up for a Mock Interview in E334 SU)

2:00 p.m. - 4:30 p.m. in the Multipurpose Room

CAREER *S e r v i c e s*

Preparing Wright State Students for their Job Search

E334 Student Union, Wright State University

(937) 775-2556 Web: <http://career.wright.edu>

The SOCHE Student Research Program has several positions for undergraduate and graduate students available in the Materials Lab at WPAFB. They offer flexible work schedules, career related work experience in their state-of-the-art labs and competitive wages (Soph. \$10.40/hr; Jr. \$11.65/hr; Sr. \$13.00/hr; Grad. \$15.90/hr). Applicants must be degree seeking students in good standing with U.S. citizenship. Positions available include the following:

Project No. 231A - Structural Failure Analysis Testing

Major: Mechanical Engineering, Materials Science
Description: Provide hands-on laboratory support for the Structural Failure Analysis team. The team conducts tests and analysis on metallic and composite weapon system components to identify failure origins and mechanism, and provide recommendations for material/process changes to prevent similar failures.

Project No. 237A - Microstructure and Properties of Metal Composites

Major: Computer Science
Description: Work includes computer programming to support microstructural analysis efforts, metallographic preparation of samples, optical microscopy, scanning electron microscopy and X-ray diffraction. Additional tasks in support of the in-house research, such as heat treatments and data collection will be assigned as appropriate.

Project No. 243B - Wear Resistant Material: Processing and Development

Major: Chemical Engineering, Materials Science
Description: To investigate the process development of solid state tribomaterials (in thin film form) grown by plasma deposition processes including laser deposition, magnetron sputter deposition, and ion beam assisted deposition. To investigate the synthesis structure/property relationships of quasicrystalline materials, nanostructured composites, and nanocomposite films. To optimize improved coatings and bulk composites for extreme environment (e.g., vacuum, high and low temperature, moisture).

Project No. 249A - Characterization of Titanium Alloy Microstructures

Major: Mechanical Engineering, Chemical Engineering
Description: The microstructures and defects developed in titanium alloy samples processed via various novel or emerging microscopy and, in selected cases, transmission electron microscopy. The processes to be focused on include laser deposition, permanent mold casting, and advanced ingot-metallurgy (wrought) processes. The similarity and differences in microstructure developed by various processes shall be documented.

Project No. 251 - Dynamic Flight Simulator Assessment

Major: Mechanical, Electrical, Biomedical Engineering
Description: This research will use computer simulation to predict pilot response in a novel centrifuge configuration operated as a motion-based flight simulator.

Project No. 253 - Characterization of Mechanical Behavior of Advanced Materials

Major: Materials Science, Mechanical Engineering
Description: The focus of this research is to develop the life prediction methodology of advanced materials, such as titanium alloys, ceramics, matrix and metal matrix composites including investigation of damage mechanisms under various mechanical and thermal loads, as well as to understand the fretting fatigue and related cracking issues of high temperature titanium alloys when subjected to high cycle fatigues using experiments and mathematical model techniques.

Project No. 263 - High Temp. Superconducting Wires for Power Generation: Pulsed Laser Deposition Plume Dynamics

Major: Elec. Engineering, Mat. Science, Physics
Description: The student would assist in one of two major research projects that are being undertaken: (1) develop advanced optical diagnostics for process monitoring of YBCO deposition and (2) investigate plume dynamics and collisional kinetics to develop a better understanding of the gas phase mechanisms and film growth.

Project No. 283 - HCF and Near-Threshold Crack Growth Behavior of Turbine Engine Materials

Major: Mechanical Engineering, Materials Science
Description: Experiments will be conducted on titanium and single crystal nickel base superalloys under HCF and mixed-mode loading utilizing a wide range of loading configurations. Data will be collected and analyzed to determine stress states and criteria for crack initiation and extension.

Project No. 289 - Nondestructive Evaluation Support

Major: Physics, Elec. Engineering, Comp. Science
Description: The student will need to learn existing inspection techniques, acquire data with them, and become familiar with what constitutes defects signals. It is likely that C++ algorithms will have to be written to convert data from one format to another and to analyze the data.

Project LISSARD - Component Architecture Development

Major: Computer Science, Computer Engineering
Description: Programmer/software integrator needed to build the backbone of a computer security research laboratory. Duties will include installing and integrating computer intrusion detection tools, artificial intelligence software and commercial databases, and making general enhancements to the overall system. Desired qualifications: programming competency in a high-order language (C++, Java, etc.), configuring Windows, Linux or Solaris-based systems, competency with data structures and algorithm design, experience in configuring computer networks, background in database management, artificial intelligence methods and/or machine learning, and computer security.

Interested students can get an application via the SOCHE website at: <http://www.soche.org>. Applications must be submitted with a resume and transcript. For more information, call (937) 910-5808.



Winter 2001 Dean's List



BIOMEDICAL ENGINEERING

Prachi Asher Honors
 Joyce Bevington Highest Honors
 Amy Bierce High Honors
 Joseph Blake Highest Honors
 Julia Cecil Highest Honors
 Sharon Dillhoff High Honors
 Adam Fournier Highest Honors
 Christy Harm High Honors
 Erica Johnson Honors
 Ryan Justice Honors
 Michael Kahelin Highest Honors
 Maria Kahle High Honors
 Tiffany Kelley Honors
 Rachel Kinsler Highest Honors
 Adam Renner Highest Honors
 Matthew Roberts Highest Honors
 Michael Rueschman High Honors
 Erin Tewksbury Highest Honors
 David Walker Honors
 Jenna Warman High Honors
 Kristina Weaver Highest Honors
 Catherine Zelnio Highest Honors

COMPUTER ENGINEERING

Paul Anderson Highest Honors
 Chad Apple Highest Honors
 William Archer Honors
 Peter Buxa Highest Honors
 Edmund Cordray Highest Honors
 Adam Ewing Honors
 Jason Gilder Highest Honors
 Tamanna Husain Honors
 George Kehias Highest Honors
 Patrick McClure High Honors
 Chad Miller Honors
 Justin Moore High Honors
 Michael Peterson Highest Honors
 Roy Price Highest Honors
 Christopher Sielski Highest Honors
 Gregory Stall Honors
 Kip Streithorst High Honors
 Jason Wright Highest Honors

COMPUTER SCIENCE

Jeremy Barfell High Honors
 Curtis Beard Honors
 Thomas Boehnlein High Honors
 Kevin Bonifas High Honors
 Ammegon Bouchard Highest Honors

Ellen Chan Honors
 Jacob Diemer Highest Honors
 Terry Dolwick Honors
 Amir Fligler Highest Honors
 Ryan Flynn Honors
 Alan Frazier Highest Honors
 Rodney Hepfner Highest Honors
 Kaiser Hussain Honors
 David Johnson Highest Honors
 Joshua Kennel Highest Honors
 Jonathan Kiner High Honors
 Davis Light High Honors
 Christina Price High Honors
 Joshua Rice Highest Honors
 Christopher Schenck High Honors
 Jeffrey Switzer High Honors
 Joshua Williams High Honors

ELECTRICAL ENGINEERING

Emad Al-Tabakha Highest Honors
 Navid Baraty Highest Honors
 Michael Bistline Highest Honors
 Jerry Burns Highest Honors
 Dale Cull Highest Honors
 Robert Gillen Highest Honors
 Julie Jackson Highest Honors
 Eugene Johnson III Highest Honors
 Ya Li High Honors
 Paul McDowell High Honors
 Zachary Riepenhoff Highest Honors
 Gaurav Singh High Honors
 James Thompson Honors
 Simon Tritschler High Honors

HUMAN FACTORS ENGINEERING

Sara Johnson Honors
 Jennifer Stowe Highest Honors

INDUSTRIAL AND SYSTEMS ENGINEERING

Amanda Campbell Honors
 Elizabeth Chadwell High Honors
 Renecia Joseph High Honors
 Emily Kempfer Highest Honors
 Christina Snyder Honors
 Joseph Nagy Honors

MATERIALS SCIENCE AND ENGINEERING

Gary Barr Highest Honors

Lisa Douglas Honors
 Sean Gleeson Honors
 Joshua James High Honors
 Joseph Kell Highest Honors
 Robert Reuter Honors
 John Welter Honors

MECHANICAL ENGINEERING

Brian Arbogast High Honors
 Chad Brown Honors
 Kevin Brown Honors
 Corey Campbell High Honors
 Joseph Cyrus Honors
 Jesse Deeter High Honors
 Steven Dooley Highest Honors
 Andrew Dwenger Highest Honors
 David Gerschutz Highest Honors
 Amy Goldschmidt Highest Honors
 Brendhan Goss Highest Honors
 Jeff Haferd High Honors
 Michael Harff Highest Honors
 Sean Henderson Honors
 Timothy Hutton High Honors
 Jason Jones Honors
 Brian Koesters Highest Honors
 Andrew Kurpik Honors
 Craig Laubenthal Honors
 Joel Lauer Honors
 Travis Michalak Highest Honors
 Edward Morris Highest Honors
 Zachary Osborn High Honors
 Gregory Palm High Honors
 Aaron Powell Highest Honors
 Stephanie Puterbaugh High Honors
 Jason Reber High Honors
 Brian Recker Honors
 Shawn Riley Honors
 Jason Robinson High Honors
 Eric Roush Highest Honors
 Jason Ruge High Honors
 Oleg Shirayayev Highest Honors
 Katy Slominski High Honors
 Lawrence Thomas Highest Honors
 Shawn Uhlenhake High Honors
 Gregory Updike High Honors
 Wesley Ward Highest Honors
 Joseph Wendel Honors

PRE-BIOMEDICAL ENGINEERING

Amanda Whetstone Highest Honors



Winter 2001 Dean's List

Continued



PRE-COMPUTER ENGINEERING

Russell Block High Honors
 Gregory Burnett High Honors
 Jody Finney Honors
 Craig Halberstadt Honors
 Toni Larson Highest Honors
 Linda Moore Honors
 Brian Potchik High Honors

Krista Poll
 Adam Schultz
 Anil Singh
 Hetal Thakker
 John Tobe

Honors
 Highest Honors
 High Honors
 High Honors
 Highest Honors

PRE-ENGINEERING PHYSICS

Dean Brown Highest Honors
 Weston Earick High Honors
 Daniel LeMaster Highest Honors

PRE-COMPUTER SCIENCE

Robert Bever Honors
 Kristopher Collins High Honors
 Joseph Kirby Highest Honors
 Brian Mullins High Honors
 Thomas Patterson Highest Honors

PRE-ELECTRICAL ENGINEERING

Eric Elchert
 Chris Evans
 Stephen Felix
 Christopher McDermott
 Ghesu Ndefru
 Daniel Wells

Highest Honors
 Honors
 Highest Honors
 High Honors
 Highest Honors
 Highest Honors

PRE-MECHANICAL ENGINEERING

Mark Brooks High Honors

Congratulations!!

OSGC Scholarships Awarded

The Ohio Space Grant Consortium has awarded several scholarships to WSU College of Engineering and Computer Science students. These scholarships are funded by the National Aeronautics and Space Administration (NASA) National Space Grant College and Fellowship Program with additional support provided by Wright State University and the Ohio Aerospace Institute.

The students receiving awards for the 2001-2002 academic year are:

Junior Awards

Jeremiah Allen, ME \$2,000

Senior Awards

Rachel Gligorich, ME \$3,000
 Eric Roush, ME \$3,000
 Stephanie Puterbaugh, ME \$3,000

ITRI News

Faculty/Graduate Student Seminar

May 3, 2001
 2:00 - 3:00 PM
 145 Russ

Dr. Nikolaos G. Bourbakis, Director of the Information Technology Research Institute, will speak on "Autonomous Robots: Space Maps Generation from Unknown Environments during Navigation."

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 June 4, 2001. 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 by May 25, 2001. The College of Engineering and Computer Science reserves the right to edit all material for publication.

NEW COURSE OFFERED
for Summer Quarter in Computer Science

CS 399 (4 Quarter Hours)

Visual Basic II

Time: Monday and Wednesday, 6:30-8:20

Place: 152A Russ Engineering Center

Instructor: Roddy Keish

255-2424 ext. 313

roddy.keish@wpafb.af.mil

Visual Basic II, CS 399, is being offered this Summer quarter. It is the follow-on course to CS 214, Object Based Programming, also offered at Wright State University. The course will cover Intermediate to Advanced topics in Visual Basic, such as Creating Objects in Visual Basic, ActiveX Controls, ActiveX Data Objects (ADO), the Windows API, OLE Automation, as well as more advanced controls not covered in CS 214. Time permitting, Dynamic HTML will also be covered. The course is more conceptual than an introductory course in Visual Basic, however, it will cover the practical applications of these concepts.

The format of the class will be lecture/seminar/in-class demonstration and participation. Homework will be oriented toward understanding basic concepts. Prerequisite for this course is CS 214 or the understanding of an introductory class in Visual Basic.

For more information, contact Roddy Keish.

Office of the Dean

College of Engineering and Computer Science
3640 Colonel Glenn Hwy.
Dayton, OH 45435-0001

