

UCF LEADS NEW SPACE INSTITUTE

The University of Central Florida will help lead a new space research institute at Kennedy Space Center, giving the university's researchers a more prominent role in helping NASA make space travel safer and less costly.

Through the Spaceport Research and Technology Institute, UCF and other researchers throughout the nation will work with NASA scientists on projects such as developing the technology to detect corrosion on space shuttles without having to remove tiles and finding better, safer ways to monitor space traffic with satellites.

UCF signed a contract in November with ASRC Aerospace Corp. of Maryland to become the lead university at the institute, which NASA started eight months ago to expand universities' involvement with the space program. UCF will partner with more than 30 other universities, including the University of Alaska, University of Florida, Florida State University, Georgia Institute of Technology, Johns Hopkins University, University of Maryland, University of Miami and University of Michigan.



The specific work of the university researchers will depend on NASA's needs. By finding ways to make access to space safer and less expensive, the universities could "help open up missions to Mars and the moon and make them more affordable," said Mike O'Neal, NASA's assistant to the chief technologist for university research at Kennedy Space Center.

"We're trying to create a collaborative environment among academia, our industry partners and NASA," O'Neal

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UCF, TEAM STUDYING AIRPORT NOISE

UCF is a member of a team of prestigious universities participating in a new Center of Excellence for Aircraft Noise Mitigation established by the Federal Aviation Authority (FAA).

The team is led by the Massachusetts Institute of Technology and is composed of eight universities, including UCF. Roger Wayson, professor in the Civil and Environmental Engineering Department of the College of Engineering and Computer Science, is the leading UCF's portion of the work. The FAA intends to fund a minimum of \$2.1 million over the first three years with continuation of funding for up to 10 years.



The Center will conduct basic research through engineering development, prototyping and testing to study the effects of noise and noise mitigation and will also extend into the study of emission control, said Wayson.

Wayson was invited to be part of the study after he met some of the MIT

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NSF AWARDS ENGINEERS NEARLY \$1M TO FOCUS ON TECH TRAINING

Hoping to make its industrial engineering program a model for universities throughout the country, the University of Central Florida will use a \$951,000 grant from the National Science Foundation to train students to use state-of-the-art technology and take leadership roles in corporate America.

The redesigned curriculum, adapting to an industry that's relying more on technology and less on traditional manufacturing jobs, will feature remote laboratories at some of UCF's corporate partners. Students will interact with employees and view actual systems, such as assembly lines or cashier stations, that engineers are redesigning and improving.



CRUMPTON-YOUNG

UCF, which has about 450 industrial engineering students, also will spend part of the grant on recruiting talented high school students, particularly women and minorities. Most students who join industrial engineering programs throughout the country are already in college and are switching majors.

Bruce Kramer, director of engineering education at the National Science Foundation, said UCF's changes during the next three years will better prepare students for a corporate world where the need for industrial engineers in the service and information technology industries is increasing while the role of more traditional manufacturing jobs diminishes.

"The industrial engineers at UCF have proposed to reinvent what industrial engineering is," Kramer said. "Our hope is that they'll do such a good job

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INVENTION TO VENTURE GIVES ENTREPRENEURS IDEAS

Every inventor has a great idea - moving it to market is what takes work, participants in the Invention to Venture conference at UCF learned.

The conference, sponsored by the National Collegiate Inventors & Innovators Alliance, featured as speakers several inventors who were willing to share their formulas for entrepreneurial success.

Gene Landrum, founder of Chuck E. Cheese pizza restaurants and Barry Schuler, former CEO of Time-Warner, Inc., were among the experts who entertained and enthralled the 150 conference attendees with the benefits of their hard-earned experience and the wisdom gathered from the school of hard knocks.

Landrum drew laughter when he told of his friends' and family's reaction to his plan for a his pizza restaurant chain whose mascot is a human-sized rodent: "'It'll never work - you CAN'T have a RAT promote a restaurant,'" he recalled.

But he stressed that the greatest original ideas are almost universally scoffed at when they are introduced. And he said that is why it's important for entrepreneurs to have the confidence to take risks and the perseverance to see a great idea through to the finish. Barry Schuler, former CEO for America Online and a self-described



LANDRUM

"serial entrepreneur," said he is always on the lookout for new start-up opportunities and he liked what saw at UCF.

The conference, sponsored by the National Collegiate Inventors & Innovators Alliance and UCF's Technology Incubator (UCFTI), was held Nov. 14 at the university's College of Engineering and Computer Science. In addition to the keynote speakers, participants heard about some of the nuts and bolts of launching successful companies from a variety of perspectives: John Spence, a leadership consultant and "executive in residence" at the UCFTI spoke on teambuilding; Patent Attorney Brian Steinberger spoke on Intellectual Property; Kevin Casey, accountant, gave an outline for the perfect business plan, slide show and elevator speech; and a panel made up of successful entrepreneurs shared their tips on finding financial support.

ONLINE RADIO SHOW DEBUTS

Tom O'Neal and Carol Ann Dykes began the first of a series of Internet radio programs Jan. 16, discussing nanotechnology on the Invention & Innovation Hour on the Voice of America News network. The program will air every Friday for 13 weeks, focusing on a range of technology areas that impact lives and the marketplace. O'Neal is associate vice president of research and director of the UCF Technology Incubator and Dykes is associate director of the Incubator.

www.voiceamerica.com



SCHULER

COOKIN' WITH M.J.



"Research IMPACT starts with quality ingredients"

ORLANDO OFFERS SCRIPPS FAR MORE THAN VACATION DESTINATION

We at UCF join the rest of Florida in welcoming the Scripps Research Institute to our state. We look forward to doing our part in making the Scripps Florida operations a success, and to opportunities for joint projects and collaboration with Scripps.

The courtship of Scripps, which was concurrent with exciting new developments in technology transfer and biotechnology at UCF, allowed us to offer the immediate engagement of certain UCF resources in these areas. The UCF Technology Incubator, recognized nationally for its superior track

record in helping new companies succeed, is available to qualified Scripps' entrepreneurial spin-offs. UCF graduate programs in the biological sciences produce highly qualified students that could participate in internship or co-op programs with the company. UCF's Tech Transfer Office is handling several biotech-related technologies that could be of interest to Scripps. UCF's burgeoning Biomedical Science Center offers opportunities for faculty appointments for qualified Scripps staff and the Florida Photonics Center of Excellence has a major thrust in biophotonics and advanced imaging that could mesh very well with Scripps research programs.

Scripps scientists and other researchers from around the world will find in Orlando facilities and expertise that can contribute to their success. From two-photon confocal microscopy to laser generated X-ray microscopy, optical coherence tomography, imaging through scattering media, femtosecond x-ray characterization, and advanced 3-D displays, scientists at the School of Optics/CREOL create their own special kind of magic every day. A UCF bio-

molecular scientist has started a company that is exploring the possibility of growing therapeutic drugs in common plants - which could literally be a lifesaver for those who cannot access or afford medications such as insulin and interferon. Anyone who has had a Positron Emission Tomography (or PET) scan to look for life-threatening tumors is likely using crystals grown in Sanford by a UCF spin-off company, Crystal Photonics.

UCF technology is attractive not just to scientists from companies like Scripps but to consumers who utilize it sometimes unknowingly.

So when educators, researchers or businesspeople get tired of sunning themselves on our beautiful coastal beaches or visiting the world's premier attractions, and want to do some great science using really cool tools, we welcome them to Central Florida.

Orlando is a great place to get leading-edge research work done.

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'TEAM ORLANDO' SHOWS SIMULATION STRENGTH AT IITSEC

The Institute for Simulation and Training at UCF coordinated its research presence with partners from the Florida High Tech Corridor at the 25th annual Interservice/Industry Training, Simulation and Education Conference (I/ITSEC) during the first four days of December.

Held in the newly opened Orange County Convention Center south halls, the conference drew more than 390 exhibitors and in excess of 16,000 visitors and conferees.

The "Team Orlando" message was straightforward: The central Florida region leads the world with the best combination of government, academic and private industry devoted to modeling and simulation research and development.

City and county development representatives, community college staff, UCF spokespersons and simulation



researchers worked together to ensure booth visitors went away with the central Florida message.

The core of the IST/UCF exhibit was a demonstration of research into mixed reality -- a combination of digital images and a view of the actual envi-



ronment - viewed through a head-mounted camera/display device. UCF's Media Convergence Laboratory, under the direction of Christopher Stapleton, currently is studying the application of this technology to training in urban combat environments. Other researchers showcased technologies that, when integrated into the mixed reality program, will add voice commands, haptic (touch) feedback, real-time graphics, lighting effects and an after-action review.

<http://www.ist.ucf.edu>

CODED VIBRATIONS COULD HOLD KEY TO MILITARY ALERTS

Military commanders might someday be able to alert soldiers to battlefield threats through vibrations instead of other, more distracting communications.

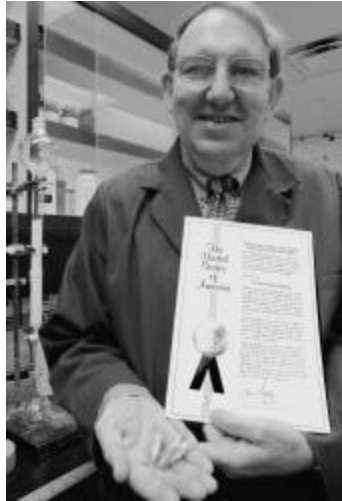
In a study funded by the U.S. Department of Defense's central research and development organization, UCF researchers are evaluating ways to send coded signals through miniature devices that vibrate. Their work could lead to a new method of communication for soldiers who rely on verbal messages and visual displays mounted in their helmets.

"Clearly, there's a concern for our soldiers, allied soldiers and civilians," said Richard Gilson, a psychology professor who is the lead researcher on the project. "We want to find out if there's a better way to convey information about threats. I seriously think we can save some lives with this."

Communicating with soldiers presents many challenges for the military. Soldiers must clearly understand information about threats, because miscommunications can leave them vulnerable to attacks and wrong responses can be deadly.

Gilson said the military can best convey information without lights and sounds that could alert the enemy to soldiers' locations. Helmet-mounted displays block some of the soldiers' views of their surroundings. And soldiers can be so overwhelmed with visual and auditory information that they aren't paying enough attention to the sights and sounds around them, Gilson said.

The U.S. Defense Advanced Research Projects Agency, or DARPA, provided \$470,000 for the project in September. Initial research will test how well UCF students understand information relayed through vibrating sensors on their bodies. Psychology professors Mustapha Mouloua and Peter Hancock are helping Gilson with the research, as are post-doctoral fellows James Szalma and Tal Oron-Gilad and graduate students Chris Brill, Joshua Downs, Cleve Mortimer and Peter Terrence.



HOWARD MILES

PATENTED COMPOUND COULD EASE TREATMENTS FOR CANCER, TUBERCULOSIS

A UCF chemistry professor has received a patent for a new organic compound that could help make cancer treatments less costly and reduce their side effects.

Drugs made from the new compound, along with 14 other synthetic compounds that Professor Howard Miles has created in the last two years with help from Russian researchers, appear to be effective in fighting diseases such as bone cancer, breast cancer, leukemia and tuberculosis.

Drugs from the new compounds may be superior to medicines that are already on

the market, which are created from biological compounds harvested from nature. Miles' compounds have a much lower toxicity level than other medicinal compounds. That means that the treatments developed from his compounds will have less serious side effects, and, since the medicines will be created synthetically, they will be less costly and more readily available than drugs produced from nature.

The compounds were created through a partnership that Miles formed a few years ago with professors and graduate students at Perm State University, in Perm, Siberia. The Russian team created new organic compounds and sent Miles samples of the ones that seemed most likely to affect biological structures. Miles then worked with the compounds to determine their medical value.

Miles is working with research facilities, including the Orlando Regional Medical Center and the H. Lee Moffitt Cancer Center & Research Institute, to determine exactly how the compounds neutralize diseased cells. Once that process is complete, UCF will contact prescription manufacturers about licensing the compounds for medicinal use.

Miles' research interests include the study of natural and synthetic organic products to treat diseases. He was named UCF's Distinguished Researcher of the Year in 1996 and has been appointed to the UCF Patent Committee.

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researchers while on sabbatical in Cambridge, MA last year.

Wayson's expertise is in the area of mechanical modeling and measurements which he will use to support five of the project's nine tasks. Wayson directs UCF's Community Noise Lab which has conducted noise impact studies for a variety of government and industrial clients.

Among the areas studied by the FAA team are abatement flight procedures and supporting technologies, compatible land use management, and airport

operational controls. Future scope of activities may be expanded to other aviation environmental efforts such as aviation gaseous emissions and particulate matter. The team includes:

MIT (LEAD)
BOISE STATE UNIVERSITY
FLORIDA INTERNATIONAL UNIVERSITY
PENNSYLVANIA STATE UNIVERSITY
PURDUE UNIVERSITY
STANFORD UNIVERSITY
UNIVERSITY OF CENTRAL FLORIDA
UNIVERSITY OF MISSOURI-ROLLA

A partner dedication ceremony for the team is scheduled for Jan. 28 in Washington DC.

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PROF ENGINEERS STRONG START FOR IT COMPANY

Mansoorah Mollaghasemi, a professor of Industrial Engineering and Management Systems, started a company, Productivity Apex, Inc., which recently won ITFlorida's Small Business of the Year Award.

BRIEFLY DESCRIBE YOUR COMPANY. WHEN WAS IT FORMED, WHAT SERVICE DOES IT PROVIDE AND HOW DO YOU HOPE TO SEE IT GROW?

Founded in 2001, Productivity Apex, Inc. (PAI) is a research and software development firm that specializes in using technological and process improvement tools to increase productivity and efficiency in private and government organizations. PAI provides a wide range of services that encompass research and development in simulation modeling and analysis, process optimization, data mining, artificial intelligence, and risk analysis.

The outlook for our company's growth is bright. Our primary niche is modeling and simulation, an area that has applications in any process and industry. For example, during the past two years, PAI has developed a simulation software product for NASA that is currently in use by the Next Generation Launch Technology (NGLT) program and the Orbital Space Program (OSP) for the evaluation of next generation vehicle architectures.

Whether it is analyzing shuttle hardware processing flow, patient flow in a health facility, or passenger flow within an airport facility, modeling and simulation is a critical tool in increasing productivity and efficiency and in reducing costs. As systems become more and more complex, simulation turns out to be the only tool that can effectively model and analyze such systems.

Our expertise and knowledge has led to the growth of our company over a short span of two years, and we are confident that, as we gain more knowledge and solidify our footing in the marketplace, that this growth will be sustained and increased.

WHAT IS THE SIGNIFICANCE OF THE ITFLORIDA SMALL BUSINESS OF THE YEAR AWARD?



MOLLAGHASEMI

ITFlorida is an umbrella, non-profit organization that represents Florida's diverse information technology community on a statewide basis. The ITFlorida Small Business of the Year was awarded to a small business for demonstrating leadership and excellence in information technology. PAI was selected from among 100 companies that applied or were nominated for the prestigious awards. The nominations were reviewed by a panel of judges consisting of Florida information technology leaders. This award offered "instant credibility" to our company and provided a number of opportunities that will help achieve our goals and vision.

WHAT UCF SERVICES DID YOU UTILIZE TO GET THE COMPANY UP AND RUNNING?

The strength of our business is based on strong association of PAI to academia. Our business is relying on using state-of-the-art tools and techniques in solving real-world complex problems. Consequently, the close proximity of our company to UCF will continue to be instrumental to our success. Furthermore, our company provides a unique avenue of commercialization for a number of innovative ideas that we develop in the academic environment. PAI has access to an unlimited knowledge base from faculty and graduate students at UCF. This has allowed us to enhance our expertise and our competitive advantage.

HOW SPECIFICALLY HAS THE UCF TECHNOLOGY INCUBATOR HELPED WITH THE START-UP PROCESS?

The UCF Technology Incubator has had a significant impact on the success of our company. One of the primary goals of UCF is to become the leading partnership university in the nation. The promotion and well-being of incubator companies has

been one of the focal points in achieving this goal. Since our joining the Incubator in April 2003, the associate director, Carol Ann Dykes, has continually and effectively promoted our company to her many contacts, is helping us with ideas on how to maintain and expand our growth, is increasing our visibility within the state of Florida, and is providing an environment that is conducive to success.

HAS CENTRAL FLORIDA (ECONOMY, GOVERNMENT, ETC.) PROVIDED A GOOD ENVIRONMENT FOR A START-UP?

As a statewide "Center of Excellence" in modeling and simulation, central Florida has attracted many private organizations and government sponsors to the area. The presence of these organizations has been critical to the success of our company.

HOW DO YOU SEE YOUR COMPANY IMPACTING THE CENTRAL FLORIDA ECONOMY?

The core products developed by PAI have positively impacted the future of the space program. Our simulation software products have enabled NASA to identify the most efficient and cost-effective space vehicle of the future which is especially significant given President Bush's newly announced space initiative. The aerospace industry is one of the largest and most visible government operations in the state of Florida, and certainly our products have contributed to the sustained growth and well-being of this industry.

Despite the fact that PAI was founded in a period of national economic downturn it has provided job opportunities to a number of highly qualified engineering professionals and has contributed to keeping highly skilled workforce in the state.

Judging by the significant potential that PAI possesses in expanding its core business product to other markets, we expect to hire many more high-skilled professionals in the near future. By working on these highly visible projects, PAI is helping to build the state's reputation as a place where small business start-ups can succeed.

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CALENDAR OF EVENTS

JANUARY

22, Thursday, noon
Research Faculty Luncheon
King Arthur, Sir Lancelot rooms, The
Marketplace Dining Room
Informal luncheon meeting for faculty.
Buy your lunch from the marketplace and
interact with OOR staff and other
researchers.
tdaily@mail.ucf.edu

27, Tuesday, 9:00am - 11:00am
Central Florida Technology Incubator
Education Series: Personal Power for
Professional Success
Details/Registration: www.incubator.ucf.edu

FEBRUARY

1, Sunday
Deadline for proposals, Florida Photonics
Center of Excellence
Proposals are sought for research partner-
ships between university faculty within the
state of Florida and Florida photonics indus-
try, photonics related Florida industries, or
other government partners. Funding is avail-
able for projects that support the goal of
the Florida Technology Development Act to
provide the state of Florida with a clear
position of leadership in key emerging tech-
nology areas with the unique potential for
economic and societal impact in the years
to come.
Details: www.research.ucf.edu

Tuesday, 10, 5:30pm-7:30pm
Radisson Plaza Hotel Downtown
Emerging Business Network
Take the opportunity to meet local service
providers and fellow entrepreneurs. Cost:
\$15 to members who pre-register and \$20
for non-members who pre-register
Details/Registration: www.incubator.ucf.edu

MARCH

Tuesday, 9, 5:30pm-7:30pm
Radisson Plaza Hotel Downtown
Emerging Business Network
Cost: \$15 to members who pre-register and
\$20 for non-members who pre-register
Details/Registration: www.incubator.ucf.edu

APRIL

Tuesday, 13, 5:30pm-7:30pm
Radisson Plaza Hotel Downtown
Emerging Business Network
Cost: \$15 to members who pre-register and
\$20 for non-members who pre-register
Details/Registration: www.incubator.ucf.edu

PSYCHOLOGISTS STUDY METHODS OF TRAINING AIRPORT SCREENERS

With a \$210,000 grant from the Federal Aviation Administration (FAA), UCF researchers are studying different learning techniques to understand how to best train people to pick out guns, knives and other threatening objects as they pass through airport X-ray machines.

The researchers' findings, along with results of similar studies at other universi- ties, will help the FAA and Transportation Security Administration determine the best procedures to train new screeners. The TSA oversees the hiring and training of screeners.

The results may eventually lead to improved safety and more convenience for travelers, said Stephen Fiore, a scientist at UCF's Institute for Simulation and Training.

"Travelers want to be safer without being inconvenienced very much," he said. "If screeners are experts at this task, they'll be more accurate and also are likely to be faster."

Increasing the pace at which screeners accurately work can be especially valuable over holidays such as Thanksgiving and Christmas, when airport lines can be long. In an early phase of the project, Fiore and his colleagues had 39 undergraduate stu- dents identify threatening objects in com- puterized X-ray images the researchers created. They were trying to see if students are more likely to identify a threatening object in a simulated suitcase if they were first shown the object in an uncluttered X- ray image or in an image that included many other items.

Results so far show that some students -- those who are good at visualizing and men- tally rotating images -- learned better with the mostly full simulated suitcases, while others learned better when the suitcases showed only the threatening object. Fiore said this type of research shows how tech- nology can be used to adapt training tech- niques to fit individual learners.

In the coming months, the researchers plan to analyze how other factors, such as the direction in which a threatening object



is facing and whether several items overlap each other, affect students' abilities to detect threatening objects.

UCF's research is funded through summer 2004. Fiore said future funding depends on the size of FAA research budgets.

Fiore is director of the Consortium for Research in Adaptive Distributed Learning Environments at the Institute for Simulation and Training. He also is a research scientist with UCF's Team Performance Laboratory. In addition to Fiore, the research team includes Florian Jentsch, director of the Team Performance Laboratory; Clint Bowers, a psychology professor and assistant dean of research for the College of Arts and Sciences; and Eduardo Salas, a psychology professor who also is director of the Department for Human Systems Integrated Research at the Institute for Simulation and Training.

Fiore, Jentsch and graduate student Sandro Scielzo of the Department of Psychology presented initial results of their research at the 2003 annual conference of the Psychonomic Society in Vancouver, British Columbia.

Fiore said a handful of other universities, including the University of California at Davis and Brigham and Women's Hospital/Harvard Medical School, have received or are receiving funding to try to improve training for screeners. Some of the topics addressed include how fatigue and distractions affect screeners' abilities to detect threatening objects and how screeners learn to look for important fea- tures on objects, such as the trigger of a gun.

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MATHEMATICS PROF NAMED 'HIGHLY CITED RESEARCHER'

Mourad Ismail, professor of mathematics, was recently named a "Highly Cited Researcher" in the field of mathematics by the Institute of Scientific Information (ISI).

ISI analyzed 19 million published papers to determine the most highly cited researchers in 21 broad categories including life sciences, medicine, physical sciences, mathematical sciences, engineering, and social sciences. Researchers are selected for inclusion based on the total number of citations received by their articles. In

the ISI category of mathematics-- which includes applied mathematics, computational mathematics, probability, and statistics-- Ismail was the only mathematician to be included from the any of the Florida state universities.

ISI Highly Cited list is offered as a database at SIHighlyCited.com. The researchers selected for inclusion on SIHighlyCited.com comprise less than .05 % of the nearly five-million researchers in the ISI Citation Database from 1981 -1999.

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BIOMOLECULAR STUDENTS CHOSEN FOR ORAL PRESENTATIONS

Five students conducting research under the guidance of Assistant Professor Beverly Rzigalinski in the Department of Molecular Biology and Microbiology, including one still in high school, were selected to give oral presentations of their findings at the Society for Neuroscience Annual Meeting-- the premiere venue for neuroscientists to meet and exchange the latest discoveries about the brain, spinal cord and nervous system. The event was held Nov. 8 to 12 in New Orleans, La., and drew more than 28,000 people.

Biomolecular science graduate students Ariane Clare, Pamela Callaghan, Jimmie Colon and Ronald Fry, and Lake Highland Preparatory School senior Andy Cook spoke about their research on the effects of engineered nanoparticles on cultured rat brain cells. Sudipta Seal, associate professor in the Advanced Materials Processing and Analysis Center and the Department of Mechanical, Materials and Aerospace Engineering and his research group created the nanoparticles.

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that other IE departments stand up, take notice and follow their lead." Lesia Crumpton-Young, department chair of industrial engineering and management systems at UCF, said more aggressive recruiting at high schools should begin in the spring. In the fall, UCF's industrial engineering program plans to start a minor in engineering management, which will better prepare students for jobs as managers and for other leadership roles, such as project team leader, she said.

UCF received a planning grant of \$100,000 a year ago from the National Science Foundation to begin developing the new curriculum. Crumpton-Young has attended

national engineering conferences and visited other universities to discuss the planned changes. The National Science Foundation awarded the \$951,000 grant in September.

Erik Halleus, a retired vice president with Siemens Corp. and a member of UCF's industrial engineering advisory board, said businesses will welcome the redesigned curriculum because universities have responded too slowly to the changing needs of an industry that's relying more on technology.

"We need exactly the education that's talked about in this proposal," he said. "Industry will really look forward to these graduates when they start coming out."

<http://www.engr.ucf.edu>

SCOTT HONORED FOR ENGLISH STUDIES

UCF Assistant Professor of English Blake Scott recently won the 2003 Richard Ohmann Award for his article "Extending Rhetorical-Cultural Analysis: Transformations of Home HIV Testing."

The award is given to the article in *College English* (Volume 65, Number 4, March 2003)-- the flagship journal of the National Council of Teachers of English (NCTE)-- that makes the most significant contribution to research, theory, or pedagogy in English Studies. The award was presented at the NCTE annual convention in San Francisco in November.

Scott's article explains how cultural studies can extend traditional rhetorical analysis to account for broader conditions of possibility, map shifting connections and power relations, and intervene in material-discursive effects. After examining traditional approaches to the rhetoric of science, the article illustrates a hybrid approach through a study of the home HIV testing controversy.

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HANCOCK AWARDED LIBERTY MUTUAL MEDAL

Peter Hancock, Provost's Distinguished Research Professor of psychology, received the Liberty Mutual Medal for a paper he co-authored on "Behavioral Accident Avoidance Science: Understanding and Assessing Response in Accident Incipient Conditions."



HANCOCK

The award, presented at the International Ergonomics Association Triennial Congress held in Seoul, Korea, recognizes outstanding, original research in the field of occupational health and safety and includes a cash award of \$5,000.

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said. "We're really trying to get some of our researchers a little more shoulder-to-shoulder working with academia." ASRC Aerospace Corp. signed the University-affiliated Spaceport Technology Contract with NASA in March. The five-year contract, which includes the new institute and other space-related projects, is renewable for another five years. The contract includes about \$400,000 of seed money to help start research at the institute. NASA will provide separate funding as specific projects are developed.

Richard Kniseley, ASRC Aerospace's program manager, said the company selected UCF as the lead university because of its researchers' "energy and excitement" and the quality of the institutes already set up at the school. He specifically praised UCF's Center for Research and Education in Optics and Lasers, or CREOL.

"This is quite significant for us to be selected for a leadership role," said M.J.

Soileau, UCF's vice president for research. "Space research really has been in our mission from the very beginning, and we've worked very hard to try to find the best way to make the talent of the university available to Kennedy Space Center and to the industry associated with the space program."

UCF and NASA have worked together on space research projects since the university's early years in the 1960s. Last year, UCF received about \$7.9 million for research on NASA projects, including work at Kennedy Space Center.

In addition to working more closely with the space center, UCF will strengthen partnerships with researchers at several prominent universities through the new institute, Soileau said. Researchers affiliated with the institute also could take on projects for other government agencies and corporations.

One ongoing project at the Spaceport

Research and Technology Institute could benefit NASA and commercial airlines, said Ron Barile, the institute's acting director. Scientists are developing sensors designed to give an early warning when wires on a spacecraft are prone to fail, reducing the potential for a short circuit or sparks that could cause a fire.

UCF professors are involved in two other ongoing projects.

Fernando Gomez, a computer science professor, is helping NASA make its database of daily, shuttle-related reports easier to access, and R. Glenn Sellar, of UCF's Florida Space Institute, is assisting with efforts to better detect hydrogen and helium leaks from spacecrafts before they are launched.

The institute does not yet have a permanent home but likely will move into a new or renovated building on the space center grounds in about two years, Barile said.

www.research.ucf.edu