RIT, Lockheed partnership works to assess ‘health’ of U.S. military vehicles

America’s military fleet is on the road to improving performance and environmental quality due to new technology implemented through a partnership between RIT and Lockheed Martin Corp. The project is a component of a $150 million competitive contract with the U.S. Marine Corps Systems Command, won by Lockheed Martin. The project will equip 7,000 to 12,000 military vehicles with new systems monitoring technology that can better assess the “health” of vehicles in the fleet.

The work builds on more than a decade of research conducted by RIT’s Center for Integrated Manufacturing Studies, a unit of the Golisano Institute for Sustainability, and the Office of Naval Research. The program was funded through the efforts and support of the Rochester area Congressional and U.S. Senate delegations.

“RIT’s world-class scientists have developed amazing technology that will really benefit our military,” says Sen. Charles Schumer. “I’m proud to have supported RIT’s efforts, and it’s gratifying to once again see its work move from the laboratory to the field.”

The partnership has also led to the creation of a spin-off company, LIBAN Inc., located in the RIT business incubator Venture Creations, which is now seeking to expand the use of software and hardware applications developed through the partnership for commercial vehicle fleets.

“This partnership is great news that further demonstrates how federal investments in our local universities create local jobs,” adds Congressman Louise Slaughter.

RIT faculty, staff and students gathered Jan. 20 in Clark Gymnasium to watch live coverage of the inauguration of President Barack Obama.

RIT joins nationwide global warming teaching initiative

Changing the conditions and policies that may alter global climate begins with broad awareness to both potential problems and opportunities for corrective action. On Thursday, Feb. 5, RIT joins more than 1,100 colleges, universities, high schools, faith organizations and civic groups from across the country to explore all aspects of this issue during the National Teach-In on Global Warming.

In the classroom

Bioinformatics class looks at marvelous fruit flies, page 2

On exhibit

Alumni photographers showcase natural surroundings, page 2

Research and Scholarship

New Liberal Arts associate dean specializes in early literacy research, page 3

Viewpoints

Preventing climate change may involve tough choices, page 3

Student Spotlight

Engineering student finds joy in research

Natasha Kholgade has spent much of her time in the Kate Gleason College of Engineering performing hands-on research with the guidance of her instructors.

In the classroom

There’s a new twist to this year’s Imagine RIT: Innovation and Creativity Festival. RIT President Bill Destler has issued a “Green Vehicle Challenge” to the campus community:

Destler has challenged RIT students, faculty and staff to design and construct a vehicle that consumes less total energy than his electric bicycle.

“We all need to do our part to help save Planet Earth,” says Destler. “Who knows? Maybe a participant will discover the right formula to fix our global energy problems.”

Vehicles must carry at least one person weighing more than 150 pounds on a three-mile route along the RIT loop using a form of energy other than human power. The winning vehicle must complete the course in less than 30 minutes.

The challenge takes place at 9 a.m. May 2. The winner will be announced at 10 a.m. during the festival’s opening ceremony. The winning team will win either an antique banjo from Destler’s collection or $1,000. For information on the rules of the challenge, visit www.rit.edu/imagine.
Bioinformatics students explore scientific marvels—fruit flies

Students in the Advanced Applied Genomics class have an eye for detail. With painstaking effort, they stitch together sequences of genetic material and pull from it the portrait of a little known fruit fly. The data is real; the work is hard and sometimes tedious. The intensity of the class requires a low teacher-to-student ratio. In this case, one professor and two teaching assistants for seven students. The upper-level bioinformatics class—which applies computer science to biological applications—meets for eight hours each week in a small computer lab.

"It's a big commitment for everyone involved," says Gary Skase, director of bioinformatics in the College of Science, who offers the course once a year.

What makes Advanced Applied Genomics particularly challenging is precisely what draws many students to science: the thrill of discovery. Skase and his teaching assistants Beza Sanchez and Ashley Benjamin work closely with the students to unravel and interpret the raw genetic data generated by the Genomics Education Partnership at Rochester University, home to one of the few high-throughput genome sequencing centers in the world.

The Genomics Education Partnership, led by geneticist Sally Elgin at Washington University, is a consortium of scientists dedicated to improving genomics education. The partnership co-authored an article published in the Oct. 31 issue of Science that highlighted the model curriculum that transforms undergraduate classrooms into real-world laboratories.

The partnership gives the class DNA sequences and creates the cost of generating poor-quality data. The rest is up to the class, which must discover what is hidden in the sequences without a lot of guidance. Students emerged as exceptional photographers as a medium of ideas and culture, especially when its subject intensely examines the context and content of our surrounding natural world.

The exhibition is organized in the Rochester Contem-porary Art Center, 137 East Ave. There will be an opening reception from 5 to 7 p.m. Feb. 6.

In addition to Pfahl, the featured photographic artists are Barbara Rossow '94 (M.F.A.), Marilyn Bridges '79, '81 (B.F.A., M.F.A.), Dean Chamsworth '84 (M.F.A.), and Dan Porter '77 (B.F.A., A.A.S.). Grey Skuse and his teaching assistants will be part of a photographic exhibition, Natura, in keeping with the theme of the exhibition. They include members of the United Nations Environment and the inter-vening role of humankind, science and technology. Pfahl, most notably the theme of the natural environment and the interfering role of humankind, science and technology.

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A close look into the landscape of oil

Liberal Arts appoints new associate dean

Suzanne Graney, assistant professor of school psychology, has been named associate dean of RIT’s College of Liberal Arts. Graney takes over for John Capps, who was recently promoted to senior associate dean. Graney will assist in the development and implementation of the college’s strategic plan and serve as an advisor to Dean Robert Ullin on academic and research issues.

“I am excited for this new opportunity and hope to help in taking the College of Liberal Arts to the next level,” notes Graney. “I look forward to developing and implementing initiatives that will enhance the college’s efforts in research, curriculum development and student support.”

Graney has been with RIT since 2003, teaching undergraduate and graduate courses, while also conducting research in early literacy assessment and instruction. She previously served as a school psychologist with the Indian River County School District in Vero Beach, Fla. A native of Canadaigua, Graney received an associate degree in humanities from Finger Lakes Community College, a master’s in psychology from the State University of New York at Geneseo and a doctorate in psychology from the University of Oregon.

“Professor Graney combines the academic, practical and administrative expertise needed to advance the development of services to our faculty, staff and students,” adds Ullin. “She will be a tremendous asset to the college and RIT as a whole.”

RIT Web page adds alumni news tab

A new page on the RIT Web site offers stories and information especially for alumni. The page, which features “online exclusive” content, with additional material added regularly. In addition, stories of particular interest to alumni from University News publications are spotlighted. The “Alumni in the News” section includes links to stories about RIT grads that have appeared in the news media. Visitors to the page will also be able to connect to RIT’s Office of Alumni Relations as well as events, services and programs offered by the university.

Visit the new page at www.rit.edu/news/alumni. It

Staff creativity wins 2009 “Accolades”

The Council for Advancement and Support of Education is recognizing the creative work of RIT staff in announcing recipients of its 2009 Accolades Awards.

Two of three winning entries are associated with Imagine RIT, a multi-disciplinary featuring festival, wins a Silver Award in the category of Webcast/Podcast/CD/DVD Feature. Also, the Imagine RIT television commercial commercials received a Bronze award in the category of PSA & Commercial Spot. Paul Stella, RIT University News director, wrote and produced both projects. Steve Czompo from RIT’s Education Technology Center served as director and editor, and ETC’s Joe Bellavia directed the animation.

In addition, the RIT/NTID 40th anniversary reunion vlog series, featuring NTID alumni relations director Matthew Driscoll, receives honorable mention in the Best Practices in Alumni Relations category. David Conyer, executive producer of Educational Design Resources, produced and directed the series, and NTID marketing communications specialist Susan Murad was the writer.

The Accolades Awards are sponsored annually by CASE District II, which represents the work of colleges and universities throughout the U.S. mid-Atlantic region, Puerto Rico, U.S. Virgin Islands and Ontario, Canada.

Ea

vironmental activist Bill McKibben visited RIT in early November capping an exciting week for those seeking to make the United States a leader in a different direction. Voters had just swept Barack Obama to victory, making him the first “community organizer” to win the presidency. That phrase generated ridicule on the campaign trail from advocates of the economic orthodoxy which concerns McKibben: that prosperity requires individuals to elevate their narrow interests above all else. As argued in his book Deep Ecology, this year’s freshman common text, such “hyper-individualism” has impoverished our societies, for only a relative few have benefited from the industrial world’s relentless pursuit of limitless growth.

In particular, the desire to maximize profits by burning cheap fossil fuels has spawned environmental challenges which we can no longer ignore—and ones which we cannot hope to solve without communal action. President Obama’s inaugural remarks about the recession apply equally well to the environment. “Our economy is badly weakened, a consequence of greed and irresponsibility on the part of some, but also our collective failure to make hard choices and prepare the nation for a new age.”

By now we have all heard about the lifecycle changes we can make to “save the earth.” Individuals should recycle, carpool and take shorter showers since the collective impact of millions of such actions will decrease carbon emissions. But affecting real change will require that we, as members of an engaged citizenry, make much tougher decisions regarding the infrastructure at the heart of our fossil-fuel based economy.

Making deep carbon cuts will require massive investment in a new “green-collar economy” featuring sustainable technologies. Just as the government bankrolled the federal highway system, so it must now restructure our power grid. Finding the money will require difficult, re-prioritizing, such as shifting subsidies from the coal industry. Such decisions will in turn require tremendous political will, and thus voters must convince their representatives that failure to act will mean losing the next election. Furthermore, because renewable energy sources like the sun and wind entail less centralization than fossil fuels, local communities will have to work together to set up such small-scale facilities.

Community organizing takes a lot more time and effort than buying a compact fluorescent light or adjusting the thermostat, but it is a crucial prerequisite of systemic change, as epitomized by the civil rights movement. It is also fulfills a human need to be part of something larger than oneself. Please join us for the National Teach-In on Climate Change on Feb. 5, and visit McKibben’s Web site at www.350.org to participate in his campaign planned for Oct. 24.

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The State of the Address delivered Jan. 7 by New York Gov. David Paterson issued news for college students. In his speech, Paterson proposed $75 million in budget cuts to student financial aid programs, including TAP, HEOP C-STEP and Liberty Partnerships. Paterson’s proposal eliminates TAP for graduate students and cuts C-STEP in half. One of the proposed cuts to TAP relates to a increase in the number of credits a student must complete full-time. Most RIT undergraduate degrees require more than 180 credits. A as a result, approximately 85 to 90 percent of RIT students will find TAP support ending prior to completing their degrees.

“We are asking RIT faculty, staff, students and alumni to share your feelings with state lawmakers as they consider Gov. Paterson’s proposed budget and make tough decisions in a difficult economy,” says Cindee Gray, RIT’s assistant vice president for government and community relations. “By simply logging onto a Web site, you can express your dissatisfaction with these cuts that will most certainly have a negative impact on our student community and our local economy.”

Fortunately for students, Paterson has introduced a new, low-cost student loan program called New York Higher Education Loan Program that may help students borrow for college at interest rates lower than what private, alternative loan lenders are now offering.

Visit capwiz.com/cic/home to encourage elected officials to enact this new initiative and share your thoughts.

Learning from a master

A. San Hinicker | photographer

John Albriton, sculptor, painter and printmaker, spoke about his work and met with RIT painting students Jan. 13. Albriton’s work is included in major museums and collections around the world.
We're all learning how to teach more immediately contributes to the chance of getting published, but the curriculum. Their work stands will submit the results back to acknowledge that we work better as very interdisciplinary. I think it's says Skuse. "It's very collaborative, fly different from its cousins. The case, lining up 40,000 contiguous many of whom are RIT alumni.close 
Practical experience they couldn't get anywhere else. " For more on this story, engineer at RIT's Educational Technology Center. "We are providing a down-
this is changing and molding their whole careers, " says James Bober, lead engineer.

A handful of RIT students and staff recently built a cutting-edge high-def-
extensively used in a host of vehicle fleets from and software applications while also creating production versions of several of our previous hardware
management packages that could be used in a host of vehicle fleets from buses to heavy-duty trucks. Also, the technology developed through the project is now being utilized as the technology developed through our previous work with the Office of Naval Research and decided to partner with RIT to develop their bid proposal for the project," notes Nahid Nasr, director of the Golisano Institute and associate provost at RIT. "Once Lockheed won the contract, we partnered with them to create production versions of several of our previous hardware and software applications while also assisting in the development and testing of the EPLS system as a whole."

LIRAN will continue to provide production support to Lockheed and the Marine Corps for EPLS software and is currently working to develop commercial vehicular- tion management packages that could be used in a host of vehicle fleets from buses to heavy-duty trucks. Also, the technology developed through the project is now being utilized as part of a partnership between RIT and the Rochester Geneseo Regional Transportation Authority to equip public transit buses with health monitoring technology.

A major focus of the Golisano Institute is to develop management packages that could be used in a host of vehicle fleets from buses to heavy-duty trucks. Also, the technology developed through the project is now being utilized as part of a partnership between RIT and the Rochester Geneseo Regional Transportation Authority to equip public transit buses with health monitoring technology. The technology can also be applied to military and commercial vehicles and passenger cars.

On another of her travels, she toured Maravell to understand the regions and "seeing the animals where they seem to be comfortable— not in a zoo. I love nature," she says. "You are such a small person when you are so much bounty. It was incredible. If I could not be a computer engineer, I’d like to own a farm."

Currently secretary of the Tau Beta Pi Engineering Honor Society, Khogale helps members organize and perform community service. This year, the group participated at a local sheep shearing festival and volunteered at activities like taking kids on tours, face-painting and helping out at the petting zoo. The humor society is not just about engineering, but how you can serve your community," she says.

Within RIT, Khogale participates as a member of several student groups including the Global Union, the Organization of African Students and the Organization of the Alliance of Students from the Indian Subcontinent.

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"Recognizing Human Activities Using Computer Vision: Facial Parsing and 3D Reconstruction from a Single Image" was the research topic for Kholgade's paper with her faculty adviser, Andreas Lepold, chair of the computer engineering department, titled "Recognizing Human Activities Using Boundary Points of Silhouettes."

The workshop was held at RIT. "One of the advantages of being at RIT as some-
- one enjoying the research experience is co-authoring research papers with faculty,

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