



More than 200 proposals have been submitted to Imagine RIT: Innovation and Creativity Festival, in addition to events being planned by each of the eight colleges. The proposals include demonstrations, exhibitions, performances and hands-on activities.

“This festival, to which we will invite parents, alumni, prospective students, the Rochester community, the entire RIT community, and the world, will showcase the incredible variety of research, scholarship, innovation and creative work going on at RIT,” says RIT President Bill Destler. “Our hope is to have as many as 30,000 people attend the festival on May 3, and to make it a fun and educational event for all who participate.”

Two informational sessions regarding the festival were held in December. To view a video of one of the sessions, visit the festival Web site at [www.rit.edu/Imagine](http://www.rit.edu/Imagine).

Leading up to the festival, *News & Events* will feature an exhibit in each edition. Here is this edition's spotlight exhibit:

■ **Name of exhibit:** The Green-vehicle Team R Car.

■ **Presenters:** RIT students Corey Mack, Patrick Villalume, Matthew Rothberg, Victor Sanchez, Jeff Nao, Zeid Nasser, Sean Croteau, Jason *Innovation Festival, page 4*

## RIT forges new partnership with Delphi

### \$2.75 million will help military vehicles use alternative energy

Through the efforts of U.S. Congresswoman Louise Slaughter and New York's U.S. Senate delegation, RIT's Center for Integrated Manufacturing Studies has been awarded a \$2.75 million grant for a joint research project with Delphi Automotive that will assist Rochester in becoming a hub of the alternative-energy industry.

“This funding will support important work at RIT to enhance our nation's security,” says Slaughter. “It will also assist in creating jobs and spurring economic development in our community, while at the same time helping ensure our servicemen and women have the best tools to do their jobs in the field.”

CIMS and Delphi will utilize the funds to assist the U.S. military in incorporating alternative-energy technologies into vehicle operations. The research will support the military's need to implement fuel-cell technology into their vehicle fleets, reducing costs, energy use and improving operation. The project will also advance the development of local production of fuel-cell technologies enhancing the potential for significant industry investment and new jobs to the Rochester region.

The effort will look to improve the performance of solid oxide fuel



A. Sue Weisler | photographer

Congresswoman Louise Slaughter announces a \$2.75 million grant that will help Delphi Automotive and RIT conduct fuel-cell research. Pictured with Slaughter are Steve Shaffer, the company's chief engineer for fuel cells, center, and RIT President Bill Destler.

cells and identify opportunities for implementation within energy systems. The work builds on Delphi's fuel-cell development efforts and will also utilize CIMS' state-of-the-art sensors monitoring technology to evaluate the quality of fuel-cell powered systems.

“This funding is welcome news for these two local institutions that have helped to build the region's reputation as a leader in research and

development,” says Sen. Hillary Clinton. “This is an important investment in the Delphi/CIMS partnership and key to the success of their innovative fuel-cell project. Not only are we investing in local jobs and building on the area's economic growth, but we are also ensuring our men and women in uniform will have access to the leading technology of the day.”

Adds Sen. Charles Schumer: “This funding keeps the Rochester area on

the cutting edge of fuel-cell research. Supporting the Delphi-RIT partnership is important not only for our military, but also for its potential to grow jobs locally.”

“This joint research effort between RIT and Delphi will further enhance this region's reputation and asset base as a center for alternative energy development and its applications,” notes RIT President Bill Destler. “It is a tremendous example of government-university-industry collaboration that will leverage the expertise at CIMS and our partners at Delphi, and further strengthen our foundation for the new Golisano Institute for Sustainability at RIT. We appreciate the efforts of Congresswoman Louise Slaughter and Sens. Schumer and Clinton to successfully include this funding in the defense appropriations bill.”

“Situational awareness, future weapons and next-generation protection systems will require more electric power generated quietly and at higher efficiency,” adds Russ Bosch, Delphi's director of fuel-cell development. “The fuel cell is a preferable technology for meeting these needs because the cell's higher efficiency decreases the amount of fuel that needs to be transported

*Delphi, page 4*



This rendering shows what the Woodward Pool area will look like after renovations are completed in fall 2009.

## Major renovation planned in Student Alumni Union

The Woodward Pool is getting a face-lift—and RIT students are getting a place to put their feet up.

A gift of \$2 million, plus architectural and construction plan underwriting from The Summers Foundation (RIT trustee John “Dutch” Summers and his wife, Jayne), sparked a \$10 million effort to create a 30,000-plus square foot Campus Center in the Student Alumni Union—a space Student Affairs officials are heralding as a much-needed “family room” for the student body.

“We need a place where students

can connect, socialize and study—someplace that's warm, somewhere students can grab something to eat,” says Heath Boice-Pardee, associate vice president for student affairs.

While many of RIT's eight colleges have such a space available for their students in the form of common areas, the new Campus Center will be designed to have a cross-institute appeal. It will be located in the heart of campus, in the former Woodward Pool area across from Clark Gymnasium.

The Campus Center will double as *Renovations, page 4*

## Student Spotlight

## Photo student finds pleasure in little things

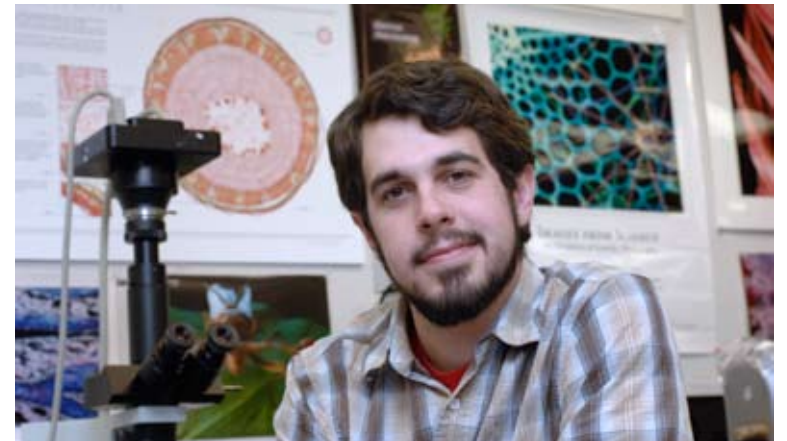
Michael Hakans photographs the tiniest of things. Whether it's a termite or the inside of the human eye or individual cells, the fourth-year biomedical photographic communications major uses specialized photographic equipment and microscopes to capture images needed in the science and medical fields.

“It's a look inside the small world of our everyday lives,” says Hakans.

Last summer, Hakans worked with some of the world's top researchers and scientists at the Marine Biological Laboratory in Woods Hole, Mass.

“Scientists who are the best in their fields conduct research there. The list of famous people who have walked through the doors is incredible. While I was there, Dr. Craig Mello, the 2006 Nobel Prize winner for his work on ribonucleic acid interference, shared his research,” says Hakans.

Hakans did a summer co-op at the Marine Biological Laboratory working for Carl Zeiss MicroImaging Inc., an international company that designs and produces light and laser microscope systems. Zeiss MicroImaging loans equipment to the lab to support scientific research. Research is conducted year-round, but in the summer the lab gets an influx of



A. Sue Weisler | photographer

Michael Hakans, fourth-year biomedical photographic communications major from the College of Imaging Arts and Sciences, loves merging imaging techniques with technical know-how.

scientists and students.

Hakans was in charge of assembling, installing and troubleshooting the systems.

“We would go around and set up microscopes, make sure systems were running properly, seeing what kinds of experiments people were doing and what equipment they needed, and teaching them more of the imaging side of things. I liked the aspect of hands-on problem solving using my skills.”

During his past four years at RIT, the Babylon, N.Y., native has honed

his skills in such areas as macro, ophthalmic and high magnification photography. The biomedical photographic communications program in the College of Imaging Arts and Sciences is the only one in the nation that grants a Bachelor of Science degree in this area of visual communications.

“It was the program that brought me to RIT. It's a photography program, but I will graduate with a bachelor's degree in science because it's a mix of imaging and technical *Student Spotlight, page 4*

### Gallery shows

Edith Lunt Small retrospective at Dyer Arts Center, *page 2*

### Awards, distinctions

University News lauded for public relations work, *page 2*

### Viewpoints

Lecturer says 'bravo' to Italian studies resource development, *page 3*

### Scholarship and Research

RIT teams up to create 'smart' telecommunications connector devices, *page 4*



**Science grant awarded**

An RIT/NTID faculty member has been awarded a \$150,000 National Science Foundation grant that will help produce typed classroom notes from a laptop computer as well as handwritten information, such as graphics.

Michael Stinson, professor in the Department of Research and Teacher Education, received the 18-month Course Curriculum and Laboratory Improvement grant which will help students better understand classroom lectures. It will also help evaluate the effect of typed C-Print notes and graphical representations of class lectures produced by a captionist in the classroom.

**'Imagine' poster contest**

RIT students are invited to tap their artistic talents to help publicize Imagine RIT. A poster design contest highlighting the upcoming festival is underway, and the winning designer will earn a \$500 Barnes & Noble certificate. All RIT students are eligible to enter. For more information, visit [www.rit.edu/imagine](http://www.rit.edu/imagine).

**NTID internship available**

English teachers of deaf middle- or high-school students may apply for a one-week endowed internship in English literacy. Interns will receive a \$1,500 stipend while learning from NTID faculty members about promoting English literacy skills needed for deaf and hard-of-hearing students to be successful in college. The internship was established to honor the memory of professor emeritus Edward Scouten, who was a faculty member in the NTID English department from 1970 until 1985. Applicants may apply any time of year but are selected on Jan. 31 of each year. For more details, visit [www.rit.edu/NTID/scouten](http://www.rit.edu/NTID/scouten).

**'Faust'—on stage**



Julie Kang | photographer

RIT students rehearse *Our Faust*, the theater performance portion of *The Fate of Romanticism: From Faust to the Present conference*, held last month. The three-day conference explored the deep romantic heritage of contemporary movements in philosophy, cultural studies and the arts. Through the presentation of scholarly papers, visual art, music, poetry and theater, *The Fate of Romanticism* allowed participants to experience artistic works with common romantic themes, such as human limitation, reason and integrity, through the use of a specific medium.

# Edith Lunt Small exhibit at Dyer Arts Center

## RIT salutes local visionary artist who "still paints every day"

Nothing is off limits to Edith Lunt Small's imagination—and what she sees, she paints. And then she throws in a few shocking details into the mix to halt any sense of realism.

"My favorite piece is called *The Entry of Christ into Manhattan*, based after artist James Ensor's *Entry of Christ into Brussels*," says the artist from her Pittsford home/studio. "I have Christ making his way on a donkey up Park Avenue, ignored by everyone. There are homeless people, transvestites, and because I was a vegetarian at the time, I put in some animals on their way to the slaughterhouse to feed our insatiable need for meat. Irony is very important in my work and in the work I love."

The Dyer Arts Center at RIT's National Technical Institute for the Deaf, will host the Edith Lunt Small Retrospective RIT '52 with an opening reception and music by Margaret Explosion from 5 to 7:30 p.m. on Friday, Jan. 18. The show runs through Feb. 29.

Although Small graduated with a degree in applied art from RIT in 1952,



where she was taught "three-dimensional-Michelangelo-like art," she developed an affinity for comic books, medieval art and Japanese prints.

"Edie is able to speak in the clear, uncluttered language of the folk artist, yet this work has a personal vision which allows her to comment on her own history in ways that cut right to the heart of the matter," says one of her schoolmates Wendell Castle.

Small says it was also a boon when she switched from oils to acrylics due to her interest in details, flatness and speed. In Small's prolific collection of paintings, wood carvings and furniture, she becomes both an artist and an observer—depicting everything from primitive landscapes, a painting of a funeral procession in front of St. Patrick's Cathedral after 9/11, the Memorial Art Gallery and The White

House to commissioned portraits and family dogs. She's painted scenes on Martha's Vineyard and 1987 Midtown Plaza (complete with the clock carousel and former B. Forman Co. and McCurdy's stores).

But her heart is with the "innocents"—animals, birds, reptiles—who she says, "remain silent in their suffering due to the devastation in our environment by human carelessness." One of her most provocative statements is called *The Last Judgment*, which she says could easily be called *The Revenge of the Animals*.

"I used the Brooklyn Bridge as the backdrop where animals emerge victorious in a sea of people who have persecuted them in the name of religion and greed," Small explains.

And believe it or not, Small has painted clothes—coats, skirts, pants, even purses. "I hate to shop, so I add my own designs—everything from butterflies to dogs."

For more on the show, call 475-6855 or e-mail [rbaker@ntid.rit.edu](mailto:rbaker@ntid.rit.edu).

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**RIT 'gladiator' wins competition**



Submitted by NBC Photo/Trae Patton

Adonis Lockett, left, who graduated last May with a bachelor's degree in electrical/mechanical engineering technology, was one of the winner's on NBC's *American Gladiators* Jan. 7. Lockett, a former president of the Alpha Phi Alpha fraternity, is currently an engineer for Boeing.

**Eastman School ensemble to appear on RIT stage**



Submitted photograph

The Eastman Wind Ensemble, with Mark Davis Scatterday conducting, will make its first appearance at RIT at 8 p.m. Feb. 1 at Ingle Auditorium in the Student Alumni Union as part of the Performing Artists Concert Series. This internationally renowned group of more than 50 undergraduate and graduate students from the Eastman School of Music tours around the world and often records for major record labels. Tickets are \$5 for students, \$10 for faculty, staff and alumni and \$15 for the public. Tickets may be purchased at the Student Alumni Union Candy Counter or by calling 475-4121.

# University News wins silver at CASE awards

University News Services is the recipient of two CASE (Council for Advancement and Support of Education) District II Accolades Awards for public relations work in 2007.

Silver awards were presented to the following projects:

■ Specific Media Relations Programs: Kelly Downs, senior news specialist, for an assortment of work related to the Big Shot in Dubrovnik, Croatia. Downs' work included media placements (including international coverage), blog posts, audio podcasts, a video podcast and a cover story for *RIT: The University Magazine*. The video podcast can be

viewed at [www.thetigerbeat.com/rss/podcasts/23rd\\_rit\\_big\\_shot.mov](http://www.thetigerbeat.com/rss/podcasts/23rd_rit_big_shot.mov).

■ News Web site: The University News Web site ([www.rit.edu/news](http://www.rit.edu/news)) was cited as among the "best of the best" news Web sites. Key players who developed the revamped Web site in 2007 were: Bob Finnerty, Michael Saffran, Pete Karl '05 and Paul Stella of University News; and Jeff Arbegast, Jared Lyon and Mark Marcello of University Publications.

CASE District II includes the Mid-Atlantic states, Washington, D.C., Puerto Rico, U.S. Virgin Islands, and Ontario, Canada. ■

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Submitted photograph

Michael Peres, left, professor of photography in the School of Photographic Arts and Sciences, is interviewed by a television news crew from Croatian National Television for the Big Shot in Dubrovnik, Croatia, last April.

# RIT helps team capture first place in computing contest

RIT was part of an Indiana University-led research team that was recently awarded first place in the Bandwidth Challenge at Super Computing 2007, an international competition for leading edge, high-bandwidth computing applications. The event is the world's largest international conference for high-performance computing, networking, storage and analysis.

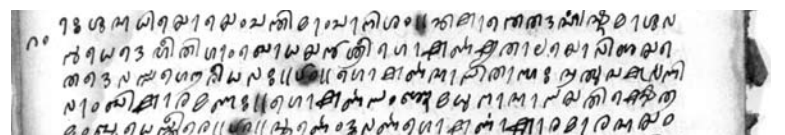
As part of the competition, teams were challenged to create methods for fully utilizing a high-speed network path to support end-to-end applications running across a grid. The team ran several cutting-edge computer applications simultaneously, including image transfers of ancient Sanskrit manuscripts from the Center for the Preservation of Ancient Manuscripts, headed by P.R. Mukund, RIT professor of electrical engineering.

The team ultimately produced speeds that were double the rate

of its nearest competitors, 18.21 gigabits per second over networks that included NYSERNet, Internet2, GEANT and DFN research links.

RIT participants were organized by James Stefano in the Department of Electrical Engineering and Andrew Elble from Information and Technology Services, who worked with NYSERNet to increase RIT's internet connectivity. Gurcharan Khanna, director of research computing, also engaged Sun Microsystems Inc. as a partner that provided a SunFire x4500 24 Terabyte server for the team's use. In addition, Paul Mezzanini, senior systems administrator/engineer for Research Computing, configured the server with the Lustre filesystem. Additional team members came from the Technical University of Dresden, Oak Ridge National Laboratory and the Pittsburgh Supercomputing Center. ■

Will Dube | [wjduns@rit.edu](mailto:wjduns@rit.edu)



As part of Super Computing 2007, the team was required to develop a system that could perform a wide variety of computer applications simultaneously at high speeds. These efforts included the imaging of ancient Hindu manuscripts, shown above.

Considering that with the newly established advanced placement exam in Italian, many more high school students are now taking Italian in the United States. In fact, according to the Modern Language Association, Italian is the fifth most popular language taught in the United States, an increase of 22 percent since 2002.

The Italian government seems to have moved in the right direction for the “millennial student” and is supporting exciting and creative opportunities for Italian language and cultural learning.

On Dec. 6, Alfio Russo, director of the Education Office of the Consulate General of Italy in New York, visited RIT to present an agreement signed between the foreign language department and the Consulate of Italy for the use of online resources from Italian broadcasting company RAI.

Present at the event were approximately 70 students from the RIT Italian program, College of Liberal Arts interim dean Glenn Kist, senior

associate dean Anne Coon and associate dean John Capps, along with foreign languages chair Hiroke Yamashita, and vice-consulate of Rochester Mario Daniele.

Russo described how RIT students will have access to high-quality cultural and sociological resources content without limitation to areas of the RAI sites that are normally open only to paying customers. This project is part of a larger dissemination of authentic Italian material to universities in the United States. Other recipients of these materials include Boston College, Harvard University, Georgetown University, New York University, Rutgers and University of Maryland.

The panel group of universities involved with the implementation of this material will collaborate to evaluate the materials in the Italian language and culture courses and will coordinate the creation of an organized database to make the use of material even more accessible. The panel will also present its experi-

ences at the Foreign Languages National Association Conferences and Symposia.

The RIT Italian program is currently using the resources for its courses, and students are increasingly enjoying them, Italian language courses online as well as research information on Italian culture, social and political life, literature, art and cinema. Having access to these materials extends beyond RIT's Italian program to all of RIT. These resources will benefit anyone whose field of study links to Italy.

In addition, the New York Italian consular office has given Andreas Mangelakis, an advanced student of Italian who majors in medical informatics, the opportunity to work with an Italian education agency on a pilot project on Italian learning in Second Life. We expect to present the project findings to the RIT community next year.

E-mail me at [exdgl@rit.edu](mailto:exdgl@rit.edu) for information about access to the online materials from RAI.



D'Amanda is an Italian lecturer in the foreign language department.

*This column presents opinions and ideas on issues relevant to higher education. To suggest an idea for the column, e-mail [newsevents@rit.edu](mailto:newsevents@rit.edu).*

## Raffaele will lead Sustainability Institute's academic endeavors

Ryne Raffaele has been named academic director for the newly created Golisano Institute for Sustainability at RIT. The institute, one of the first of its kind



Ryne Raffaele

in the nation, focuses on research and education in sustainable production and on areas such as sustainable product development, pollution prevention, sustainable transportation systems, remanufacturing and alternative energy systems development.

Raffaele, who currently serves as a professor of physics and microsystems engineering and director of the NanoPower Research Labs, will direct the institute's educational mission, including the development of one of the world's first doctoral programs in sustainability.

“Ryne Raffaele is an excellent addition to the Golisano Institute team and will enhance its efforts to develop cutting-edge research and education programs in the growing field of sustainability,” notes Stanley McKenzie, RIT provost and vice president for academic affairs.

“This appointment is a great

honor and I am looking forward to assisting the Golisano Institute and RIT in educating our next generation of engineers, business managers and policy makers,” adds Raffaele.

The Golisano Institute for Sustainability was created last September thanks to a \$10 million commitment from Rochester-area businessman and RIT trustee B. Thomas Golisano.

Raffaele will be responsible for the development, implementation and management of the academic programs offered within the institute, including chairing the curriculum committee and overseeing the recruitment of faculty and graduate students. He will also have oversight of all research activities performed in conjunction with the new academic program. Raffaele will be working closely with Nabil Nasr, assistant provost for academic affairs and director of the Golisano Institute; Andrew Moore, dean of graduate studies; and Don Boyd, vice president for research, in this new role.

“Ryne Raffaele is an outstanding educator and researcher with an international reputation in the fields of nano materials and alternative-energy development,” says Nasr. ■

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## RIT receives science funding Grant helps minority students enroll and graduate in technical programs

The National Science Foundation has awarded \$3 million over five years to an alliance of upstate New York colleges and universities, including RIT, to enroll and graduate more African American, Latino American and Native American students from science, technology, engineering and mathematics degree programs.

As part of the Upstate Louis Stokes Alliance for Minority Participation, RIT will receive \$420,000 to enhance its articulation agreements with area community colleges while supporting a range of research internships for students.

“RIT has set forth a vision for the future that incorporates diversity into the mainstream functioning of

the institution,” states Eulas Boyd, RIT assistant provost. “Support from the National Science Foundation is extremely important in helping us ensure the success of an increasing number of students coming to us from underrepresented populations.”

According to the NSF Science and Engineering Indicators, the gap in educational attainment between underrepresented groups and Caucasian students remains wide, especially in science and engineering fields. The alliance will strive to reach 60,000 potential students across the member institutions in hopes of doubling the number of minority graduates participating in these targeted programs. ■

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### Outspoken general shares thoughts on war in Iraq



A. Sue Weisler | photographer

Retired Gen. John Batiste presented his talk, “Reflections on Iraq,” to a standing-room only crowd Dec. 5 in the Fireside Lounge where he described a military in decay from a war costing \$12 billion a month. Batiste called for “hard-hitting diplomacy” and a comprehensive strategy in Iraq. He also spoke of the need for a debate about national service in the United States. Batiste, who commanded the First U.S. Infantry Division in Iraq, retired from the Army in 2005 in order to speak out against the war. The event was sponsored by the College of Liberal Arts Honors Program and the Department of Political Science.

## \$600K donation awarded to NTID Funds help students realize entrepreneurial spirit

In a move that will help RIT with its reputation of being an innovation university, a Florida-based charity has donated \$600,000 to create a scholarship for deaf and hard-of-hearing students eager to become entrepreneurs.

The Johnson Scholarship Foundation, which provides educational opportunities to disabled or disadvantaged students, has donated the money to form an endowed Scholarship for Innovation and Entrepreneurship. Twelve students are expected to receive \$5,000 a year in tuition assistance.

The donation will be matched by the federal government, making the base of the scholarship \$1.2 million. The foundation is offering an additional \$100,000 to match private donations to the scholarship from the community. That money would also be matched, leaving a potential scholarship base of \$1.6 million.

Launching a new business is a daunting task for any entrepreneur. Deaf and hard-of-hearing students pursuing new ventures face additional challenges which can often prevent them from becoming successful. This has resulted in a dearth of deaf entrepreneurs.

“One of the foundation's core areas of interest is deaf and hard-of-hearing students,” says Malcolm Macleod, foundation president. “Our creation of an endowed scholarship for innovation and entrepreneurship for deaf and hard-of-hearing students at RIT/NTID was a natural outgrowth of these ideas. We have every confidence that this will help generations of deaf and hard-of-hearing students to become successful entrepreneurs.”

Nearly half of all NTID students come from families with annual household incomes of less than \$30,000; nearly a third come from families with annual incomes of less than \$18,000. The scholarship is expected to enable some students to go to college after high school as opposed to entering the workforce without a college education.

It is also expected to enable the students to devote more time on research and studying than working to pay for college. A typical student may earn \$7.50 an hour, so a \$5,000 Johnson Scholarship Foundation would be equivalent to a student working more than 650 hours. ■

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## On the Web

with Mike Saffran  
[mjsuns@rit.edu](mailto:mjsuns@rit.edu)



Dateline: RIT, a family of new media offering on-demand, ‘VIP’ access to RIT news, has launched a Dateline: RIT Facebook Group on the popular social-networking Web site—providing another convenient way to stay informed about RIT news.

The group offers “one-stop shopping,” including summaries about and links to RIT news podcasts, blog, e-newsletter and Web site, along with popular Facebook features such as “The Wall,” where members can write messages to other members and visitors. The group page is accessible to registered Facebook users at <http://rit.facebook.com/group.php?gid=7671747315>.

Other Facebook groups you might want to check out include:

*Imagine RIT* (A group devoted to this spring's “Imagine RIT Innovation + Creativity Festival”)

*I wear Orange & Brown on Fridays!* (The name says it all.)

*Deaf/Hard-of-Hearing @ Rochester Institute of Technology* (NTID's “official” Facebook Group)

*Society of Women Engineers* (A group for and about RIT's student section of SWE)

*PRSSA: RIT Chapter* (A group for those interested in the RIT chapter of the Public Relations Society of America)

... and hundreds of others connecting you to RIT-related interests and people.

**Studio 86 ‘On the Road’ II: Formula SAE Road to Detroit**

To hear the second installment in a yearlong series of podcasts following this year's RIT Formula racing team as it prepares for competition next spring, visit [www.thetigerbeat.com/rss/podcasts/studio86\\_12-18-07.m4a](http://www.thetigerbeat.com/rss/podcasts/studio86_12-18-07.m4a).

See you on the pod and Web!

## Matching gifts boost RIT student giving

The Fund for RIT has received another shot in the arm.

On the heels of last fall's pledge by RIT President Bill Destler to match RIT students' gifts dollar-for-dollar, up to \$10,000, Mary-Beth Cooper, RIT vice president for student affairs, has promised \$5,000—bringing the total match to \$15,000.

The matching gifts will benefit the campus organizations designated by students in their original pledges—a factor in some students' decisions to give to RIT.

“RIT has given me the skills to succeed, some lifelong friends, and instilled in me many great qualities,” says Steve Staurovsky, a fourth-year information technology major. “My decision to designate money toward my home department, information technology, was because it's full of intelligent professors who genuinely want you to do well and become a big part of your life over the years. I hope that others will follow in my donating footsteps to see that others can have a great experience at RIT.”

Adds Nicholas Cox, a third-year imaging science major, “I wanted to give back to the RIT cross-country team to show thanks for all the opportunities I've been given as an athlete, and I saw the gift-matching program as a wonderful chance to make the most of my donation.”

This year's fundraising runs through the end of the academic year. For information, visit [www.rit.edu/~giving/students.php3](http://www.rit.edu/~giving/students.php3). ■

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Submitted photograph

Women's National Basketball Association star and three-time Olympic gold medalist Sheryl Swoopes is coming to RIT. Swoopes will deliver a motivational speech at 5 p.m. Feb. 2 in Clark Gymnasium. Tickets for the event, which is sponsored by the Gay, Lesbian, Bisexual and Transgender Center and the Center for Campus Life, are \$3 for college students and children under 12 and \$7 for faculty, staff and the public. Tickets can be purchased at the Gordon Field House and Activities Center Box Office beginning Jan. 22.

## Delphi from page 1

and the fuel cell's quiet operation improves 'stealth' capabilities."

Rochester area economic development leaders echoed RIT and Delphi in lauding the significance of this new initiative for regional growth.

"Rochester has a host of research, academic and industrial advantages that make it an excellent location for development of alternative energy businesses," notes Sandy Parker, chief executive officer of the Rochester Business Alliance. "The efforts of Congresswoman Slaughter and our U.S. Senate representatives in aiding this fuel-cell project will only further the development of a strong and

vibrant fuel-cell production center in our region."

"The Rochester region, thanks to the strength of organizations like RIT and Delphi and the work of our federal representatives, is a leader in fuel cells and other alternative-energy technologies, and we are well poised to generate a significant number of new jobs and economic growth in this sector," adds Dennis Mullen, president and CEO of Greater Rochester Enterprise. "Developments like this one help validate our vision, and move us closer to achieving our regional growth targets." ■

Will Dube | wjduns@rit.edu

## Renovations from page 1

a glass main entrance to the Student Alumni Union, which includes a second story overlook onto the Quarter Mile. Visitors will enter into a lobby that features a spiral staircase encircling a unique water structure that is designed to celebrate the original Woodward facility.

The facility's main level will house Student Government, the Leadership Institute and Community Service Center and the RIT Women's Center. It will also include three general-use conference rooms and an area designated for RIT clubs and club services.

Lower-level tenants include Reporter magazine, the Campus Activities Board, Global Union (RIT's largest multicultural student organization) and AALANA (African American, Latino American, Asian American and Native American) Collegiate Association.

The upper floor features a student lounge positioned in the glass bay overlooking the Quarter Mile. It will also house offices for the Orientation program and the First-Year Enrichment Program, in addition to offices for the Off Campus and Apartment Student Association. The upper level will also have two connected multi-

purpose rooms for student events and a sizable reading room for quiet study. It will be joined to the Student Affairs offices on the second floor of the Student Alumni Union by a bridge that will connect at the Clark meeting rooms.

Plans for the new Campus Center were largely driven by student input. Pushing for the renovation of the Woodward Pool area into student-centered space was one of Student Government president Ed Wolf and Student Government vice president Sasha Malinchoc's primary objectives when they took office.

"We heard from our student clubs and organizations that there wasn't enough space and resources dedicated to them," Wolf says. "This renovation will bring new meeting spaces, better resources and a comfortable atmosphere that the union has lacked. It is our hope that this will encourage more students to become involved on campus."

RIT's Office of Development has launched a fundraising effort to support the remainder of the project, which is slated for completion in the fall of 2009. Officials hope to see ground broken this spring. ■

John Fallaco | jpfuns@rit.edu

## Innovation Festival from page 1

Sauers and James Taylor.

■ **Brief description:** The Green-vehicle Team will officially unveil its first vehicle in its "R"eliability series on May 3. Engineers and technologists in the Kate Gleason College of Engineering designed the vehicle's mechanical and electrical components, and industrial designers in the College of Imaging Arts and Sciences designed the exterior.

■ **How is the exhibit creative and/or innovative:** The purpose is to show how feasible it is to build a small fuel-efficient vehicle. This particular vehicle was built for less than \$5,000. The R car is a vehicle that can attain more than 800 miles per gallon.

■ **Exhibit experience for visitors:** Visitors will be able to see the vehicle and sit inside. ■

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## Student Spotlight from page 1

know-how. When I came here, I realized I couldn't be doing what I'm doing anywhere else."

Hakans relishes his educational experience, taking various courses outside of his major.

"I've tried to dabble in as much as I could. I've taken kayaking classes. I'm currently taking craft classes and a class called Garbage Archaeology where we are using garbage as contemporary artifacts to learn about material culture and the habits of wasting and recycling."

Carrying a 3.85 grade point average, Hakans has been an active member of the RIT Honors Program since his freshman year. In March, several honors students from CIAS will head overseas to the Czech Republic, Poland and Hungary.

"I have never been to Europe, so I'm pretty excited."

Past trips with the CIAS Honors Program took students to Los Angeles, Chicago and Washington, D.C.

"When we went to Washington, we visited the Secret Service and



Submitted by Michael Hakans

Michael Hakans' photograph of termite mandibles taken with a microscope using darkfield illumination.

the FBI. We met an alumnus from my program that's an FBI agent. He's done forensics imaging at crime scenes and even facial reconstructive work. It was really interesting."

Soon to be an alumnus himself, Hakans has his foot in the door at Zeiss MicroImaging and hopes to work there full-time after graduation.

"My supervisor was very impressed with our knowledge. Zeiss has been using RIT as a breeding ground for employees for several years. Students who come out of the biomedical photographic communications program have the skills that Zeiss is looking for." ■

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## RIT offers assistance with 'smart' connectors

Researchers at RIT are partnering with Syracuse-based PPC, a worldwide leader in connector technology, to greatly enhance the reliability of essential components used in telecommunications networks. Led by Robert Bowman, professor of electrical engineering, the RIT team is developing "smart" RF connectors that self diagnose potential problems and report them before they lead to service degradation or service failure.

"The continued development of faster and more reliable RF telecommunications systems, such as cellular networks, is dependant on the ability to enhance the performance of all components within the system," notes Bowman. "Through the integration of smart-sensor technology into RF connectors, we can create system components that will alert telecommunications companies of potential problems before they become network failures."

RF mating connectors bring together two sections of coaxial cable. The connector performs the dual purposes of mechanically holding the cables in place while electronically transferring the RF signal being sent from one cable to the other without a disruption of transmission. RF connectors used with the coaxial cables found on



Submitted image

The sensor technology developed by RIT engineers fits on a small plastic disk which is fit into the connector housing. The disk is about the size of a quarter.

all cell towers are often exposed to severe environmental conditions and have been identified as one of the highest failure rate components in the system. RF connector failure and repair cause network interruptions and increased costs to service providers and customers and cost the telecommunications industry over \$1 billion annually.

The smart connectors being developed by the RIT team will monitor the "health" of the cable system and alert maintainers when a failure mode is detected. Common failure modes include connectors becoming loose or taking on moisture. The recovered sensing data will be used both to properly maintain the equipment and to develop a better understanding of the problems affecting the system, enhancing component redesign and

upgrades.

All smart connector sensing elements and electronic signal conditioning components are mounted on a small plastic disc smaller than the size of a quarter. The small disc is inserted into the RF connector housing at the time of manufacture. The smart connector disc acts as a transparent insert into the RF connector by harvesting power from and communicating over the same cable it is monitoring without disturbing the normal RF signal.

"As cellular phones and wireless technologies become more ubiquitous, the costs of repairs and impacts of network downtimes will become more challenging to companies and communities," says Dave Jackson, PPC's vice president of engineering. "RIT's research will enhance our continuing efforts to create telecommunications systems that are efficient, cost effective and reliable."

The RIT team, which currently includes three graduate student researchers and a research associate, has filed for several patents for their technology. PPC will soon begin prototyping, with the goal of commercializing an initial version of the smart connector within the next two years. ■

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