

NSF awards \$475K for chemistry lab

The National Science Foundation has awarded \$475,000 to YSU's chemistry department to purchase a new nuclear magnetic resonance spectrometer, a piece of equipment that will help faculty and students conduct cutting-edge research in biotechnology and nanotechnology.

"The NSF is again recognizing us as a national leader," said Allen Hunter, chemistry professor and principal investigator on the grant. "This is an important tool needed for research, and it helps make us an even stronger department."

NMR spectroscopy is one of the most powerful tools available to chemists to identify unknown substances and to characterize specific arrangements of atoms within molecules.

"Access to state-of-the-art NMR spectrometers is essential to chemists who are carrying out frontier research," the NSF said in awarding the grant that was written by a team from YSU, led by chemistry Professor Peter Norris, and its partner institutions.

"The new spectrometer will allow our students, both graduate and undergraduate, to solve chemical problems that we haven't been able to on the YSU campus before," Norris said. "This instrument will help make our students even more competitive in the national job market and help ensure our continued success in attracting external funding for our work."

This will be YSU's second NMR spectrometer. The university's current spectrometer is approaching 15 years old, and the new one will include better electronics and allow for more advanced and sophisticated experiments and easier student use, said Daryl Mincey, chemistry department chair. The university will keep and continue to use the magnet from the old spectrometer, he said. ■



Ashley Malich of Youngstown, a graduate student in YSU's chemistry program, works on the NMR spectrometer in Ward Beecher Hall. The NSF has awarded YSU \$475,000 to purchase a new, more advanced spectrometer for the department.

University reduces surcharge for graduate students outside Ohio

The cost for out-of-state and international students to enroll in graduate-level classes at YSU will be reduced significantly under a plan approved by the YSU Board of Trustees.

YSU currently charges students living outside Ohio an additional tuition surcharge amounting to \$126.92 to \$244.29 per credit, depending on where the student lives. Under the new plan, the surcharge will be slashed to only \$8.34 per credit.

As a result, the cost for out-of-state and international students to enroll in graduate-level classes at YSU will drop as much as 40 percent beginning fall semester 2007.

That would make YSU's out-of-state tuition for graduate students lower than or only slightly above the in-state tuitions at

nearby universities in Pennsylvania, including Slippery Rock University, Clarion University, California University and Indiana University.

"YSU offers the best selection and highest quality of graduate programs in the region," said Peter Kasvinsky, dean of the YSU School of Graduate Studies and Research. "Under this new plan, students living outside of Ohio will have access to those programs at a cost that is only a few dollars more than what in-state students pay."

"It is further incentive for students to cross the line from Pennsylvania, West Virginia and New York State to enroll in our graduate programs, as well as international students from outside the United

continued on back page

Professor Rodabaugh: YSU's resident 'fuzzy' guy



Stephen Rodabaugh

It doesn't bother Youngstown State University Mathematics Professor Stephen Rodabaugh that he's known as a "fuzzy" guy to renowned mathematics scholars at top educational institutions

around the world.

In fact, Rodabaugh describes himself as the only permanent "fuzzy" guy currently in the Department of Mathematics and Statistics.

But there are other "fuzzys" at YSU, Rodabaugh said – Eugene Santos, professor emeritus, and John Sullins, professor, both of Computer Science and Information Systems, and Jalal Jalali, professor and chair of the Department of Electrical and Computer Engineering.

Rodabaugh of Canfield said he "really started looking at fuzzy sets" – which he describes as an extension and abstraction of traditional mathematics – around 1975 two years before he started at YSU in 1977.

"Fuzzy mathematics allows for degrees of membership other than 'in or out.' With traditional mathematics, it's either 'in or out,'" explained Rodabaugh, who has published almost 70 papers and has edited and co-written three post-doctoral level books and handbooks on the topic. "Fuzzy math is a repackaging of traditional mathematics that lets mathematicians deal with imprecision in a precise way."

And it's obvious that Rodabaugh loves the subject.

"Fuzzy math allows me to create mathematics that is aesthetically pleasing. I look

at a theorem that I build and say to myself 'let's make it more beautiful,'" he said, adding, "And once in a while I answer a question that no one has answered before."

As far as practical uses for fuzzy math, Rodabaugh said many imaging devices, such as camcorders or television sets, use this type of mathematics. Further, the latest surround-sound technology being developed for both commercial and home theaters use fuzzy logic. Fuzzy control systems are also widespread in washing machines and people movers, etc.

Rodabaugh's expertise in this specialty has drawn scholars from as far away as Greece, China, Australia, Europe and Africa to YSU regularly since the early 1980s to work and consult with him.

It's also earned him three sabbaticals from YSU to do fuzzy mathematics research. His most recent sabbatical ended in summer 2006.

Rodabaugh, a December 1974 doctoral graduate from the University of Missouri, has been invited multiple times throughout the years to lecture at educational institutions such as Charles University in the Czech Republic, Cape Town University in

South Africa, the University of Vienna in Austria, the University of Bremen in Germany and the University of Lecce in Italy.

He's also been a visiting professor at the University of Wuppertal in West Germany, the University of Bilbao in Spain, Rhodes University in South Africa, and the Johannes Kepler University Linz in Austria.

Nearly every year since 1981, Rodabaugh has joined his colleagues at the Linz Seminars on Fuzzy Sets in Bildungszentrum St. Magdalena, Linz, Austria, as program committee and executive board member and twice as program committee chair. This year's seminar, which was held in February, focused on "Fuzzy Sets, Probability, and Statistics – Gaps and Bridges." Rodabaugh will again be a program committee chair for the 2008 seminar, with the theme "Foundations of Lattice-Valued Mathematics with Applications to Algebra and Topology."

On occasion, he's taught fuzzy logic to graduate students at YSU and has recently submitted for approval several courses to facilitate a new cooperative doctoral program with Kent State University, one of which includes fuzzy mathematics. ■

eUpdate exclusives

For more news about YSU, read these and other stories in eUpdate at <http://eupdate.ysu.edu>.

- **The Ohio Board of Regents appoints former State Senator Eric Fingerhut as its new chancellor.**
- **Howard Mettee, professor of chemistry, writes about his sabbatical research at the Forest Technical Academy in St. Petersburg, Russia.**
- **A new report from the College and University Professional Association for Human Resources shows a 3.8 percent increase in median faculty salaries in 2006-7.**
- **The search committee for the position of dean of the College of Liberal Arts and Social Sciences at YSU has identified four finalists.**
- **President David C. Sweet releases a memo concerning solutions to continued infrastructure problems with Ward Beecher Hall.**
- **North Dakota State and South Dakota State are the newest members of the Gateway Football Conference.**
- **With March Madness upon us, Inside Higher Ed uses graduation rates to determine the academic winner of the NCAA basketball tournament.**
- **Campus News Roundup.**

Youngstown STATE UNIVERSITY

The *YSU Update* is published every other week during the academic year and once a month in the summer by the Office of Marketing and Communications. 8-003

Marketing and Communications
133 Tod Hall, Youngstown, Ohio 44555-3519
racole01@ysu.edu 330-941-3519

Faculty & Staff

Janet E. Del Bene, professor emeritus, Chemistry, had the invited chapter "Predicting and Understanding the Signs of One- and Two-Bond Spin-Spin Coupling Constants across X-H-Y Hydrogen Bonds" co-published in *Computational Chemistry: Reviews of Current Trends*. The publisher is World Scientific Publishing Company LTD.

Virginia Bendel Draa, coordinator, Merchandising: Fashion and Interiors, Human Ecology, presented "Why Is It So Difficult to Recruit Family and Consumer Sciences Teachers?" at the 2006 Association for Career-Technical Education conference in Atlanta.

Sylvia J. Imler, assistant professor, Counseling and Special Education, presented "Reducing the Achievement Gap in Ohio: Implementing OISM to Prepare Graduates of Youngstown State University to Meet the Needs of All Students" at the Ohio Confederation of Teacher Education Organizations Fall Conference in Columbus.

Sue Leson, instructor, and director, Dietetic Technician Program, Human Ecology, was recognized by the American Dietetic Association with a recent outstanding dietetics educator award.

Tom Oder, assistant professor, Physics and Astronomy, was the principle author of the paper, "Thermally Stable Schottky Contacts On N-type GaN Using ZrB₂" published in *Applied Physics Letters*. Co-authors of this article were former YSU undergraduate physics student **Pamela Martin** and collaborators from Kansas State and Auburn universities.

Zbigniew Piotrowski, professor, Mathematics and Statistics, presented "Continuous Functions Having 'Small' Preimages of 'Small' Sets" to the Mathematics Department of the Pomeranian Academy in Slupsk, Poland.

Paul Rorhaugh, instructor, Educational Foundations, Research, Technology and Leadership, received the Charles S. Roberts Award for best magazine-published war game at the World Boardgaming Conference in Lancaster, Pa., for his game "Chennault's First Fight: the Flying Tigers Over Burma." The game was published in *Against the Odds* magazine.

Thelma Silver, associate professor, Social Work, presented "Consumer Empowerment and Community Partnership in Mental Health" at the National Association of Social Workers Ohio Chapter Annual Conference in Columbus.

Fred Viehe, associate professor, History, presented two papers "The Political Community of the First Ward: Los Angeles, 1878-1888" and "Collective Security and the Underworld: Were Woodrow Wilson and Johnny Torrio 'Strange Bedfellows'" at the Hawaii International Conference on Arts and Humanities. He also served as chair of the two sessions.

Robert Ward, assistant professor and coordinator, Hospitality Management, Human Ecology, presented "Railroads of Yates County" to the Yates County Historical Society in Penn Yan, New York. This is one of a series of presentations that he has made of findings from nearly five years of research on rail transportation in upstate New York.

New diversity director named

Yulanda L. McCarty-Harris of Toledo will be the new director of YSU's Office of Equal Opportunity and Diversity effective April 2.

McCarty-Harris, who has a law degree and is currently the procurement administrator for

Lucas County Jobs and Family Services in Toledo, succeeds Jimmy Myers, who resigned to take a similar position at Indiana University of Pennsylvania in July.

Since then, Steve Lucivjansky, manager of labor relations, has served as interim director and will continue to do so until McCarty-Harris starts the new position.

A 10-member search committee chaired by Joseph Mosca, chair of Social Work, received nearly 40 applications for the job.

"Ms. McCarty-Harris' understanding of the law was a strong aspect of her credentials," he said, noting the search committee provided President David C. Sweet with an evaluation of each candidate, and Sweet made the final choice.

McCarty-Harris, who is licensed to practice law in Ohio and Texas, was a senior prosecuting attorney and a senior labor and employment attorney for the city of Toledo and an associate at the firm Rohrbachers, Light, Cron, Zmuda and Trimble, also in Toledo.

"I am looking forward to working with the university and community," said McCarty-Harris, who earned a bachelor's degree in journalism from the University of Texas and a law degree from Southern Methodist University.

"We all share a common goal and that is to educate our leaders of tomorrow." ■



Yulanda L. McCarty-Harris

Send items for "Faculty & Staff" to wawolfgang@ysu.edu.



Surcharge change

(Continued from page 1)

States.”

The cost reductions apply only to students enrolling in graduate classes. For the present, students enrolling in undergraduate classes will continue paying regular out-of-state surcharges.

In addition to out-of-state students, the new rate structure is expected to be very attractive to prospective international students, said Robert K. Herbert, YSU provost and vice president for academic affairs.

“Cost is a major factor for many international students considering their options when coming to the United States,” he said. “This new fee structure will allow us to offer a very effective package to those students.”

YSU currently enrolls 197 out-of-state students in graduate programs, including 60 international students. The university hopes to increase that number as a result of the new, lower tuition schedule.

The chart below shows the cost for Pennsylvania residents to enroll in nine credits of graduate courses at the listed universities in Western Pennsylvania. The chart also shows what YSU currently charges students who are residents of Western Pennsylvania, and how those charges will dramatically decrease under the new fee structure.

School	Tuition
Slippery Rock	\$7,830
Clarion	\$7,623
Indiana	\$6,048
California	\$6,048
YSU current.....	\$8,443
YSU new	\$6,309

Ohio law requires public universities to assess a surcharge on nonresident students, but the law does not stipulate how much that surcharge should be.

Based on current enrollments and fee levels, and factoring in graduate assistant costs that the university pays itself, the new fee structure would reduce nonresident surcharge revenues by \$259,000. To offset that loss, YSU would need to enroll approximately 31 additional full time equivalent graduate students. ■



A cat in a hat...

Paul Rohrbaugh, an instructor in the Beeghly College of Education, dons Cat in the Hat attire and shares a laugh as one of many who participated in a Read Across America event in Beeghly Hall. The event, sponsored by the Youngstown Student Education Association, featured readings, crafts, face-painting and games such as Pin-the-hat-on-the-cat and Pin-the-egg-on-the-plate.