Robert Nesmith
Communications & Marketing

Glassblower Don Woodyard didn’t start out wanting a career making scientific instruments. In fact, working with glass wasn’t even a goal. “I wanted to be a rocket scientist, but it didn’t work out,” he said. “I got to chemistry and the acid-base equilibrium equations—it just blew me out of the water.”

In the 1970s, Woodyard traveled Germany via the Army. “It worked out pretty well, because most were going to Vietnam at the time.” As a result of the GI Bill, Woodyard became what he refers to as “a professional student,” studying various courses, including architecture and landscape architecture. After taking a chemistry glassblowing course at Virginia Tech, he realized he enjoyed the work. Soon after, he became employed with a small scientific instrument company in Washington, D.C.

He decided to make the transition to art glass, a trade he piled for about 14 years until he decided he’d had enough. “There are two ways to go about art glassblowing. You can make some really intricate, expensive pieces that you never sell, or you make little things, [of which] you find yourself making thousands.”

It was a 1985 scientific glassblowing course at Salem Community College in New Jersey that sealed it for Woodyard. The position opened at Tech the following year, and he’s been here ever since.

Although technically under the umbrella of the School of Chemical and Biochemistry, Woodyard counts many other departments as his clients. “From its inception, this was a campus-wide position,” he said. “Most of my work is for Chemistry, and Chemical Engineering is another big part.” Other clients vary, from Polymer, Textile and Fiber Engineering and Mechanical Engineering to the College of Engineering.

Tech glassblower Don Woodyard concentrates on delicate work in his workshop.

In recognition of former Georgia Tech President John Patrick Crecine’s contributions, the Institute has recommended to the Board of Regents of the University System of Georgia naming Hemphill Apartment Building on West Campus the John Patrick Crecine Residence Hall.

Crecine was honored by President G. Wayne Clough, former Atlanta Mayor Andrew Young and Tech faculty members at a memorial service in the Alumni Association’s ballroom May 20. Scheduled to meet again in June and August, the Board of Regents posts agenda items on its Web site the Friday prior to the meeting date.

For more information...

University System of Georgia
www.usg.edu

Vanpool program forming for Tech

As gasoline inches toward $4 a gallon, Parking & Transportation is starting a vanpool program that matches employees and students who live in the same geographic areas. Vans, provided by VPSI Inc., hold 15 people. A minimum of eight riders—along with a driver—is required.

Riders pay a monthly fee, sharing in the cost of service of the van. A fuel card, if included, is factored into the monthly invoice, and the cost is dependent upon the miles traveled in the group’s roundtrip commute. Those interested should contact Alternative Transportation Manager Tim Hogan at tim.hogan@parking.gatech.edu.

For more information...

Parking & Transportation
www.parking.gatech.edu
“QUOTE-UNQUOTE”

“One is the robotic, personal assistant that may cost as much as an automobile. The other is through the addition of specific robotic functionality to standard household equipment.”

—Henrik Christensen, director of Tech's Robotics and Intelligent Machines Center, speaking about how robots will move beyond industrial applications and enter our personal lives. (Industry Week)

Glass, cont’d from page 1

Architecture. “I used to do a quarter of my work for GTRI, but that has reduced.”

His workload is mainly in two main areas: fabrication of unique pieces and repair (modification) to existing glass instrumentation. Woodyard says the majority of his work is the latter. “Fabrication usually takes longer,” he said. “Most repair work is for pieces that are purchased from vendors—factory pieces.” No matter what is requested, from cutting tubes or creating glass washers, Woodyard says all he really requires from clients is basic information on what they need—“move this liquid from here to there”—not necessarily the end result they are trying to achieve with his work.

“I really enjoy some of the challenges that come along,” he said. “People come in [and] they don’t really know what they want. I have to explain to some of them the basic physics, and how what they are trying to do would be better done in one way or another.” Upon explaining this, Woodyard still will “make to order” what students request, but for the most part they take his suggestions.

“I have had some amazing projects over the years,” he said, describing a monatomic hydrogen injection system for an ultra-high vacuum system, a nearly three-week project he called his “toughest.” He had to attach a metal flange to Pyrex and attach that, in turn, to quartz. Inside the container was a condenser chilled with liquid nitrogen gas, and then one section had a radiofrequency (RF) radiation area. The RF section would dissociate the hydrogen before traveling through the condenser. At the end of it, when the hydrogen passed through a 50-micron calibrated leak, the atoms were monatomic hydrogen. “Most hydrogen is H2, and they wanted it just H.” He said. His clientele consists of almost entirely graduate students, along with the occasional faculty member requests.

“I make what nobody else makes. I make it by design, and I can save a lot by repairing work,” he said, referring to all the modified pieces he has crafted. The main challenge his department faces is lack of exposure. “Graduate students and some professors have never had [access to] a glassblower before, so they aren’t really aware of what we can do. I’m astounded by what our former glassblowers have made,” he said. “It’s amazingly complex.” Jerry Cloninger and Dan Lilly were Tech’s former glassblowers. Woodyard was hired to work with Cloninger when Lilly—who currently makes the one-of-a-kind glass Buzz statues for Institute retirees—himself retired from Georgia Tech.

Originally a two-man operation, the glassblowing shop has been solely manned by Woodyard since Cloninger became a research technologist in the School of Chemistry. But, Woodyard says, as the needs have changed over the years, he has seen the scope of his responsibilities also change. In the past, he and other glassblowers have made mercury diffusion and oil diffusion pumps, which are not made anymore, due to better technology and more environmentally conscious thinking. “The needs change over time, and we try to change along with them,” he said. “I pretty well can keep up with the work,” Woodyard said. “I really enjoy my profession, and I enjoy working with the students.”

He provides limited instruction to students in one organic lab class, teaching how to make ampoules and a manifold. He has, however, taught some students on his own time. “I meet a number of students who want me to instruct them in glass-blowing, but I can’t formally teach it here.” Woodyard said he enjoys participating in activities with Tech’s clubs and organizations, and that while he has tried the skydiving club, he’ll stick with more down-to-earth excursions—like the caving club. “If you are interested in anything, you can find it here,” he said.

Glasses

“Glass, cont’d from page 1.”

---

Georgia Tech online

Visit www.gatech.edu for the latest information involving the campus community. Learn about exciting research at Tech, and read economic reports from Institute experts. The Georgia Tech homepage and the News Room will keep you up-to-date regarding the latest stories, events and speakers on campus.

View the latest Institute photos and videos in Photos@Tech and Videos@Tech, and read the varied voices of Tech’s diverse students, faculty and staff featured in Blogs@Tech. A host of other resources also are available online, including an updated campus calendar and dedicated faculty and staff resources available within Tech For You.

Stories from the News Room

Robots built to go where scientists fear to tread

To help scientists collect detailed data from the world’s ice shelves without risking scientists’ safety, Tech researchers, working with Pennsylvania State University, have created specially designed robots called SnoMotes to traverse these potentially dangerous environments.

Biomedical imaging in the palm of hands

Tech researchers have developed a narrowband filter mosaic that will expand the uses and functionality of multispectral imaging. The new, single-exposure imaging tool could significantly improve point-of-care medical and forensic imaging.

Studies show diatoms remove ocean phosphorus

The discovery opens up a new realm of research into an element that’s used for reproduction, energy storage and structural materials in every organism. Its understanding is vital to the continued quest to understand the growth of the oceans.

---
Governor awards Tech for charitable campaign

Robert Nesmith
Communications & Marketing

Gov. Sonny Perdue honored Georgia Tech Thursday for its role in the 2007-2008 statewide charitable campaign. During the May 15 awards luncheon, the Institute received the Governor’s Award for the largest increase in contributions and the Governor’s Cup for an organization with 1,001 to 9,000 employees.

"Compared to the prior year, our contributions increased 42 percent or more than $48,000—$299,839 in 2007 and $211,089 in 2006. In addition, the number of donors nearly doubled from 766 to 1,528," said Student Center Director Rich Steele, coordinator of the Institute’s campaign. "(We) averaged nearly $55 per employee, or $196 per donor." Career Services Vice President Art Ragauskas is campaign co-coordinator.

Overall, the Institute raised nearly $500,000 for 1,000 state-based charities from October 8 to November 2 of last year. "The success this year came primarily from the 90-plus departmental coordinators who worked diligently for almost six weeks to encourage participation in their respective departments," Steele said.

The luncheon was held in the Spokney Floyd building on Martin Luther King Jr. Drive, near the state Capitol.

For more information...

During his presentation to the students, Steele highlighted the importance of giving to those in need.

"The governor and state lawmakers clearly appreciate their investment in the College of Architecture and what that means to the state in terms of the economy," said Denise Shewmake, director of Government Relations. "Higher education was made a priority this year for the state of Georgia."

Robert Nesmith
Communications & Marketing

For more information...

period. I am grateful for Doug’s strength in leading the College this past year and anticipate that Alan and Doug will form an especially effective team, working together to realize the aspirations Georgia Tech has set for the College of Architecture.

During his presentation to the faculty in April, Balfour discussed his vision, stressing collaboration between the disciplines—music, industrial design, building construction, architecture and city planning—both within and outside the college.

"The world city of the future is of enormous concern to me," Balfour said. "This College has within its culture all the major fields of knowledge that can be applied to this problem."

Utilizing partnerships within the College, Balfour said the Institute and practitioners in the disciplines will help Tech’s graduates be ready for any challenge, no matter local or global.

"Graduates must have complete mastery of the tools of digital technology, they must be empowered to predict the impact of their designs—at the social level as well as the energy and resource levels—and they must view their knowledge, creativity and skill as being relevant to global as well as local practice."

In 13 years at RPI, Balfour oversaw the growth of the Lighting Research Center in both basic and industry-supported research on lighting, began a cross-disciplinary program with Shanghai’s Tongji University, established a doctoral degree in Architectural Sciences, which was developed from master’s degrees in acoustics, built ecologies and lighting, and helped spearhead the building of an Experimental Media and Performing Arts Center. Balfour received his education at the Edinburgh College of Art and Princeton University, and he is a member of the Royal Institute of British Architects. In 2000 he received the American Institute of Architects/Association of Collegiate Schools of Architecture (AIA/ACSA) Topaz Medal for Excellence in Architectural Education, the highest recognition given to a North American architecture educator. His World Cities series of books seeks to explore architecture and urbanism of cities around the world, including "Shanghai" (2001), "New York" (2001) and "Berlin" (1995), and in his "Creating a Scottish Parliament" (2005), Balfour links the building’s creation with the political structure for which it was constructed. For both "Berlin" and "Berlin: The Politics of Order: 1737–1989" (1990) he received AIA International Book Awards.