

FOCUS

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Dance fever

Dave Ralph stretches the bounds of electronica dance music on his new CD *Naturalized*. Read the review in Entertainment. Page 8

Future potential

Freshman Quarterback Damarius Bilbo probably won't play a down this year, but the expectations are high for this 6'3", 225 pounder from Mississippi. Page 28



kerry watkins
9 • WR • 5'11", 180

Are science and faith incompatible?

Although traditionally regarded as a purely technical institute, Tech's religiously affiliated student-run organizations demonstrate a strong presence on campus

By Gray Gunter
Assistant Focus Editor

In an age where religion and technology often come into conflict and the worlds of faith and science seem incompatible, it is surprising to find religiously-affiliated student organizations thriving at Tech.

Currently, there are no fewer than 36 religious organizations on campus. The majority of these organizations are Christian. Twenty-eight groups claim some affiliation to either a particular Christian denomination, such as the Baptist Student Union, or to broader nondenominational concepts, such as New Generation Campus Ministries. This organization, according to its mission statement, espouses a belief in "Christ-centered values and Bibliocentric principles." The remaining organizations include larger non-Christian groups whose numbers are not diluted by various denominations, including the Jewish Student Union, Muslim Student Association and Hindu Students Council.

Although campus religious groups are primarily comprised of the major faiths of the world they are certainly not limited to them. The smaller, less widely known Eastern faiths of Baha'i and Bhakti-Yoga both have active organizations on campus exposing students to their beliefs



By Brian Oxford / STUDENT PUBLICATIONS

Amy Vinson takes a private moment to pray at the Westminster Christian Fellowship campus ministry. Religiously affiliated groups composed a large percentage of student-run organizations on campus.

and practices.

Baha'i, a faith begun by the Persian Baha'u'llah in the mid-nineteenth century, states that there is one Supreme Being, or God, known and believed in by all the varied faiths of the world. The laws and desires of this Being have been revealed to a series

of messengers including Jesus, Muhammad, Krishna and Buddha. The Georgia Tech Baha'i Club currently has 15 active student members. The group's mission statement available on their website states: "We promote the oneness of humanity, equality of women and men, unity of

religions, harmony of science and religion; a world commonwealth of nations, and other principles of the Baha'i Faith. The world is but one country and mankind its citizens!"

President Siddharth Joshi

See *Faith*, page 13

Campus Research Review Learning Through Role-Playing

By Benjamin Small and
Kimberly Rieck
Columnists

Wouldn't it have been über-cool to learn object-oriented programming as a kid? And to do it in a role-playing game-like environment? Professor Amy Bruckman and her cadre of students in the Electronic Learning Communities (ELC) research group design software that allows elementary through high school students to interact within virtual communities and environments while learning important principles of mathematics, problem solving, creative writing, reading comprehension, and even history.

Professor Bruckman subscribes to a "constructionist" view of learning and believes in unleashing the Internet's amazing educational potential, and her MOOSE project is a wonderful manifestation of this conviction.

The idea is that learning should occur through the construction of new knowledge and the interaction with personally meaningful artifacts; these processes establish better mental connections to information than traditional mem-

orization.

The premise of the *MOOSE Crossing* software is similar to a traditional gaming MUD (multi-user dungeon). Yeah, how cool is that? So, there're a bunch of elementary-aged school kids talking to each other in a chatroom-like interface that describes an environment of various objects which can be manipulated by the participants.

The goal is "to expand creative writing skills and [teach] program[ing] at the same time." Now causes don't get too much more noble than that. And imagine yourself as a nine-to-thirteen-year-old kid again: wouldn't you be ecstatic to have the chance to play in a MUD all day and to learn object-oriented programming?

"The world of *MOOSE Crossing* is built by kids, for kids." There's just not a spiffier learning environment. And it also allows for socialization and just general fun. Interfaces to this MUD are distributed for free: *WinMOOSE* and *MacMOOSE*; the design of this latter as well as the development of the MOOSE language was ac-

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What's in a word?

By Benjamin Small
Senior Staff Writer

So many of us at Tech are social outcasts. That's just the way it is, and if you're like me, you're OK with it by now. But there are those less intelligent of our student body who still find it necessary to stereotype and insult us. Well, we're going to try to help them get their terminology right at least.

I, for example, am a geek, and I'm proud of it. Granted, the word used to have a pretty negative connotation as "a carnival performer often billed as a wild man whose act usually includes biting the head off a live chicken or snake." Yeah, that's not so pleasant. But as the computer industry gradually became more and more popular in the early 1990s, new connotations developed. Now a geek is "one who eats (computer) bugs for a living," according to our beloved Jargon File (tuxedo.org/~esr/jargon). And of course this label is way cool—who wouldn't want to be able to eat through computer vi-

ruses like fried chicken?

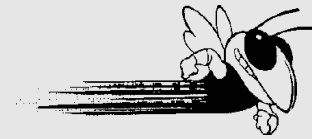
This meaning has now had ten years' fermentation, so of course there are different flavors of geeks: the computer geek, the chess geek and even various academic subject-area geeks. We find computer geeks as the direct descendants of the original categorization. Nevertheless, it is important to be aware of the existence of the multitudinous species within this genus.

American and Japanese pop culture have even picked up this use of geek as an extremely skilled and intelligent individual concerning computers or otherwise. Heck, even the *New York Times* has adopted the fashion terminology "geek chic" as that which is worn by one who wants to look smart: thick-rimmed glasses, wide-collared shirts, and artificially disorganized hair (whatever).

See, "geek" isn't an insult after all. Now that intelligence is finally prized, at least a little bit, by our popular culture, being a geek

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Buzz Around the Campus



Question of the week

"What makes Tech nerdy?"



Claudia Arniella
INTA Freshmen

"Kids fighting with duct tape weapons at the SC."



Kristin Dion
ME Senior

"Ads for LAN Parties."



Gwendolyn Sisto
AE Sophomore

"People complaining that Tech is nerdy."



Courtney Collins
M.S. CEE

"My husband."

Feature and Photos by
Scott Meuleners

Tech striving to increase minority enrollment

Tech's enrollment statistics demonstrate the disparity between minority and white students on campus. In order to increase these numbers, Tech extends its resources to create a personal relationship with prospective students.

By Gray Gunter
Assistant Focus Editor

Georgia Tech is well known for its efforts towards promoting diversity on campus. Tech supports numerous minority education programs, including OMED and Challenge. However, most of us are aware of the fact that the African-American student population at this Institute is small.

This fact is visibly evident as you walk around campus or sit through a lecture. Tech's statistics demonstrate the startling disparity between African-American and other minority students.

For the class of 2000, including all undergraduate and graduate students, there were roughly two and a

half times as many Asian students and nearly eight times as many white students as African-Americans (from the 2000 Georgia Tech Fact Book available at www.irp.gatech.edu/).

There is no disagreement about the facts, but the causes of such low African-American applicants and enrollment is the subject of much debate, as is how to correct the problem.

The first place to begin the search for answers is an examination of the admissions process. Of the 8,868 students who applied for undergraduate admission to Georgia Tech in the fall of 2000, only 1,271 were black (14.3% of the total applicants). For the past five years the number of black applicants has held steady at less than fifteen hundred students.

Obviously if there were more black students applying to Tech, then potentially the number of enrolled students would increase.

When asked why such a small number were applying, Associate Director of Undergraduate Admissions Ingrid Hayes cited the problems inherent in recruiting any student to Georgia Tech. Hayes said, "There are a lot of misconceptions about Tech only offering engineering careers. High school students aren't aware of the Ivan Allen College and the fields of study it offers."

Hayes and other officials do not feel the problem is with the race of the students; instead the admissions

office views it merely as a subset of the overall problem of convincing students to come to Tech.

Hayes points to high tuition fees for out of state students and the prevalence of more lucrative financial aid packages at other universities. "Tech asks students to make an initial investment for their future. Maybe a lot of students and families don't look at the long run and are interested in a college that can make them a better offer up front, without helping them as much in getting a job," Hayes said.

The next point of interest in this discussion is the number of African-American students who are accepted and finally decide to enroll at Tech. In the year 2000 out of the already small pool of 1,271 black applicants only 340 were offered admission. That's just 27% of all black applicants.

While there are other ethnic groups which apply and are offered admission in fewer numbers, the African-American percentage of admission is by far the lowest. The five-year average is 29.6% for black students, peaking at 40% in 1998 and dipping to 22% in 1996.

Since the admissions process itself is done without regard to individual characteristics, such as race or financial standing, it should be assumed that Georgia Tech itself is in no way biased towards the selection of students.

Finally, an even smaller number of African-American high school stu-

dents ultimately choose to attend Georgia Tech. For the year 2000 of the 340 students who described themselves as African-American on their application and were offered admission, only 129 accepted enrollment. That represents around 38% of those who were accepted, and only 10% of the total number of black students applying to Georgia Tech.

This trend extends through the five-year period as well. Through this period the percentage of those accepted never exceeded 40%, and the percentage of those who applied and enrolled remained well under 20% during the same time period.

The low enrollment is a direct result of aggressive recruitment of talented black high school students by universities across the country. Today no college, especially the more prestigious academic institutions, wants to be perceived as non-diversified, or potentially biased against minority students.

For those colleges with high academic selectivity, such as Georgia Tech, a limited number of qualified students exists to begin with. Finding and attracting the brightest African-American students is an attempt to appeal to a minority within a minority. When the field of applicants is so small, and the offers are so many, low numbers of enrollment are a natural result.

The university's spin on the subject directs the focus of the matter from the quantity of black students enrolled to the quality of black graduates.

The admissions office points to Tech recently being honored in a report in the June 7 issue of *Black Issues in Higher Education* as the number one producer of African-American engineers in the country. This is seen as a sign of Tech's improvements in attracting African-American high school students.

However, Associate Director Hayes did say that the school is extremely concerned about the num-

ber of black students applying and enrolling, "Obviously we've still got some work to do. The numbers are nice, but we need more students. We definitely want to increase our yield [percentage of those who apply who enroll]. The institution is interested in doing more in terms of creating a personal relationship with prospective students," Hayes said.

In the future it will be these personal relationships that determine Tech's ability to bring in black students. To get students' attention and keep their interest, Tech is organizing current students, faculty and alumni to sell African-American high school students on the university.

The Office of Admissions has helped put together the Minority Recruitment Team, a student organization dedicated to bringing underrepresented groups to Georgia Tech, particularly black and Hispanic students. Members of this group contact prospective students by phone, conduct online chats and host visiting students to answer their questions about Georgia Tech and the application process.

Family Affair is a program for junior and senior high school students and their parents. It aims to introduce Hispanic and black students to Georgia Tech in a relaxed family atmosphere.

Extending from this idea of making recruitment familial, Tech is preparing to host its second annual Harambee celebration.

Harambee is a principle of Kwanzaa meaning 'let us come together.' During this time prospective students room with current Tech students and meet Tech faculty in the spirit of honoring a shared cultural background.

Hayes emphasized that the goal of Georgia Tech was not to increase African-American application and enrollment to improve some idealized statistic, but to make Georgia Tech a more complete, diverse learning institution with a broad cultural base.



By Robert Hill / STUDENT PUBLICATIONS

Chris Aquino, an undergraduate Science Technology and Culture major at Georgia Tech, studies at Cyberbuzz Cafe. Aquino, who is Filipino, is part of the minority population at Tech which was extremely low entering into the 2001-2002 school year, especially for African-American and Hispanic students.

Women quickly level the playing field at Tech

Despite common misconceptions concerning female enrollment at Tech, the average incoming class contains approximately 28-29 percent women with a 57% acceptance rate—essentially equal to that of men at 55%.

By Josh Boutwell
Staff Writer

Elizabeth Herdon and Barbra Diane Michel, the first women to walk Tech campus as full-time students, enrolled for the fall quarter of 1952. Since that time, Tech has become increasingly more supportive, granting the most engineering degrees to women of any school in the nation. Moreover, over one-third of the President's Scholars are female. But what does Tech, a predominantly male college, have to offer the women who attend?

Despite the extremist rumors spread to incoming freshmen, Georgia Tech does not have a six to one ratio or worse. Since 1998 the average incoming class contained approximately 28-29 percent women. It is interesting to note that Georgia Tech does not adhere to standard affirmative action procedures either. Yvette Upton, the Program Coordinator for the Women's Resource Center, said, "often times women who attend Tech feel that they only were admitted because of their gender."

The acceptance rates for women, 57%, is essentially equal to that of men, 55%. Interestingly, women typically do slightly better than their male counterparts; the average GPA for women is 0.06 points higher. This amounts to 12

credit hours in which the student received one letter grade higher.

Mrs. Upton believes there are several reasons for this. Tech is traditionally viewed as a male-dominated school, and so, only the best women tend to apply. Secondly, she pointed out that women tend to have slightly better study habits in K-12 education. These two factors together most likely account for the slight difference in GPA's.

In addition, the retention rate for women at Georgia Tech has consistently exceeded men. While only 68.5% of men graduate or are still enrolled after 7 years, an incredible 75% of women are retained. Another interesting difference between men and women at Tech are major changes. Women change majors more frequently than men—45% for women and 39.7% for men. The In Gear Report on the Status of Women at the Georgia Institute of Technology (www.academic.gatech.edu/study/report.htm) evaluated this discrepancy and came to the following conclusion: "female students change majors as a coping strategy that allows them to continue their studies at Georgia Tech." But it is also important to remember that students are not the only women on campus. Women also compose a large portion of the faculty. In

1997, they made up 12.9% of the tenure track employees at Tech. Sadly there seems to be a female "brain drain" as the younger faculty members move on to less male-dominated universities. Fortunately, Tech does provide support for female students with the Women's Resource Center (WRC).

As Mrs. Upton said, "The Women's Resource Center is striving to create community and companions so that [women] don't feel there are any additional obstacles to them at Tech." The WRC sponsors many different activities for women both on and off campus including a counseling center for sexual harassment and sexual assault victims, a resource center and a health center, all geared towards the particular needs of women.

Mandy Gaskin, a transfer stu-

dent from Gordon College, entered Tech as a Junior with the hopes of attending medical school after graduation. "Tech has that reputation as being a cut above the rest," she said. "While I was excited about attending a school which was 70% male, I was never worried about being a minority. It wouldn't make a difference whether I applied or not."

Gaskin emphasized that the Tech community made every effort to meet her needs as a woman. She found people to be very friendly and open and noted that the Greek rush system helped her meet new people.

For more information on the resources at Georgia Tech, visit the Women's Resource Center or its website. All data was taken from the In Gear Report on the Status of Women at Georgia Institute of Technology.

Quan T. Tran, a graduate Computer Science major at Tech works on the 'Aware Home' project on the corner of 10th and Center street. 'Aware Home' explores the prospects of ubiquitous computing in housing spaces, including utilizing a computer to keep track of ingredient amounts in a recipe as well as their order of addition to complete the meal.



By Robert Hill / STUDENT PUBLICATIONS

WRC Calendar

Event	Date
WST/WRC Welcome	Sept 5
Horseback Riding Trip	Sept 15
Assertiveness Training	Sept 25
Preparing for Coming Out	Oct 4
Homecoming 2001	Oct 19
"Optimizing Your Career"	Oct 23
Women's Climbing Wall	Oct 24
TEAMBuzz	Oct 27

Calendar events courtesy of:
www.womenscenter.gatech.edu

Research from page 9

tually the subject of Dr. Bruckman's Ph.D. thesis at MIT. (Isn't that great?—We stole a really cool project from MIT.)

The MOOSE programming language, which is a descendant of the original MOO (object-oriented MUD) allows users to communicate with each other, manipulate components of the virtual environment, and introduces fundamental computer programming concepts. The "metaphoric nature of the environment" familiarizes the participants with the paradigm of object-oriented programming without them even realizing it; moreover, the manipulation of such objects in the virtual world indoctrinates principles of problem solving and critical thinking.

Kids seem to really enjoy the interface it allows them to learn in a wonderful imaginary world of "King Tut's Pyramid, the Emerald City of Oz, or Hogwarts [!]" And teachers find it to be a valuable and effective learning experience.

There's probably no better way to demonstrate what we mean than to give a brief interaction on *MOOSE Crossing* (extracted from Bruckman's doctoral dissertation).

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Magic Subway Station
Welcome to The Magic Subway Station!
Please select your destination and
step through the magic portal!
Obvious exits:
..CR.....Crossroads
..EA.....Emerald Apartments
..HC.....Home in the Clouds
..NM.....North Main Street
..PI.....< Paradise Island >
..RF.....Redwood Forest
..TA.....Travel Agency
You see Google here.
Cloudstreamer is here.
Scribbles teleports in.
Scribbles says, 'Hi there!'
Cloudstreamer says, 'hi'
Cloudstreamer: look Scribbles
    You see a brand new MOOSE Crossing
    member. She is awake and looks alert.
Scribbles grins
Cloudstreamer says, 'watch this'
Cloudstreamer: become Widget
    Cloudstreamer is suddenly covered
    by robot mechanics the size of mice
    carrying wrenches and drills and
    screwdrivers. Body parts fly every-
    where! (Grown-ups, don't read this!)
Yikes! Duck! There goes an eyeball!
The metal mice vanish, and before you
now stands... drumroll, please! ...
the one and only Widget!!!

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Anyway, there is an entire suite of ELC software including *AquaMOOSE 3D* and *Palaver Tree Online*.

The former (developed by graduate student Jason Elliott) is an environment that allows high school students to practice three-dimensional mathematics: the path of a fish, which swims around a virtual world, can be controlled with algebraic and parametric equations; other mathematical problems and programming issues are also introduced. So, in our humble opinion, that's cool too.

When was the last time you got to play a game by entering " $x = \cos(10*t)$; $y = \sin(5*t)$; $z = 20*t$ "—and then have your character actually walk along that path? This is an absolutely ingenious way to teach people 3D visualization and Euclidian geometry.

Palaver Tree (like that place where the village elders gather to tell stories; the doctoral project of Jason Ellis) teaches students about World War II or the civil rights years of American history, introducing historical stories such as *The Diary of Anne Frank*; it also encourages discussion of such narrations and facilitates practice with reading comprehension.

Both of these more advanced environments still retain the social atmosphere and

positive learning environment common to all of the MOOSE tools.

The Electronic Learning Communities group has the pleasure of developing and facilitating these wonderful learning environments. They undertake field research in order to optimize the interface of the students to the educational material.

These projects seem to be a great deal of fun and immensely fulfilling; Dr. Bruckman finds the experience of working with children in this environment to be extremely enjoyable.

So apparently do her cadre of motivated research assistants: Lori Adams, Alisa Bandlow, Jason Elliott, Jason Ellis, Jim Hudson and Carlos Jensen. Their work seems to be heavily influenced by modern computer role-playing games, the fascination with which extends also to the leader of the group.

Anyone interested in helping with these projects should contact asb@cc.gatech.edu. Furthermore, professor Bruckman is the Undergraduate Research Opportunities in Computing (UROC) coordinator and may be able to help you find a fun project in which to take part; she also suggests that you consult the massive College of Computing job database—www.cc.gatech.edu/program/uroc.

Faith

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leads the small Bhakti-Yoga club. He describes the organization's mission as "to expose the Georgia Tech community to an ancient but thoroughly timely, practical, and enjoyable means of generating peace and well-being in one's life, especially in light of the lack thereof in today's fast-paced society. This is done dynamically, our primary activities including, but not limited to: Mantra Meditation, discussions on the philosophy of The Bhagavad-Gita and

its relevance today, Vegetarian Feasts, and Mantra chanting sessions accompanied by traditional instrumentation. And this has all been done right on campus on the third floor of the student center, bimonthly."

The club is the campus branch of the larger Bhakti-Yoga Center of Atlanta. Siddharth Joshi said of the Atlanta Bhakti-Yoga community, "they themselves are very enthused to introduce the tenets of this spiritual doctrine and its concomitant practices to the Georgia Tech community. Despite the lack of widespread interest, we did not lose heart,

as we still derived great spiritual fulfillment amongst ourselves, the small group that we were."

Like the Bhakti-Yoga Club, most student groups have some affiliation to a larger, off-campus religious organization. The Jewish Student Union works with the Atlanta YAD, an association of young Jewish adults, student and nonstudent, throughout the metro area.

YAD, Hebrew for "hand," coordinates events and gatherings with all the Jewish organizations at Georgia Tech as well as Emory, Agnes Scott, Georgia State, Oglethorpe Univer-

sity, Perimeter College, Kennesaw State and the University of Georgia. Jewish fraternities and sororities on these campuses, such as the Alpha Epsilon Pi fraternity at Tech, also work with YAD to bring the younger Jewish community of Atlanta together.

Other spiritual organizations at Tech are individual branches of larger associations. Campus Crusade for Christ (CCC) is an international, interdenominational Christian organization founded to spread and nurture Christian ideals at universities worldwide. CCC has regional offices here in Atlanta and brings together Christian students from across the metro area for worship and public service.

The other predominant Christian student organization is Christian Campus Fellowship. Advisor Tom Atkins described current enrollment, "There are about five hundred active members involved in Bible study and all of the small groups and fellowship activities. Approximately three hundred usually show up on Thursday night, which is the big weekly service," Atkins said. Like all student religious groups CCF seeks to help its members keep the faith using a community support structure, evident in its mission statement, "Fellowship is a refuge that creates and nurtures a closer walk with the Lord for the students of Georgia Tech."

The Muslim Student Association (MSA) has taken an active role not only in bringing together believers, but also in educating non-Islamic students. Beginning September 11, there will be an options course entitled Islam 101: Introduction to Islam. The lecture series is geared towards non-Muslim students to educate them on the religion and culture of Islam. There is no fee for the course.

Shahzan Akbar, president of the 250-member MSA, described the organization's goals for believers and nonbelievers in Islam, "Our objective is to promote a proper understanding and awareness of Islam to both non-Muslims and Muslims on and off campus. We strive to provide a forum to unite the Tech community to provide activities that would enhance understanding of Islam and form bonds of friendship. Our activities are open to people of all religions who want to increase their knowledge of Islam or simply want to meet some new people," Akbar said.

Words

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is hip, yo. Consequently, there's "geek pride," the "Geek Code," thinkgeek.com and other positive concepts of intellectual elitism to separate ourselves from those damn "normal" people. This is good. And you can't neglect my favorite verb to describe partaking in any of this culture—to "geek-out"—as in, "I didn't have anything to do Friday night, so I geeked-out with some PHP action."

There's also "nerd," "an unstylish, unattractive, or socially inept person." Whatever—I'm a nerd, and honestly many of us at Tech are too. Thankfully, however, Eric Raymond has saved us with slightly nicer definition: "someone who knows what's really important and interesting and doesn't care to be distracted by trivial chatter and silly status games." We have the kids at MIT to thank for this. As early as 1957, with "gnurd" or "nurd," à la Dr. Seuss, techies began to turn the insult around and use the term for themselves.

It is absolutely fantastic that intelligence is beginning to be prized by some of us more than our silly social conditioning. Though we must not forget the necessity of occasional profitable social interaction.

We normally use "nerd" for mathematically- or scientifically-minded people or just general bookworms, as in "physics nerd" or "math nerd." I'm a nerd: I love physics. But notice the difference between geeks and nerds: geeks are the tech-savvy skilled laborers whereas nerds are the inherently scientifically intelligent. (Notice how I haven't talked about "hacker" and "cracker" yet. And I'm not going to.)

Lastly is "freak." Since the modern advent of psychotropic drugs like Lithium in the 1970s (it was actually first used in 1949 by the Australian physician John Cade) and Prozac in 1987, some subcultures actually find it cool to be a "freak." Many indeed call themselves freaks as a declaration of comfort with their abnormalities. Or as a hail to friends passing on the walkway. Heck, there's, marvelously enough, even a "Freak of the Week."

So remember to get your terminology right, whether "geek," "nerd," "dork," or even "freak." And make sure you have another witticism ready in case your target is comfortable with his or her social caste.