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TECHNIQUE

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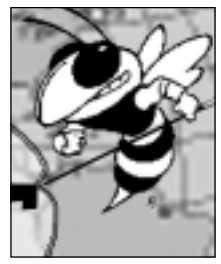

Tech finishes academic misconduct review

Results of CS cheating investigation released as CoC enacts new homework collaboration policies for classes

By Andrew Howard
Contributing Writer

With the investigations of the 186 students accused of fall academic misconduct in Computer Science 1321 and 1322 complete, students in the class will now take part in a totally different type of learning environment.

Starting this summer, students may appropriately collaborate with their peers on all programming assignments; however, exams will be the major assessment of knowledge and determination of the students' grades.

In the wake of the unusually high volume of academic misconduct charges for one semester, the Institute formed two task forces to review the two introductory courses in which the students were enrolled and the academic misconduct process.

The Task Force on Introductory Computer Science Courses consisted of a group of Georgia Tech professionals including chair Jim Foley, Kurt Eiselt, Richard LeBlanc, Mark Guzdial, and Ashwin Ram from the College of Computing and Bob McMath, the Georgia Tech Vice Provost for Undergraduate Studies.

"The committee took input from the primary teachers of the courses, Bill Leahy and David Smith, as well the faculty at large. [They] wanted as many facts and as much input as they could find. President Clough was also constantly kept up-to-date," explained Karen Boyd, Senior Associate Dean of Students.

A final report was submitted to President Clough and the College of Computing following the investigation this May with findings and recommendations for the course. Many of the recommendations went into effect immediately.

The report addressed many fundamental questions including:

- Should there be more than one introductory computer science course?
- Should there be an accelerated section of CS 1321 for students with some prior programming experience?
- What are the best ways to access programming ability?
- Are workloads for these courses too heavy?
- Should the "limited collaboration policy on programming assignments" policy be modified?

According to Institute Communications and Public Affairs, "The most notable policy change from the task force is shifting the assessment focus from homework to quizzes and exams."

"These two courses will now allow collaboration with attribution on homework assignments, a subtle but important change from previous years. The new policy, which went into effect for the summer semester, allows students to work cooperatively on homework assignments, as long as they credit the external sources used to complete the work. Those external sources may include, but are not limited to, other students, teaching assistants, textbooks, websites, etc."

"The changes seem appropriate. By making the test more difficult and allowing students to work together, the course is now more like what it is in the real world. Hopefully, students who are not computer savvy can learn much more," said sophomore Patrick Phelan.

"The [collaboration] change generated a great deal of discussion," said James Foley, Associate Dean of the College of Computing and chair of the Task Forces. "There are logical arguments for both approaches and both are in use around the country. But we ultimately felt that learning would improve by using the homework to teach and quizzes and exams for the bulk of our assessment. Such an approach is consistent with Georgia Tech's overall approach to collaborative learning."

"The committee was not formed purely because of the academic misconduct cases in the fall. The recommendation to allow collaboration has been in the works for a very long time. The cases were just one of the many issues that formed this committee," explained Boyd.

By Chris Gooley/ STUDENT PUBLICATIONS

The results of the academic misconduct review prompted an evaluation of the current CS curriculum. Starting this summer, students in the introductory CS classes will be able to collaborate on their homework.

Tests now comprise 48 percent of a student's average in CS 1322, versus 33 percent last spring.

The College of Computing will offer an accelerated version of the CS 1321 course in the fall. It also plans to offer several different introductory computer science courses that are not necessarily major specific in the future. The committee also made the recommendation to take into account other programming languages for CS 1321.

"Teaching assistants will be required to attend weekly status and training meetings. This fall, CS 1321 will use a model in which TAs will report directly to the instructor for their given section instead of reporting to a central TA manager.

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Silver takes second at Intel awards

By Jay Owen
Contributing Writer

"I think the best part of the prize was the 5-foot-tall check that I thought you could only get on a game show," said Electrical Engineering undergraduate Jay Silver when asked about taking second place in the Intel Undergraduate Research competition. " Isn't that what life is all about?"

Despite SIlver's lighthearted comment, his project, funded by a grant from the Intel Corporation, was very serious. He has been working on Real-Time Nematode Egg Detection with Computer Vision, which sounds complicated but in reality is easy to understand. A Nematode is a type of worm that is frequently used in scientific experiments, and is frequently the subject of human observation. Jay chose the specific behavior of egg laying as the subject for his research.

"A human observer will watch the worm for a period of 6 hours and count the eggs that have been laid," said Silver. This job is tedious at best, and, according to Silver, "observations made by humans will differ from person to person and even as a person's mood changes throughout the day." This was the problem that he stepped up to solve.

While working on this project, Ron Schaffer, a Regents Professor in the School of Electrical and Computer Engineering, advised and assisted Silver. When asked about running his own project, Sliver said, "It was difficult being more in control of my own project the same way that any new responsibility is difficult."

When there was a problem in the lab, Silver had to solve it himself. While this was difficult at times, it also meant that Silver could set his own schedule. Of important problems or questions, Silver said, "I [could] leave the lab and think about the problem over the next day."

The solution to Silver's problem, and the result of all his effort in the lab, was a real-time system that monitored the nematodes. "As the worm crawled around on the Petri dish, images were sent through a micro-

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Summer Fun Tie-dye and ice cream

By Shelley Hoyal / STUDENT PUBLICATIONS

Students took a break from summer school and frigid labratories on Tuesday, tie-dying t-shirts and eating ice cream out at the Campanile.

Clough earns salary raise

The Board f Regents of the University System of Georgia awarded state college and university presidents a three percent salary increase Wednesday. The raise, which takes effect July 1, raises Tech President Wayne Clough's annual salary by $6,750 to a total of $231,754, the highest of the 34 university and college presidents in the system.

GTREP breaks ground Monday

Georgia Tech and the Savannah Economic Development Authority (SEDA) will break ground Monday, June 17 on a new academic and research campus to house the hub facilities for the Georgia Tech Regional Engineering Program (GTREP), which offers students in Southeast Georgia the opportunity to earn undergraduate degrees in civil engineering and computer engineering, as well as master's degrees in civil and environmental, electrical and computer and mechanical engineering from Georgia Tech without leaving the area.

Technique Online Voice Your Opinion!

Last issue's poll garnered 51 responses to the question:
"What is the best way for freshmen to get involved at Tech?"

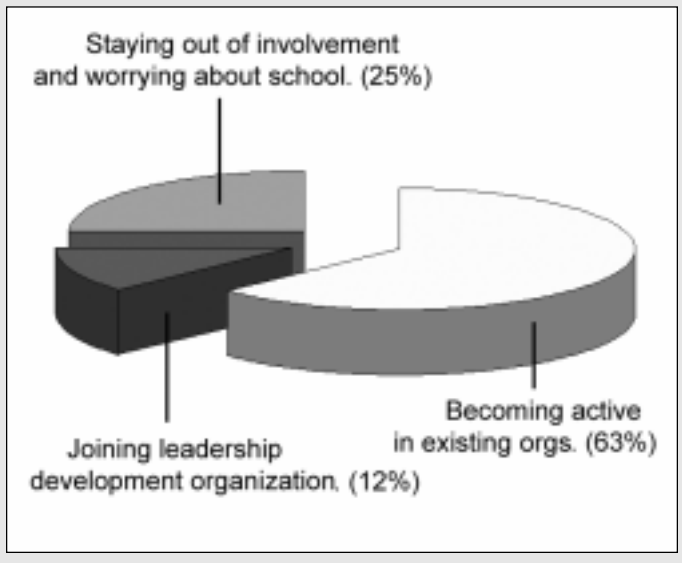
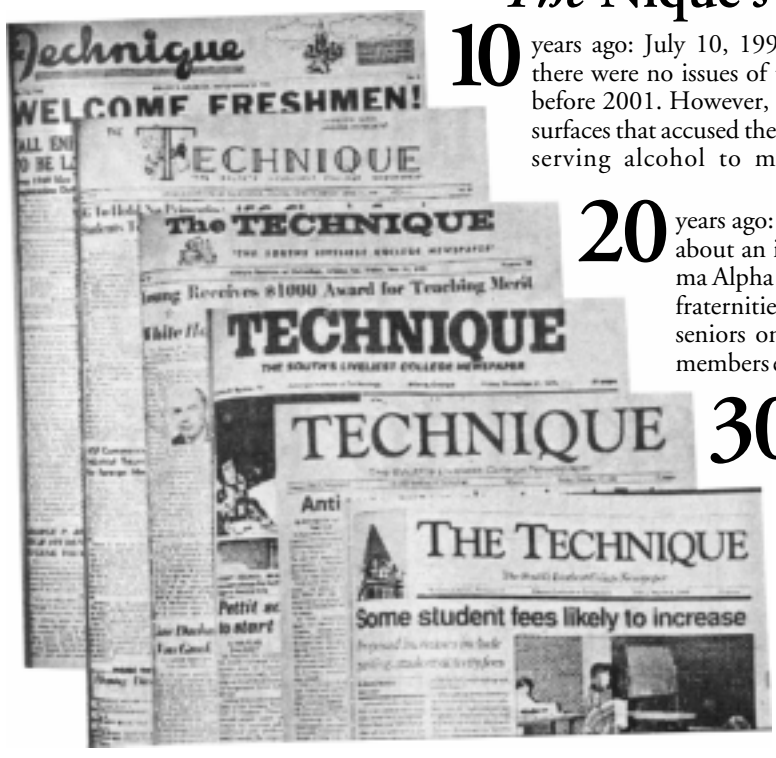


Image by Robert Hill / STUDENT PUBLICATIONS

This week's poll is about the latest changes to the computer science course. Will they work? Do further changes need to be made to the course? Vote online at **www.cyberbuzz.gatech.edu/technique**.

From the archives...

The Nique*'s top stories from:*



10 years ago: July 10, 1992—Because of the quarter system, there were no issues of the *Technique* printed in early June before 2001. However, in the July 10 issue, allegations first surfaces that accused then-Tech President John P. Crecine of serving alcohol to minors at a swim team banquet.

20 years ago: July 2, 1982—The *'Nique* reported about an incident that occurred between Sigma Alpha Epsilon and Beta Theta Pi. The two fraternities held parties for their graduation seniors on the same night, resulting in their members exchanging words and bottle rockets.

30 years ago: July 7, 1972—Tech students celebrated as Georgia's age of majority was lowered to 18. Students were allowed to marry without parental consent, purchase liquor legally, and sign contracts, and perform other actions of full-fledged adults. According to the same issue, the lowering of the age had no effect on the Tech prohibition of alcohol in all dorms.

Breaking the Bubble

www.bubble.nique.net

In "Breaking the Bubble," you will find highlights of news stories that the members of the *Technique* editorial board feels are important—stories about which each member of the Tech community should know. Visit www.bubble.nique.net to find links to complete articles about these stories, as well as other important and interesting pieces the editors have compiled.

Colorado wild fire nears Denver suburb

The fire that started in the foothills southwest of Denver, Colorado on Saturday has since spread to within thirty miles of the city limit. Investigators are unsure as to the origin of the fire other than that it was caused by humans. The fire has destroyed at least 21 homes and another estimated 2500 homes are at risk.

Israel ends two-day blockade of Arafat

Israeli troops pulled out of Ramallah on the West Bank on Wednesday after surrounding Yasser Arafat's headquarters for the past two days. They said their object was to prevent Palestinian gunmen from taking refuge inside the compound. This comes on the heels of a Palestinian suicide bombing last week that killed 17 Israelis.

Bush to visit Atlanta Monday

President George W. Bush will be making a visit to Atlanta's Carver Homes on Monday to witness the growth of what was long considered one of Atlanta's most dangerous neighborhoods. The new development will have 252 homes, 718 apartments, shopping, a library, and a community center.

CS

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According to the CS task force report, "the goal is for the TAs and their instructor to form a "team" that will take on an enhanced sense of ownership of and responsibility for the educations of the students."

"The collaboration issue was discussed a lot. Our goal is not to allow cheating," said Robert McMath, Vice Provost for Undergraduate Studies. "Our goal is to allow students to work and learn together. We have never and will never allow plagiarism. If a student receives any kind of help from another student, that students needs to be given credit."

"Changes were definitely needed in both classes, but I am not really sure that these changes will adequately solve the problem. Tech has a high standard of education and by changing the class, the challenge has been greatly diminished," said sophomore Puja Shah.

President Wayne Clough and Provost Jean-Lou Chameau were actively involved in the process of forming the committee and its direction, but were not involved in discussion. A second committee also formed in the aftermath of the academic misconduct cases in the fall to review the new Honor Code. The committee made several recommendations and slightly altered the misconduct review procedure.

"The [academic misconduct] incident has caused the Georgia Tech community to look closely at the way we teach and the way we hold each other accountable for our actions," said McMath. "Because of the serious and thoughtful efforts of many people, I believe that we are coming out of this experience a stronger and better university."

The Dean of the Students' office is now hiring three new employees to aid in the review process. All students are now shown a video explaining the review process prior to meeting with the Dean in order to expedite the process.

"The University of Virginia had a similar situation during May of last year. They still had 70 cases pending after a year. Every [Georgia Tech] student was offered a fair review and we were able to review all the cases fairly efficiently. My job is to hold every student accountable and as the Dean of Students I am committed to providing the best educational environment for our students," said Dean Boyd.

"The most significant statistic in all of this is that more than 1,500 students did their work as assigned for those two classes without any accusations of plagiarism," said Bob Harty, ICPA Executive Director.

"It's also significant that 83 percent of those involved accepted their sanction(s) without question. That speaks highly of the process used to identify cheating and also reflects positively on the incredible work done by our Office of the Dean of Students. They had an enormous task to fairly and efficiently investigate all of these cases," said Harty.

Results of CS investigation

	Number	Percent
Students Referred	187	n/a
Investigations completed	186	99
Withdrew from Georgia Tech	1	1
TOTAL	187	100
Violations found	154	83
No violation	32	17
TOTAL	186	100
Accepted Dean's decision, sanctions	136	883
Requested Student Honor Cmte. hearing	18	12
TOTAL	154	1003
ACADEMIC Sanctions		
Zero on assignment	32	24
Drop final grade one letter	64	46
Drop final grade two letters	15	11
"F" in course	26	19
Suspension	1	0
TOTAL	136	100

Results of the CS investigation show that most students found responsible received sanctions of a lower grade on the assignment or in the class.

Intel

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scope to a video camera," he explained, "The camera fed sequences of images to digitizing card on a Pentium III. The computer [then] analyzed the images using techniques from computer vision."

According to Silver, "'Real-time' means that the processing is keeping up with the stream of images so that no images need to be stored and no processing needs to be done after the experiment ends." Thus were achieved methods for cutting the cost, and increasing the accuracy, of the experiment. These factors motivated Silver's work; the rest was slightly more personal.

Silver has a long-term goal to "teach at the college level and research in my field with a goal of improving educational technology." While on break in California, Silver asked Tom Cover, an electrical engineering professor at Stanford, what might be a good path to this goal. Cover responded with what Silver called a "cryptic analogy."

" He [Cover] said that a new theory of light suggests that light takes all possible paths to reach its destination. He drew a straight line, a curved line, and a chaotic line between a light source and an object on a piece of paper."

While the approach was somewhat unconventional, the message Silver took away was simply that, "a subject is learned by approaching it from many paths." The research was a potential path towards the end that Silver keeps in mind.

By taking second place in the Intel competition, Silver has started down that path. He currently interns at Lincoln labs, and will spend the next year in Cambridge before he attends MIT in pursuit of a Ph.D..

Of the distant end that Silver alone can see, he says, "I would really like to bring the arts into the math classroom as a tool for relating new ideas to a student's current intuition."