Library East Commons reinvents study space

Flexibility a key theme in new layout

By James Stephenson  
News Editor

The Library East Commons opened to students this Aug., to provide group study and areas of relaxation.

“We wanted to create an adaptable workspace with study tables, comfy chairs and couches. We wanted to make it feel homey. This is the student’s living room,” said Charlie Bennett, Library East Commons coordinator.

Jazzman's café enables students to buy food and drinks in the library, which brought about a change in policy for the library.

“At Jazzman’s a student can get sandwiches, fruit, coffee and other items. They can make a full meal out of it,” Bennett said. The organization of the furniture is still being worked on.

“We are looking to push group and collaborative work.”

Charlie Bennett  
Library East Commons Coordinator

“We put as much as we could in a general placement. A lot of the furniture just arrived. It’s an organized chaos right now. Everything is in a constant state of flux,” Bennett said.

The two main themes of the Library East Commons are flexibility and group activity. The group activity is meant to provide a contrast to the West Commons, which was designed for the individual student.

“We are looking to push group study and collaborative work,” Bennett said.

“The flexibility in space can be seen in many facets of the East commons. Next walls are temporary walls that are used to break up the space. They have a certain sculpture aspect to them,” Bennett said.

The lighting is another aspect to the design.

See Flex, page 6

Memorial honors 9/11 anniversary

Monday on Skiles walkway there will be a memorial honoring those who died during the terrorist attacks of Sept. 11. A flag will be placed for each person who lost their life in the World Trade Center, the Pentagon, and United Flight 93.

Tech Night at Six Flags next Friday

Tickets are on sale for Tech Night at Six Flags, which will be next Friday, Sept. 15. Student tickets are now $15 and available at the Student Center Ticket Office. A new roller coaster, Goliath, is being featured at the park. Goliath is the tallest and fastest roller coaster in the Southeast.

Ozone showing signs of recovery

The Earth’s ozone layer is showing sign of recovery in the most important regions of the stratosphere, above the mid-latitudes in both the Northern and Southern hemispheres, a new study shows. A new NASA satellite called Aura is continuing to measure ozone in various regions of the stratosphere, and these same researchers are involved in the ongoing study of the ozone layer using the satellite’s data.

Unmanned hydrogen aircraft launches

By Raisa Simoes  
Contributing Writer

Researchers at Tech recently launched an aircraft powered by hydrogen fuel cells. The plane requires no manpower to launch, proving to be a step forward in flight technology.

The unmanned fuel cell plane was a joint project between Tech’s Aerospace Systems Design Laboratory (ASDL) and the Georgia Tech Research Institute (GTRI). Tech got the contract for the project from the University Research Engineering Technology Institute (URETI), which came under NASA. The researchers chose to use the NASA/URETI grant to study alternative propulsion concepts, which involved fuel cells, and aircraft modeling and designing.

“The plane is not necessarily a new discovery, but a demonstration of the state of the art of fuel cell development,” said Adam Broughton, research engineer and one of the builders of the plane.

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The Graduate Student Senate (GSS) met on Tuesday. Four bills were passed.

The Allocation to Black Graduate Student Student Association was the first bill to be brought before the Senate. The bill was asking for funds to reimburse the Black Graduate Student Association for their Spring Recognition Banquet and Awards Night. The bill was amended from $1,163 to $586 and was passed in its amended form.

The next bill to be brought before the Senate was the Revised Amendments to the Bylaws of the Graduate Student Senate. A motion was made to slate the bill with the revised amendments to the constitution, but was denied due to the fact that the two bills require a different type of vote. The bill passed by unanimous acclamation.

The next bill brought before the Senate was the Revised Amendments to the Constitution of the Graduate Student Senate. The bill was amended to show the current working versions and passed by unanimous acclamation.

The final bill brought before the Senate was the Graduate Student Senate Fall 2006 Picnic. The bill was for funding for the Graduate Student Picnic to help pay for the food being prepared by Auxiliary Services. The bill passed the Senate.

In the report of the president, Mitch Keller talked about the Diversity Forum and said that he was looking for SGA representatives to participate. Keller also reminded senators about Tech Night at Six Flags on Sept. 15. Keller encouraged senators to attend.

The committee for health and welfare discussed their meeting with the Student Center in an attempt to get better labeling of food in the Student Center dining hall.

The senators all received new PRS devices to be used for voting purposes. This was the first meeting that the PRS would be used to tally the votes cast by the Senate. The purpose is to speed up the voting process.

The senators were given a crash course in how to use the PRS system. However, the senators had problems using the system and, after a few tries, they reverted back to the old system of standing up and being counted manually.

The senators were promised that the PRS system would be reworked and that a more efficient and less confusing system in the near future.
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DNA research shows cancer link

By Craig Tabita
Contributing Writer

A team of scientists from the School of Physics and Chemistry & Biochemistry has made an important discovery in better understanding the process by which oxidative damage occurs in DNA, leading to mutation and consequently many types of cancer.

Their research was published in the August 2006 edition of the Journal of the American Chemical Society. The professors in the group were Uzi Landman, professor in the School of Physics and director of the Center for Computational Materials Science, and Gary Schuster, a professor in the School of Chemistry and Biochemistry and dean of the College of Sciences who was recently appointed provost.

“The whole objective of this sort of work is to understand where oxidative damage to DNA occurs, why it occurs there, and what the consequences are,” Schuster said. DNA consists of a double-helix whose two strands consist of a chain of the nucleotides adenine, cytosine, guanine and thymine, often abbreviated by their initials A, C, G, and T.

One of these nucleotides in the strands is the storage medium of genetic information in the body. The two DNA strands of the double-helix are connected to form a ladder-like structure as a result of bonds between corresponding nucleotides, adenine pairs with thymine and cytosine pairs with guanine.

A number of factors, such as free radicals, can cause an electron to be removed, known as oxidation, from one of the nucleotides at a particular atom location labeled as carbon-8, leaving a hole where there used to be an electron. Like electricity running through a wire, that hole is continuously shifted among nucleotides in the carbon-8 spot along the DNA strands.

It was observed that the hole tends to rest in place longer when it reaches a pair of guanine nucleotides next to each other, and it is at that location of two neighboring guanines that a water attack will occur. This greater understanding will help researchers a clearer idea of how mutations happen, and will not necessarily yield a cure. This does not mean that there is a cure for cancer. We are not suggesting that tomorrow somebody should try to modify DNA molecules from having negative phosphate groups to having neutral ones," Landman said.

“Like nobody’s business,” Landman said. “We are anchored in the need to know the origin of physiochemical processes. This is one more component in understanding the origins of disease. I believe that when we understand more of these origins, we will understand what type of vaccine, cures or remedies we can find,” Landman said.

G o Jackets!! Students who did not get tickets into the stadium can watch the Notre Dame game in Yellow Jacket Park Saturday.
Students work at group work stations in the library east commons. The East Commons is promoting group activity and collaboration.

According to Stuart, [2nd floor west] would be all about groups, whereas, the 1st floor was all about the individual. “During a study conducted in Oct. 2003, we looked at the seven most popular study places on campus. We took pictures of the places and of the tables and chairs in those places. We talked with students about why they chose to study at that place and compiled a list of reasons. The reasons were in terms of least negative and not in terms of positive,” Stuart said.

The East Commons creates a meeting area where students and faculty can come together to discuss things. “The students wanted to be able to know the faculty as humans, not just as talking heads in a classroom. Jazzman’s was created to have a coffee house effect where students could meet with professors informally,” Stuart said.

The East Commons is only a step in a continuing process. “This is just page one chapter one. It’s a start,” Stuart said.

Flex of flexibility. “The lighting system is completely moveable and adaptable. The lighting system is a Herman Miller system. Each one has a sensor on it. A wand allows all the lights to be on the same control...We went with having a lot of control with the light as opposed to knocking down walls and putting in a bunch of glass,” Bennett said.

“I think of it as recharging the batteries. [East Commons] is good for right-brain stimulation.”

Charlie Bennett
Library East Commons Coordinator

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Airplane from page 1

The main designer of the aircraft was Tom Bradley, a mechanical engineering Ph.D. student, who researched and developed a fuel cell component of the plane. Bradley said, "The fuel cell is basically an electrochemical device that performs a chemical reaction and makes electricity just like a battery." Unlike other forms of making energy, fuel cells are less harmful to the environment, as water and heat are the only by-products that are emitted.

"The technology in...using fuel cells is less than 15 or 20 years [away]." Blake Moffet Aerospace Engineering Ph.D. Student

"I think the process has been a good one because it has involved all the right people." John Stein Interim Dean of Students

According to Moffet, the Code of Conduct is an area that students don't spend a lot of time studying. "We have a responsibility to always look for ways of getting this information out to students, so they can be informed and keep giving us feedback and asking us questions," Schafer said.

"I'm glad that we are not rushing through it, because I think it is something that is worthy of time and focus. And so I think spending time with it is useful and beneficial for us as a community," Stein said.

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ECE creates lab-on-a-chip

By Carbin Pon
Contributing Writer

Ali Adibi, a professor at the College of Electrical and Computer Engineering (ECE), and his research group have created the world’s smallest wavelength demultiplexer, critical in the development of small-scale biosensing and chemical analyzing devices.

“A wavelength demultiplexer is an optical device that has the capability to separate the different wavelengths from an incident signal into a space. If you look at what a prism does, it gets the white light that has multiple colors, which are different wavelengths...and at the output it separates the colors so that at one point you see green and at one point you see red. That is a wavelength demultiplexer,” Adibi said.

The research of Adibi’s team involves photonics, the study of transmitting information with electromagnetic waves, and especially the transmitting information with multiple wavelengths at the same time.

“If you normalize the published results...ours is smaller by two orders of magnitude.”

Ali Adibi
Professor, College of Electrical and Computer Engineering

in order to increase your speed or your bandwidth.”

According to Adibi, the second application is on spectroscopy.

“In Lab-on-a-Chip...you have a chemical...[or] a fluid you want to sense and look for a specific molecule. You bring it on a silicon chip and a light beam goes through that. Its spectral signature will appear on that optical beam...then the wavelength demultiplexer can distinguish those signatures and a detector can detect them,” Adibi said.

The Lab-on-a-Chip concept integrates many laboratory functions onto a single chip only a few square millimeters.

“I think [the wavelength demultiplexer] is a piece,” Adibi said.

According to Adibi, when a person talks about Lab-on-a-Chip, they are talking about a system and spectroscopy is a major part of that system.

“Think this is...the most compact way of doing this on a chip that can be integrated with other photonic and electronic functionality,” Adibi said.

Georgia Tech currently has several proposals in the works based on the technology around the tiny wavelength demultiplexer and research opportunities will expand around the areas of spectroscopy.

“It brings a new opportunity to spectroscopy by using a three dimensional version of what we did,” Adibi said.

According to Adibi, two-dimensional is always good for Lab-on-a-Chip or on-chip performance.

“If you want a general purpose or a specific purpose spectrometer, you extend it to the three dimensional case and have a standalone device that does the job for you. It would be useful in handheld sensors, mobile sensors...that could be used for [biological] or environmental [applications],” Adibi said.

Breaking the Bubble

According to the Atlanta Journal-Constitution, it will be three to four months before the cub can be seen by the public. The panda will be named at a ceremony held 100 days after its birth, according to Chinese custom.

The longest labor on record for a panda in captivity had been 34 hours. Lun Lun took 35 hours to deliver her cub.

Bush announces use of secret prison by CIA

Bush announced that 14 high-profile terrorist suspects that were secretly being detained by the CIA are being transferred to Guantanamo Bay for military tribunals.

According to the New York Times, the announcement was the first time that Bush talked about the secret CIA program which he authorized.

The government says the 14 terrorist suspects include some of the most senior members of Al Qaeda captured by the United States since 2001, including those who participated in the attack on the USS Cole.

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Breaking the Bubble

A lot of things went on outside the bubble of Tech in the past week. Here are a few important events taking place throughout the nation and the world.

Stingray claims life of Crocodile Hunter

Crocodile Hunter Steve Irwin was attacked on Monday by a stingray and received a fatal puncture wound to the chest. Irwin was shooting an episode for his show off of Australia’s north coast. According to CNN.com, Irwin was snorkeling at Batt Reef, a part of the Great Barrier Reef about nine miles from the town of Port Douglas, when the incident happened.

According to witnesses, Irwin swam over the stingray, which was buried in the sand and the barb came up and hit him in the chest.

New panda born at Zoo Atlanta

Lun Lun, the panda at Zoo Atlanta, had a baby panda on Wednesday. Assuming it survives, the new cub would be just the fifth to be born and raised successfully in a U.S. zoo.

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