

## Tech hosts competition for aspiring engineers

By Chris Russell  
Contributing Writer

Ask an engineer about their favorite childhood toy, and odds are good that LEGOs®, K'Nex® or Tinker Toys will pop up somewhere in the conversation.

Toys like these have always been a staple in the aspiring engineer's toy box, but recently some have been asking something else: could they be used to get children interested in engineering in the first place?

According to Tech's School of Electrical and Computer Engineering, the Center for Education Integrating Science, Mathematics, and Computing and the FIRST® LEGO® League (FLL), they can, and they are.

On Jan. 23, Tech played host to a small army of young roboticists as they competed in the FLL state finals.

Jeff Davis, Associate Professor in the School of ECE and a key player in FLL at Tech said, "FIRST® Robotics is an organization that started...a while ago at the high school level. At some point, it branched out into this middle school effort of FLL. FLL is geared towards ages nine to 14, and, basically, this national organization comes up with a competition each year."

According to Davis, the competition itself consists of multiple parts. The main show is the robotics competition, where students build and program a robot to complete a series

of missions on a four-by-eight foot course. Robots have two and a half minutes to complete as many goals as possible, and the more they complete, the more points their teams earn.

This year, the theme for the event was called "Smart Moves," and the competition reflected this with a series of transportation-themed challenges. The robots' tasks included maneuvering through tight spaces, crossing bridges and determining where they could and couldn't reach.

Previous years have featured themes like a Mars exploration, helping people with disabilities and nanotechnology. Like this year's competition, the

robots' missions were made to match the theme. For example, for the nanotechnology theme robots had to repair and bring supplies to a large LEGO® "bone" set into the course.

According to the FLL website, the theme for the 2010 competition is a focus on robotics' role in the biomedical field.

A blurb on [www.firstlegoleague.org](http://www.firstlegoleague.org) stated that, "[Participants] will explore the cutting-edge world of biomedical engineering to discover innovative ways to repair injuries, overcome genetic predispositions, and maximize the body's potential, with the intended purpose of leading happier and health-

ier lives."

Many of the missions stem from a few simple operations.

"Typically the types of missions they have are...[going] out to some location and flipping a switch or getting some loops and bringing them back to base," said Davis.

In addition to the robotics course, the challenge also has three other components: a research project, a technical report and a team-based project. While the research project is normally based around the theme of the competition, the technical report is more journal-

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Phot by Basheer Tome/Student Publications

FLL lets children from all over the state to compete against each other while learning about engineering.



Phot by Basheer Tome/Student Publications

Students competed in the FIRST® LEGO® League by creating a robot that has to compete specific tasks.

## CoC professor appointed new cybersecurity czar

By Andrew Nelson  
Staff Writer

One of the nation's renowned computer security experts, Howard Schmidt rejoined the White House payroll as their cybersecurity coordinator, or "cyber czar."

President Obama initially appointed Melissa Hathaway—a leading advisor in national cybersecurity and intelligence—acting senior director for cyberspace last Feb. to evaluate the importance of national cybersecurity. Hathaway resigned that August leaving an "initial down payment," as she called it, for what a cybersecurity coordinator should attend to.

Given Schmidt's record of service at the White House and top cybersecurity positions at companies like Microsoft and eBay, the Deputy National Security Advisor John Brennan, whom Schmidt will report to, has warmly welcomed him to the position of cybersecurity coordinator.

"I'm committed to bringing [the government, private sector and individual citizens] together around a new comprehensive cyber strategy that keeps America secure and prosperous," Schmidt said in a video statement.

Schmidt's top priorities are to develop a new network security

strategy, lead a national campaign to promote cybersecurity education and research, ensure an organized response to cyber incidents and strengthen public, private and international partnerships.

This task prioritization is the goal of President Obama's recent string of policy coordinator appointments, popularly dubbed "czars."

Schmidt has served with a host of organizations, government agencies and companies, and he clocks in over thirty years of continuous information technology (IT) security service. From 2006 to 2009, though, Schmidt was worked with Tech's College of Computing (CoC) as an adjunct professor and professor of practice.

"[Schmidt] was more interested in and has more expertise in the policy side [which includes] how to evaluate benefits, what roles government and industry play and what solutions we can come up with is the policy side," said Dr. Mustaque Ahamad, Director of Tech's Information Security Center (GTISC).

Ahamad coordinated Schmidt's interactions with Tech, which included delivering lectures to graduate classes and conducting research with faculty on a

regular basis.

He and Schmidt both worked on a project for the Japanese Ministry of Internal Affairs and Communications.

"[The ministry] was interested in the policies and practices that U.S. government agencies and companies have developed and followed," Ahamad said, "Schmidt helped them figure out who to talk to and what kind of info they needed to address."

Research projects like this are usually funded by the contractor, in this case the ministry, and completed at Tech by faculty or students.

Schmidt also helped Ahamad set up the GTISC's Industry Advisory Board—composed of various industry professionals and advisors from companies like Intel and Bank of America—that gives them advice on academic research. GTISC also hosts the Information Security Summit, open to all faculty, students and non-GTISC guests; Schmidt delivered a keynote speech to one of them regarding online identity management challenges.

"We do joint projects that are funded by industry, like AT&T and IBM, so we find a common problem or interest with them, and develop a research project,"



Photo courtesy of...

President Obama appointed Howard Schmidt, a member of the CoC faculty from 2006-09, to the position of cybersecurity czar.

Ahamad said, "There are a number of places where we do this kind of research, and they are of course more worried about real-world problems, so the advisory board in some sense helps us go after real-world problems."

The board helps define what the problems are and what problems companies face and then

the companies provide resources and funding to work on the research projects or to help address those research problems. Funding is typically used as salaries for graduate students, and sometimes undergraduates, during these research projects.

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# Students weigh in on campus carry legislation

By Andrew Nelson  
Staff Writer

Campus weapon control is still on the radar for both the apolitical and outspoken student.

At a recent interview with the *Atlanta Journal Constitution (AJC)*, Institute President G.P. "Bud" Peterson stated his opposition to firearms on campus, specifically concealed weapons.

Among his points, Peterson cited possible weapon misuse, the unlikely event that a major attack will occur on campus and that weapons are not the answer to crimes on and surrounding campus in the first place.

This issue resurfaced up when the Ga. legislature announced a bill that would relax restrictions on where weapons may be carried, including college campuses and public buildings; this is a continued effort from past state bills to edit the Official Code of Georgia regarding firearms. Currently, weapons are not allowed on or within 1000 feet of schools, including college campuses.

"This law has always created complications with picking up and dropping off students living on campus before and after [Marksmanship] club-sponsored events," said David Wilkes, president of Tech's Marksmanship Club. "For example, in a situation where it is unfeasible to drop off firearms and ammunition before returning guest members to cam-

pus, the students must be dropped off 1000 feet beyond the perimeter of campus, often in the late evening and after dark. This type of situation creates a clear risk of the student being robbed while walking back to the dormitories in the dark."

Of the 40-45 million handgun owners, as estimated by the NRA, a key issue is the transportation and accessibility of weapons, notably concealed carry and possession in public spaces.

In Ga., about 300,000 residents own guns. If Ga. relaxed the campus carry restrictions it would be one in a small handful of states that allow concealed weapons on campus.

Since most students on Tech's campus are under 21, the impact of such a policy here may be more obvious just off-campus, like in Home Park, or on the perimeter of campus. On campus, the impact could be more obvious with faculty and staff.

"It's not the faculty and staff I'm worried about. Tech hired them because they're capable, responsible leaders in their fields," Rob Agocs, first-year ME, said. "I feel that if someone, regardless of their status as a student or not, is willing to go through the process of legally obtaining a firearm, they'll probably be responsible enough to know the risks involved in mixing their possession of a firearm with their college environment."

Psychology Professor Jack Feldman believes that the weapons aren't as much the issue as is the personal preparedness of their users.

"There are moral and legal responsibilities involved. Part of acquiring skill is the need to meet these responsibilities, to minimize possible harm to innocent others as well as to protect one's self," Feldman said. "Skill, by the way, isn't just about shooting; it's about awareness of one's environment, of ways to disengage and de-escalate confrontations, to avoid the need for violent action. The best way to win a fight is to not be there when it starts."

In his interview Peterson made the point that guns aren't the answer to the frequent robberies just off-campus, rather the students should be more alert, saying, "I am not trying to blame the victims, but they aren't being smart."

"I can certainly understand President Peterson's reasoning from a political standpoint. I do not, however, agree with his rationale," Wilkes said. "Allowing [concealed carry] permit holders on campus will make it just like any other area of society where they can carry legally."

The College Democrats and Kristofer Carta, fourth-year HTS and president of the club, however, fully agree with and support Peterson, and they are pleased that he is so outspoken on the issue.

"If anything, Tech will be



Photot by Kelvin Kuo / Student Publications

**If legislation is passed in Georgia to allow guns on campus Tech could be one of a handful of schools to allow concealed carry.**

much less safe with stressed and often depressed students walking on campus carrying firearms," Carta said. "With all respect towards the Second Amendment, I am extremely personally opposed to the ownership of handguns, the purpose for which are only ending another human being's life. Bringing another gun into the equation [of confronting an assailant] can only have negative consequences."

Clubs on campus like the Marksmanship Club and the College Democrats, are strongly

involved in the political aspect. The Tech chapter of Students for Concealed Carry on Campus have even organized "empty holster" demonstrations to protest the rules they see as anti-defense.

Handguns aren't the only possible firearm on campus; rifles and shotguns are also potential newcomers to Tech grounds.

Zac Churney, first-year ME, said, "I don't have a problem with concealed handguns, but anything bigger would probably be

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oriented to keep over-involved parents from doing their child's work. Students report on various challenges and technical potholes they had to overcome while working with the robots.

As for the robots themselves, FLL competitors are all given a LEGO® Mindstorm NXT robotics kit. The robot's hardware is based around its motors, a micro-controller brain and a set of light and touch sensors.

The robots come with a software suite designed to allow kids with little programming experience to create fairly robust programs.

"When they get the kit, it comes with software, which is a GUI-based programming environment. Basically, it's a kind of drag-and-drop program with a palette of commands on one side," said Davis.

The program started out with rather humble roots. According to Davis, Tech's involvement in the FLL came eight years ago, when a student-faculty committee in the School of ECE decided to do some outreach work in education.

Several students mentioned having enjoyed working with these robotics kits and the school decided to hold a pilot program for sixth and seventh graders at Inland Middle School.

The idea garnered a lot of interest with students, and those who took part thoroughly enjoyed it. According to Davis, at the award ceremony for the first competition, the winning teams were so excited that they started running laps around the warehouse the event was housed in, trophies in hand.

However, what started as a small competition for eight teams quickly grew into a state-wide, multi-level competition for almost 300 teams.

Even then, the number of participants who came to Tech last month for the finals was not insignificant. Forty-eight teams took part this year, and the entire Student Center—from the ballroom down to Tech Rec—had to be rented out to house the event. According to Davis it takes at least 50 volunteers to keep things running smoothly every year.

However, the competition isn't just about fun and games. One

of the FLL's goals is to foster an interest in math and science in younger students.

According to a statement on the FLL's website, "FIRST® LEGO® League is a global program created to get children excited about science and technology. A hands-on program for ages 9 to 16 (9 to 14 in the U.S. and Canada), FLL uses Challenges based on real world scientific problems to engage children in research, problem solving, and engineering."

Davis thinks the FLL is a good method of achieving this goal.

"Generally the goal is to promote interest in math, science, and engineering.... There's a desire to try to increase the interest level of students in the U.S. to consider careers in engineering and science. So this is a great activity, just because it's so hands on. You're programming this robot, you see it boot up in the physical world, it's in LEGO®, and everybody likes LEGO®," Davis said.

Davis is also in charge of one of Tech's Think Big housing groups, where students with an interest in a topic can live and work together. The theme for his group is, of course, LEGO® robotics.

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Ahamad's own research concerns information security, identity management and authentication, like how to make servers and storage services trustworthy and resilient to failures and attacks. Aside from research, he teaches at an undergraduate and graduate level.

"I taught Introduction to Information Security, now taught by former CoC Dean Demillo that really introduces cybersecurity threats and defenses we have from a technical and policy standpoint," Ahamad said.

"You learn a broad overview of cybersecurity threats, how to counter threats, software security, database security, network security and cryptography. It's a great class that's not just for computer science people, but knowing how to program, like from taking CS1371, and understanding a discrete math would help you understand more easily," Ahmed said.

Ahamad teaches Secure Computer Systems, a graduate-level CoC class, and he is a proponent of both graduate and undergraduate research.

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a little overkill. You don't need a shotgun."

In Atlanta, anyone with a permit may carry a gun to coffee shops, parks and on MARTA. Places like the airport and government buildings are, however, no-holster-zones. There was a recent case, however, where MARTA employees stopped Christopher Raissi as he carried a firearm to a station. The federal district judge on the case initially ruled that MARTA had probable cause to stop him, but the final ruling was in favor of Raissi.

To carry a firearm outside the home or place of business, the owner must hold a valid permit. The requirements to carry firearms ensure the owner is registered with the state, has a clean criminal record, is mentally sound and is at least 21 years old.

Concealed carry covers firearms, combat knives, bludgeons and any other dangerous weapon not openly visible. In Fulton County, applicants must pay \$60.44, sign paperwork, submit to a background check and have fingerprints on file.

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heart-shape sticker girl: 6th floor  
Icarus and the sheep 4EVER  
No more music on the way to class. I miss out on too many epic nerdy conversations.  
I am Melon Lord! Muahahaha!  
Hey guys, close your legs on the bus. I am sure your Wang isn't that big and you're taking up a full seat  
roses are red, violets are blue, ginger from NA, I choose you!  
roses are red, violets are blue, ginger from NA, I choose you!  
@quinn of wdf 207, who are you and how is your itunes library so amazing?  
Kiko  
Kiko hearts Lolotas  
Shamus is such a Cutie!  
Dear SRH, please cut your hair, take a shower and get the heck out of my dorm room. thanks.  
IMClient, please go slower so I have NO chance of making it home tonight! Ahhh, gamesheets!  
Nothing says "Not well adjusted" like getting bent out of shape over intramural dodgeball  
To the intramural participant who stole the basketball from court 4 on Sunday. Please return it to the IM office.  
"Bro, bro, bro, bro...that dude is a bro!" -Roberto Suave  
Your friend and my favorite, Mark "The Shark" Titus  
There was this guy in woodies the other day with a REALLY small nose!  
Duuuuude...you'd have been oooout!  
Javaris Crittenton representing GT...in Jail  
Eli Whitney drank cotton Gin!  
Imagine how it would Psychologically to change your name  
So there is a hole on 10th street and everytime a truck passes by, the GLC shakes...



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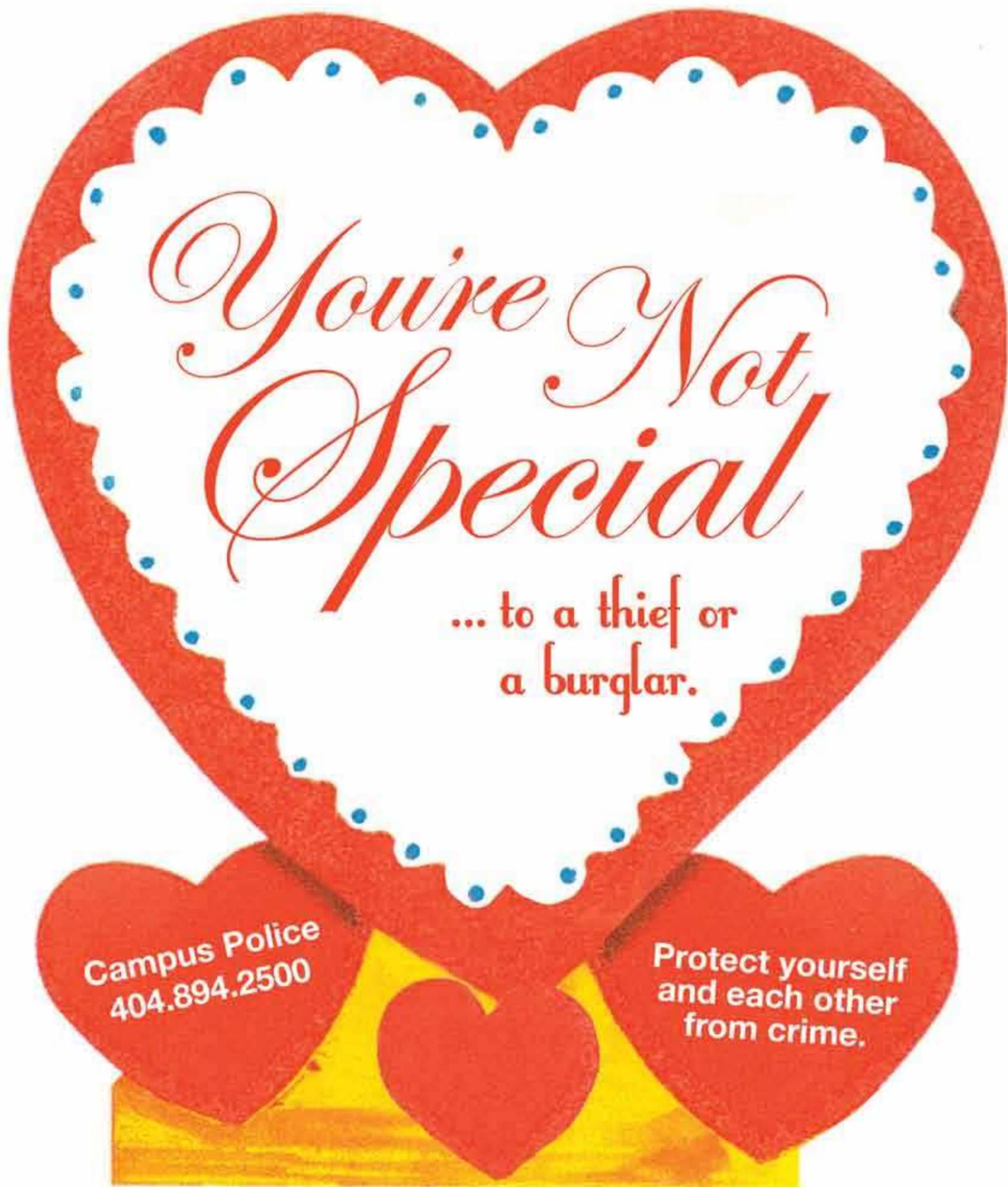
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# Campus Safety Day

## February 11, 2010

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