

# CAMPUS LIFE

Technique • Friday, June 1, 2001

## Are you bored?

Check out Campus Briefs for an update on what's happening around campus. Take your professor to lunch or catch *Trafficat* at the Student Center Theatre. **Page 8**

## Summer Intramurals

Do you miss the old days when kickball was cool? Don't miss your last chance to sign up for summer intramural sports like sand volleyball and softball. **Page 8**

## West Side Diner considers change

*Auxiliary Services and Georgia Tech Dining Hall Services begin initial discussions concerning conversion of West Side Diner into more appealing space for students*

By Josh Boutwell  
He knows Jon too

When most Tech students return in the fall, they may discover that a familiar landmark has disappeared. Since its opening in January 1998, West Side Diner has provided late-night meals and a common meeting ground for Tech students. However, last semester Auxiliary Services and Georgia Tech Dining Hall Services began discussions that considered changing the diner into a coffee shop.

Several months ago, SGA conducted a survey to investigate the poor patronage of the West Side Diner. Throughout spring semester the diner averaged only one-hundred customers a night.

SGA interviewed approximately three thousand people and found that in general, they did not feel comfortable hanging out at the diner. The metallic furniture and uncomfortable chairs provided an atmosphere that discouraged most people.

After evaluating the study, Auxiliary Services and Georgia Tech Dining Services began looking at how to convert the space into something more appealing to students. Barbara Wilson, Communication and Student Relations Coordinator of Auxiliary Services, said "this [level of patronage] is not helping the students." After several focus groups, it was decided that a higher-end



By Daniel Uhlig / STUDENT PUBLICATIONS

**Auxiliary Services and Georgia Tech Dining Services are currently assembling a group of administrators, Sodexo Marriott representatives and students to discuss the West Side Diner conversion.**

coffee shop would better satisfy most people.

Darci Tice, in charge of marketing for Georgia Tech Dining Services and Sodexo Marriott Services, envisions a warm friendly atmosphere where "students can come and decompress." She wants to create a place with plenty

of comfortable lounge chairs so that people "have a place to go when they leave their rooms."

The menu for the new coffee shop will be very similar to the Cyber Cafe in the Tech bookstore. In addition to serving a wide assortment of coffee drinks, cold sandwiches and wraps will

also be served.

But Georgia Tech Dining Services is planning on keeping West Side Diner's most popular dishes. The ice cream and milk shakes will most likely stay on the menu.

Darci Tice was not concerned

See *Diner*, page 8

## Campus Research Review

### Fuel cell fantasy a reality at Georgia Tech

Benjamin Small and Joe Gezo  
Strangely charmed



"These new technologies are the solution to our electricity shortages and energy cost increases."

**Benjamin A. Small**  
Professional Geek

Professor Jack Winnick of the School of Chemical Engineering is striving to make this planet a better place. No really—he's involved with a project that will help us save the environment as well as produce electricity more efficiently. This amazing prospect is because of one little chemical device—the fuel cell. (Perhaps certain presidential figureheads ought to pay attention.)

And what are fuel cells, you say? I'm glad you asked. Fuel cells are perhaps the most promising development for alternative power. If you live in California, you're probably having dreams about them.

Most current power plants burn a fossil fuel (like coal), and the heat produces steam, which is used to turn a turbine and generate electricity. Inevitably, a certain amount of power is lost in this system, since the chemical energy is transformed into thermal energy, which produces mechanical energy and finally electrical energy. Additionally, burning large amounts of anything tends to have some

rather undesirable side effects (soot in the air, acid rain, Greenpeace getting on your case, etc.).

Fuel cells, on the other hand, take in fuel and air in one end, do some fancy electrochemistry in the middle and leave only harmless water at the other end. (You remember reaction potentials from freshman chemistry, right?) No pollution, no moving parts, and great efficiency, since they convert chemical potential directly into usable electricity.

So why haven't we switched entirely to fuel cell power yet? First, they are substantially more expensive to build than a coal power plant, even though they are much cheaper to operate. As fuel costs continue to rise and fuel cell technology develops, we will start to see more

people making that initial investment. Helping this progress is Professor Winnick and the Georgia Tech Center for Innovative Fuel Cell and Battery Technologies. He explained to us some of the specifics of modern fuel cell technology.

A proton exchange fuel cell (PEFC) is a sort of membrane sandwich and generally runs near room temperature. Encased between two thin sheets of platinum-containing electrode, there is a proton exchange membrane, made of a Teflon-like electrolytic polymer and surrounded by some nifty chemicals. One of these is the fuel itself, which could be hydrogen or even an alcohol. On one side of the polymer membrane, electrons are stripped off of hydrogen. On the other, the hy-

drogen, which is now missing its electrons, combines with oxygen in the air to create water. We get to keep those electrons, which gain about 0.8 volts of electrical potential, so 150 individual cells can be tied together in series to produce 120 V. Vast arrays of fuel cells could produce substantial quantities of power. Although the platinum electrodes keep PEFCs too expensive for large-scale power plants, smaller units are already in mass production for powering homes and vehicles.

Solid Oxide Fuel Cells (SOFC) operate at higher temperatures (~1000 °C) but can use a variety of fuels; electricity can be generated from natural gas, diesel fuel, kerosene, gasoline, and even coal. They use the same sort of proton and electron exchange as PEFCs, but since the electrodes can be made from cheaper metals (like copper), the cost of SOFC is low enough to make them applicable for larger megawatt-range power plants. Moreover, waste heat from the reaction can be used to generate even more electricity from a turbine,

See *Fuel Cells*, page 8

## Buzz Around the Campus



Question of the week

"Why are you here this summer?"



**Eray Uzgoren**  
M.S. AE

"It was a random choice."



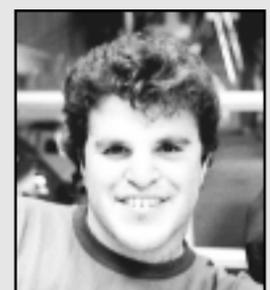
**Melda Ormeci**  
M.S. ISyE

"To get my degree."



**Tony Hernandez**  
EE Senior

"Why not."



**Zach Kraus**  
ChE Sophomore

"Because my car broke down."

Feature and Photos by  
Scott King

## Fuel Cells

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just like traditional plants, which makes SOFCs insanely efficient alternatives to coal power.

Sounds great, doesn't it? Feel like running outside and shouting "it's a great time to be alive"? Don't leave just yet—it gets better. Professor Winnick and his research group are developing techniques to make fuel cells even *more* efficient; he is "very big on any energy-producing device being environmentally benign." Much

of the research is devoted to recovering waste materials and reusing them, making fuel cells a "sustainable technology." Hopefully, the group's work will be able to convince large utility corporations to adopt fuel cells as a financially effi-

cient source of electricity. They have constructed systems for recovering chlorine from waste hydrochloric acid (a common product in many industrial processes like microelectronic fabrication) and for using hydrogen sulfide (that foul-smelling product of petrol refinement) as a reactant for fuel cells.

Winnick believes in breaking down every potential barrier to the introduction of fuel cells into the market. We couldn't agree more since, to the best of our knowledge, electricity is good and smog is bad. The only hindrance that remains is educating corporate and government entities so that they realize fuel cells are the best economic solution.

"[I am] very big on any energy-producing device being environmentally benign."

**Jack Winnick**  
Chemical Engineering

## Diner

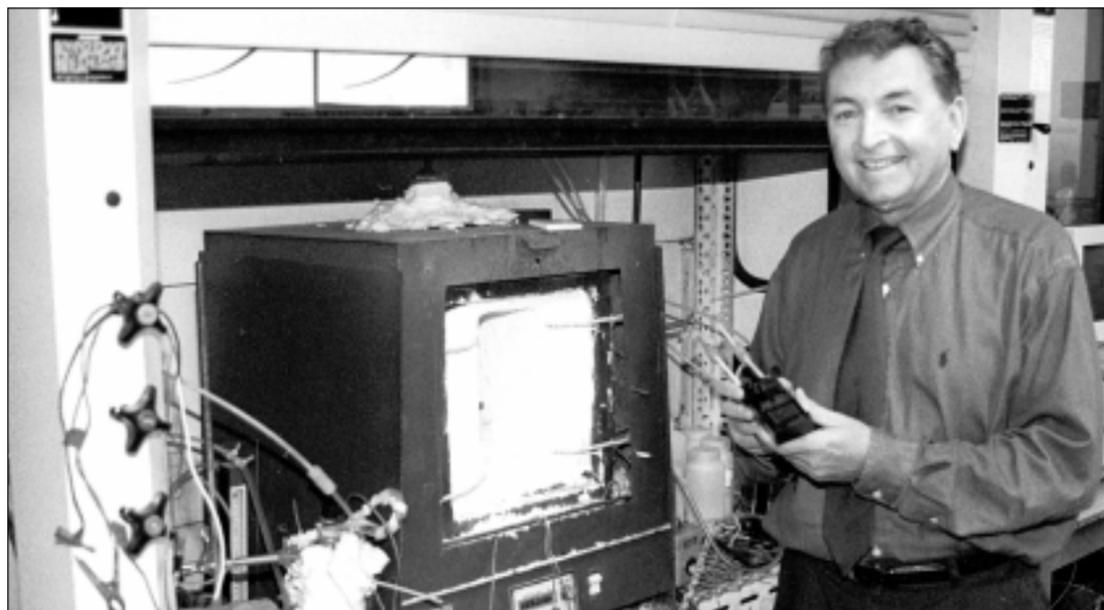
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about possible competition between the West Side's coffee shop and Cyber Cafe. She noted that the new shop will have similar hours to the old diner. Since the new shop will be open mainly at night, it would not compete with the Cyber Cafe which is open during the day.

However, Darci Tice is not opposed to competition. She is thinking of using Seattle's Best Coffee brand coffee to provide some variety from the Starbucks brand.

Tice also pointed out that students who wanted to eat at a diner could go to the new City Cafe that opened a block away, although she denied that this was a reason for switching West Side Diner to a coffee shop.

This change is not certain. Auxiliary Services and Georgia Tech Dining Services are just beginning the change. They are currently assembling a group of administrators, Sodexo Marriott representatives and students to oversee the change.



By Marques McMillan / STUDENT PUBLICATIONS

Professor Winnick's research is devoted to recovering waste materials and reusing them, making fuel cells a "sustainable technology." The hope is that utility corporations will adopt fuel cells as a source of electricity.

# Campus briefs

## Technique *columnists looking for research topics*

Are you doing research on campus? Do you think you can handle our abusive interrogations? Our contestants are decided in a weekly full-contact Parcheesi tournament. For more information, contact Benjamin Small at [bas@isentropo.org](mailto:bas@isentropo.org) or Joe Gezo at [mojo@sps.physics.gatech.edu](mailto:mojo@sps.physics.gatech.edu). Heck, if you're an undergraduate looking for any kind of research opportunity, let us know.

## *Suggestions for future fate of West Side Diner*

Darci Tice, in charge of marketing for Georgia Tech Dining Services and Sodexo Marriott Services has asked anyone who wants to contribute to or has an opinion on the proposed changes to the West Side Diner to please contact her at [dtice@sodexhomarriott.com](mailto:dtice@sodexhomarriott.com).

## *Mandatory intramurals sports captains meeting*

This Monday, June 4, is the mandatory intramurals captains meeting. The meeting will be held from 6 p.m. until 7 p.m. at the Tennenbaum Auditorium. Summer sports will all be outside including softball, kickball, and sand volleyball. Contact Dan Hazlett at [dan.hazlett@sac.gatech.edu](mailto:dan.hazlett@sac.gatech.edu) or 404-894-5437 or you can visit [www.campusrecreation.gatech.edu](http://www.campusrecreation.gatech.edu) for more information.

## *Register for summer intramural sports at SAC*

Registration for summer intramural sports occurs Tuesday, June 5, at the Student Athletic Complex. Sign-up will continue from 9 a.m. until 5 p.m. Summer intramurals will all be available online. For more information contact on Dan Hazlett at [dan.hazlett@sac.gatech.edu](mailto:dan.hazlett@sac.gatech.edu) or you can visit [www.campusrecreation.gatech.edu](http://www.campusrecreation.gatech.edu).

## *Student Center Theater presents film "Traffic"*

Student Center Theater presents *Traffic* on Friday and Saturday, June 8 and 9 from 7 p.m. until 10 p.m. Cost is \$2 with Georgia Tech ID and \$3 without. Contact Renee Villa at [sc26@prism.gatech.edu](mailto:sc26@prism.gatech.edu) or 404-894-2805 for more information.

## *Junior's Grill hosts "Take a Professor to Lunch Day"*

Take a professor to lunch on Thursday, June 14 at Juniors. Only \$6 for student and faculty/staff pair. Lunch is from 11 a.m. until 1 p.m. Contact Renee Villa at [sc26@prism.gatech.edu](mailto:sc26@prism.gatech.edu) or 404-894-2805 for more information.

*Send us your brief; keep campus informed:*  
[campus.life@technique.gatech.edu](mailto:campus.life@technique.gatech.edu)

## Take-A-Prof to Lunch at Junior's!

**GEE WHIZ!**  
WOULDN'T IT BE SWELL  
TO TAKE A PROF  
TO LUNCH?

**Thursday, June 14**

11:00am to 12:30pm

Junior's Grill

**\$6 for Both Meals\***

\* student and faculty/staff pair

**We need to know you will  
attend by Tuesday, June 12**

Call 404-894-2805

or visit [www.fun.gatech.edu](http://www.fun.gatech.edu)

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