

Calendar

Wednesday, August 25

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium - 1

West

Speaker: E. Seidel, Max-Planck-Institut

Title: Enabling Science and

Engineering Applications on the Grid

Thursday, August 26

2:30 p.m. Theoretical Physics Seminar -

Curia II

Speaker: A. Daleo,

Fermilab/Universidad de la Plata

Title: Fracture Functions and Higher

Order QCD Corrections to Semi-

Inclusive DIS

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR

PHYSICS AND TECHNOLOGY

SEMINAR TODAY

Wilson Hall Cafe

Wednesday, August 25

French Onion

Texas Style Meatloaf Sandwich \$4.75

Grilled Chicken with Black Bean &

Corn Salsa \$3.75

Kielbasa & Sauerkraut \$3.75

Three Cheese & Tomato Panini \$4.75

Sausage & Pepperoni Combo \$2.75

Fettucine Carbonara with Ham &

Mushrooms \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Weather

Instructor Certification Program Takes Off

Jean Slisz of Lab Services recently taught her first HTML class without the help of her instructional trainer, Sara Webber, after completing Fermilab's new Instructor Certification Program.



Jean Slisz

"I've taught several classes already, but this is my first without Sara's help," Slisz said. "At first I was opposed to teaching because I freeze up in front of

groups, but this has been a great experience. I've met a lot of people, honed my HTML skills, and gotten over my fear of speaking in public." By teaching one-day HTML courses to other employees, Slisz provides training that is specific to Fermilab's needs and saves the lab the cost of hiring outside instructors.

Webber, from Training Development, started training Slisz last September and has co-developed and helped teach Slisz's first two courses, Editing HTML for Administrative Professionals and Introduction to HTML.



Sara Webber

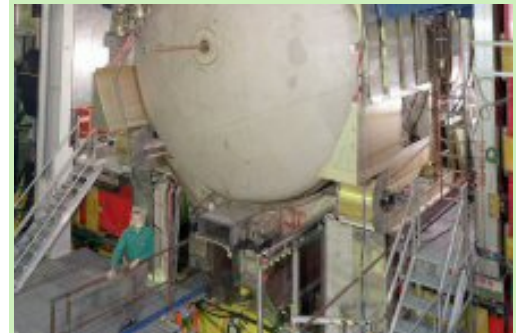
"She learned by doing," Webber said. "I just sat in the back and helped her to explain things in different ways, so

What's Up with the Linear Collider?

The twelfth in a series of Fermilab Today stories on the International Linear Collider. The entire series is [available online](#).

ILC Detector Effort

Ramping Up At Fermilab



DZero looms large here, but Gene Fisk and several colleagues at Fermilab and other institutions are now working on developing the next generation of detectors for the proposed International Linear Collider. (Click on image for larger version.)

Detectors for the proposed International Linear Collider will require capabilities that, in some respects, surpass the CDF and DZero detectors at the Tevatron, and the CMS and ATLAS detectors under construction at the CERN Large Hadron Collider.

"We'll have to be much better to pull the physics out of the ILC," said Harry Weerts of DZero, now on sabbatical from Michigan State University to work on ILC detector R&D at Fermilab. "It's amazing how much better we'll have to do."

Fermilab scientists and guest scientists recently made 16 presentations at the American Linear



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that everyone would understand. Her knowledge is an asset to the lab, and it's great that she's sharing it with others."

ES&H Section Goes Tropical

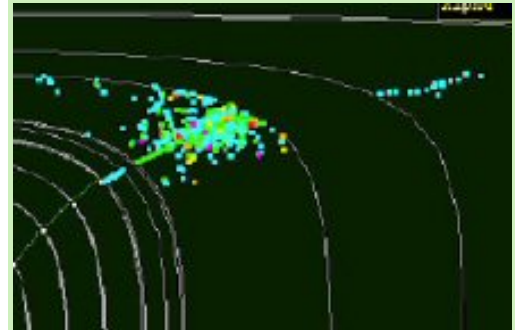


Mae Strobel and Robert Arnold of ES&H enjoy Tuesday's picnic. (Click on image for larger version.)

ES&H Section employees gathered in the Kuhn Barn yesterday for their annual safety picnic. Hawaiian-shirt and lei-wearing attendees enjoyed food, fun and live steel drum music at the island-themed picnic. After enjoying chicken wings, ham, potato salad and desserts, employees competed in ring toss, putting, and foam-Frisbee golf games.

"We've had a good year," said ES&H Head Bill Griffing. "It's been over 1300 days since our last lost-time injury. The picnic is the perfect way to celebrate and to get people together. ES&H has only about 80 employees, but we're spread out in four or five buildings, so the party and the games get everyone to interact more. The committee that planned the food, decorations and entertainment did a great job."

Collider Physics Group conference in Victoria, B.C. Included were eight detector presentations: two by Weerts; three by Gene Fisk (PPD); one each by Caroline Milstene (PPD) and Craig Moore (AD); and one by a team of Bill Cooper (DZero), Marcel Demarteau (PPD) and Mike Hrycyk (PPD), who discussed a possible layout for a silicon detector.



Simulation of collisions in an ILC muon detector. (Graphic by Caroline Milstene) The detectors are largely independent of the accelerator technology, so the recent endorsement of "cold" or superconducting technology for the ILC by the International Committee for Future Accelerators will not significantly affect the Fermilab efforts. Fisk, a 31-year Fermilab veteran, is working with colleagues from Wayne State, Notre Dame, NIU and UC Davis on a muon subdetector system that can be used with either the "warm" or "cold" accelerator technology. "The muon detector is a big system, something that's very sensible for a national lab to be working on," Fisk said. "It's also very interesting technology."

Slawek Tkaczyk, head of the Fermilab Linear Collider Physics and Detector Group, coordinates detector R&D efforts at Fermilab. Detector R&D already encompasses a wide range of efforts: for example, Caroline Milstene



ES&H employees line up for food and desserts. (Click on image for larger version.)

In the News

From *Science News*, August 7, 2004

Starting from Square One

The intricate behaviors of quarks may finally yield to calculation

by Peter Weiss

Quarks are the smaller-than-a-proton particles without which there would be no stars, dogs, or breakfast burritos. In 1986, after a dozen frustrating years of trying to find ways of using computers to calculate properties of quark-containing entities such as protons and neutrons, Kenneth G. Wilson threw in the towel at a physics meeting. Wilson, who had already won a Nobel prize for previous work in another branch of physics, had been trying to make realistic predictions using the mathematically unwieldy theory of quark physics known as quantum chromodynamics (QCD). He had even invented a computational

on simulation software; William Wester and Ray Yarema's electronics group on chips for calorimeter applications; Cooper and Demarteau on an all silicon tracker. Groups at Argonne Lab and Northern Illinois University also have considerable efforts underway in calorimetry.

The new ideas for detectors and algorithms will need to be verified experimentally in a testbeam, and Fermilab is one of the few places in the world that has a testbeam. There are already requests from other ILC R&D detector groups for beam time.

[Roundup of worldwide linear collider news](#)

Announcements

UEC Career Night

The Fermilab UEC will be hosting a Career Night on Thursday, September 9 from 7:00 p.m. to 9:00 p.m. in One West. The talks are aimed at graduate students and young physicists, but everybody is welcome. Wine and cheese will be served from 6:00 p.m. to 7:00 p.m. For more information, contact a member of the Organizing Committee: Ken Bloom (kenbloom@umich.edu), Sharon Hagopian (hagopian@hep.fsu.edu), Lydia Lobo (lm11@fnal.gov) or Paul Sheldon (sheldon@fnal.gov).

GSA Triathlon Saturday

The annual GSA triathlon will take place this Saturday, August 28 at 8:00 a.m. in the village. The race, which will start at 8:15 a.m. at the village pool, will consist of an 800 yard swim followed by a 20 km bike ride around

technique, called lattice QCD, to do just that. Bemoaning the dearth of computing power available at the time, however, he concluded that his approach just wasn't worth pursuing.

Wilson declared the field "dead," says physicist G. Peter Lepage of Cornell University.

Now, decades after Wilson devised the lattice-QCD technique, souped-up computer power and improved understanding of QCD theory are making him eat his words. At a meeting on lattice QCD in June, Wilson offered to "pay penance for claiming in '86 that there was a long desert ahead."

Researchers can now do some calculations with long-awaited accuracy. So promising are the results that theorists may soon for the first time make predictions that can be tested by experimentalists working at a large particle collider. In the future, theorists may also provide experimenters with values to use in determining whether their data fits the current understanding of the world.

[read more](#)

site followed by a 5 km run. This is an informal race for anyone who wants to have a go - you don't need to be an athlete or have spent months training! There'll be refreshments for all who come to participate or support people taking part. Please register ahead of time by emailing gsa_officers@fnal.gov as this makes things easier for the organisers! However, you may just turn up on the day and take part.

Fermilab Recreation Office Offers Discounted Tickets for the Bristol Renaissance Faire

Discount Renaissance Fair Tickets are on sale in the Recreation Office until August 27. The tickets are good until Labor Day. The Bristol Renaissance Faire offers entertainment on 16 open-air stages, 50 food booths, and over 180 high quality arts and crafts shops. The fair runs from July 10 - September 6, 2004 on Saturdays and Sundays and Labor Day Monday from 10:00 a.m. until 7:00 p.m. (Rain or Shine). Discounted tickets are \$15.75 for adults and \$7.50 for children age 5-12.

International Folk Dancing

International Folk Dancing will be held at 7:30 p.m. Thursday, August 26, at the Geneva American Legion Post, 22 South Second St. in downtown Geneva, one block west of Route 31 and one block south of Route 38, across from the Geneva Public Library. Newcomers are always welcome. Info at 630-584-0825 or 630-840-8194 or folkdance@fnal.gov.