

## Calendar

[Have a safe day!](#)

Friday, Oct. 22

3:30 p.m.

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over  
4 p.m.

[Joint Experimental-  
Theoretical Physics  
Seminar](#) - Ramsey  
Auditorium

Speaker: Ofer Lahav,  
University College London  
Title: Testing the Dark  
Energy Paradigm with the  
Dark Energy Survey (in  
conjunction with the Dark  
Energy Survey  
collaboration meeting)  
8 p.m.

[Fermilab Lecture Series](#) -  
Ramsey Auditorium  
Dr. David Archer presents  
The Long Thaw: How  
Humans are Changing the  
Next 100,000 Years of the  
Earth's Climate  
Tickets: \$7

Monday, Oct. 25

2:30 p.m.

[Particle Astrophysics  
Seminar](#) - One West  
Speaker: Igor Moskalenko,  
Stanford University  
Title: GALPROP Model for  
Cosmic Ray Propagation  
and Galactic Diffuse  
Emission

3:30 p.m.

DIRECTOR'S COFFEE  
BREAK - 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting  
- Curia II

Click here for  
[NALCAL](#),  
a weekly calendar  
with links to

## Recreation Feature of the Month

Classes, wellness events,  
club and league  
information for November

This month, the  
Benefits /  
Recreation  
Department will  
sponsor the  
following  
classes:

- Kyuki-Do: 5-6 p.m.  
on Mondays and  
Wednesdays, Nov. 1  
– Dec. 8 at the  
Recreation Facility.  
Fee is \$55/person.
- Yoga: Noon – 1 p.m.  
on Tuesdays, Nov. 2  
– Dec. 21, in the  
Ramsey Auditorium.  
Fee is \$85/person
- Bod Squad Muscle  
Toning: 5:30-6:30

p.m. on Tuesdays and Thursdays, Nov.  
9 – Dec. 21 (no class on Nov. 25), at the  
Recreation Facility. Fee is \$59/person.

This month, the  
Benefits/Recreation Department  
will also sponsor the following  
wellness events:

- Free Bone Density Screenings: 10 a.m.  
– 2 p.m. on Tuesday, Nov. 2 in Wilson  
Hall One North. Call Jeanne at x2548 to  
schedule your 10-minute screening.
- Lunch & Learn about Qigong,  
Mindfulness & Tai Chi Easy® for Stress  
Reduction from Noon – 1 p.m. on  
Wednesday, Nov. 10, in WH, Curia II.  
The class features moving meditation  
practices for stress reduction, vitality  
and health enhancement. Practice  
gentle movement, breath awareness  
and relaxation. Classes are currently  
noon – 12:45 p.m. on Fridays in  
Ramsey Auditorium. Beginning in  
November classes will also take place  
on Wednesdays 7 – 8 a.m. in Ramsey  
Auditorium and Thursdays 4:45 – 5:45

## Recovery Act

Recovery Act gives LBNE  
team chance to grow

From left: Joel Sefcovic, Laura Sujan and Tracy  
Lundin joined the LBNE project thanks to  
Recovery Act funds.

A growing staff of project specialists is  
working behind the scenes to prepare the  
proposed Long-Baseline Neutrino  
Experiment for its upcoming review.

Thanks to funding from the American  
Recovery and Reinvestment Act, LBNE has  
expanded this project team, which is  
developing the design, cost and schedule  
for the experiment's beamline, massive  
detectors and associated technology and  
facilities. Fermilab used part of the \$9  
million in ARRA funding it received for long-  
baseline neutrino research to fill much-  
needed LBNE project staff positions. ARRA  
funding will pay for the positions for about a  
year, and then the LBNE project funds will  
take over.

"The ARRA funds are extremely important,  
not only to create jobs, but also to sustain  
jobs," said newly hired contractor Laura  
Sujan, contracted project controls specialist  
for conventional facilities. "The projects I've  
worked on over the past year have all come  
from ARRA funding, and those positions  
would not have been available to me had it  
not been for the recovery funds."

Before coming to LBNE in September,

additional information.

[Upcoming conferences](#)

## Campaigns

[Take Five](#)

[Tune IT Up](#)

## Weather



Sunny  
65°/49°

[Extended Forecast](#)  
[Weather at Fermilab](#)

## Current Security Status

[Secon Level 3](#)

## Wilson Hall Cafe

Friday, Oct. 22

- Breakfast: chorizo burrito
- \*Chunky vegetable soup w/ orzo
- Buffalo chicken wings
- Tuna casserole
- Cajun breaded catfish
- \*Teriyaki pork stir-fry
- Honey mustard ham & swiss panini
- Assorted sliced pizza
- Carved turkey

\**Carb-restricted alternative*

[Wilson Hall Cafe Menu](#)

## Chez Leon

Wednesday, Oct. 27

Lunch

- Chicken satay w/ peanut sauce
- Peapods
- Jasmine rice
- Coconut cake

Thursday, Oct. 28

Dinner

- Closed

[Chez Leon Menu](#)

Call x3524 to make your reservation.

p.m. in the Users Center Music Room. Free.

Employee clubs:

- **Scrappers:** Open 11:30 a.m. – 1:30 p.m. Tuesday, Nov. 2, in the Wilson Hall Aquarium conference room. Scrapbookers bring your scissors, adhesive and journaling pen. Supplies provided for themed and generic layouts. \$10/person.
- **Card Stampers:** Open 11:30 a.m. – 1:30 p.m. Tuesday, Nov., 9 in the Wilson Hall Aquarium conference room. Interested stampers should bring scissors, adhesive and journaling pen. Supplies provided for three cards. \$10/person.
- **Toastmasters:** Noon – 1 p.m. Thursdays, Nov. 4 and 18 in the Wilson Hall 7th Floor Racetrack.

Book Fair

From 10 a.m. – 4 p.m. on Wednesday, Nov. 17, and 8 a.m. – 3 p.m. on Thursday, Nov. 18, in the Wilson Hall atrium. Start your holiday shopping early. Cash, check, Visa or Mastercard accepted.

From *symmetrybreaking*

## Hogan's holometer: Testing the hypothesis of a holographic universe



MIT physicist Sam Waldman in the laser lab where the holometer is being constructed

In 2008, Fermilab particle astrophysicist Craig Hogan made waves with a mind-boggling proposition: The 3D universe in which we appear to live is no more than a hologram.

Now he is building the most precise clock of all time to directly measure whether our reality is an illusion.

The idea that spacetime may not be entirely smooth – like a digital image that

Sujan worked on an ARRA-funded project to renew Chicago Transit Authority blue line train tracks in downtown Chicago.

LBNE's two other most recent ARRA-funded additions are contractor Joel Sefcovic, project controls specialist for the liquid argon subproject, and Tracy Lundin, Level 2 manager for conventional facilities.

Sefcovic, who has worked on several other ARRA-funded projects at Fermilab, joined the LBNE team in September. Lundin joined in August.

Lundin, Sujan and Sefcovic are already heavily involved with LBNE and in helping the project prepare for its approaching CD-1 review.

"The best part of my job so far is getting to know more about LBNE," Sefcovic said. "Learning about the proposed neutrino beamline from Fermilab to the Deep Underground Science and Engineering Laboratory in South Dakota is really interesting, and being able to help move the project forward and advance science is really rewarding."

-- *Amelia Williamson Smith*

Photo of the Day

## Joe Levin tours the Silicon Detector Facility



Joe Levin (right), a staffer on the House Appropriations Subcommittee on Energy & Water, visited Fermilab on Oct. 13. In addition to visiting the CDF assembly building, underground MINOS facility and SRF test accelerator facility, he also had the opportunity to meet with Fermilab's Tom Diehl and Brenna Flaughter to learn about the Dark Energy Camera.

Announcements

Latest Announcements

## Archives

[Fermilab Today](#)[Director's Corner](#)[Result of the Week](#)[Safety Tip of the Week](#)[CMS Result of the](#)[Month](#)[User University](#)[Profiles](#)[ILC NewsLine](#)

## Info

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becomes increasingly pixelated as you zoom in – had been previously proposed by Stephen Hawking and others. Possible evidence for this model appeared last year in the unaccountable “noise” plaguing the GEO600 experiment in Germany, which searches for gravitational waves from black holes. To Hogan, the jitteriness suggested that the experiment had stumbled upon the lower limit of the spacetime pixels’ resolution.

Black hole physics, in which space and time become compressed, provides a basis for math showing that the third dimension may not exist at all. In this two-dimensional cartoon of a universe, what we perceive as a third dimension would actually be a projection of time intertwined with depth. If this is true, the illusion can only be maintained until equipment becomes sensitive enough to find its limits.

“You can’t perceive it because nothing ever travels faster than light,” says Hogan. “This holographic view is how the universe would look if you sat on a photon.”

Not everyone agrees with this idea. Its foundation is formed with math rather than hard data, as is common in theoretical physics. And although a holographic universe would answer many questions about black hole physics and other paradoxes, it clashes with classical geometry, which demands a universe of smooth, continuous paths in space and time.

“So we want to build a machine which will be the most sensitive measurement ever made of spacetime itself,” says Hogan. “That’s the holometer.”

[Read more](#)

[Cafeteria Closed Saturday, Oct. 23](#)

[Nov. 22 deadline for The University of Chicago Tuition Remission Program](#)

[Employee Art Show: April 2011](#)

[Fermilab Arts Series presents Project Trio: Greg Pattillo \(beatbox flute\); Eric Stepheson \(cello\); and Peter Seymour \(jazz bass\) Nov. 6.](#)

[Accepting nominations for Director's Award](#)

[Argentine Tango through Nov. 3](#)

[Accelerate to a Healthy Lifestyle program](#)

[Fright Fest discount tickets at Six Flags](#)

[Chicago Blackhawks discount tickets](#)

[Regal Movie Theater discount tickets available](#)

[GD&T Introduction and Fundamental Principles class - Oct. 28 & 29](#)

[PowerPoint 2007: New Features class - Oct. 28](#)

[Outlook 2007: New Features class - Oct 28](#)

[Introduction to COMSOL Multiphysics 4.1 and Its Electromagnetic Waves Simulation Capabilities tutorial - Oct. 26](#)

[Facilitating Meetings That Work class - Nov. 4](#)

[Management and Negotiation Skills class - Nov. 9 & 16](#)

[Word 2007: Intro class - Nov. 9](#)

[Submit an announcement](#)

Classifieds

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