News

Argonne NATIONAL LABORATORY

June 30, 2008 Volume 61, No. 13

New TCS building to foster cutting-edge research

Artist's rendering of theTheory and Computing Sciences (TCS) Building that is currently being built at Argonne. TCS is expected to be occupied in the summer of 2009.

By Rachel Lichtenfeld

In the near future, Argonne scientists will have access to a world-class research center that supports large-scale computation and a venue conducive to interdisciplinary meetings.

Construction of the more than 200,000 square-foot, seven-story-tall Theory and Computing Sciences (TCS) building is underway near Argonne's North Gate. When completed, the building will provide a much-needed infrastructure for large-scale computers, computational laboratories, a digital conference and meeting area as well as a consolidated Argonne library.

"The Theory and Computing Sciences facility is a critical building block in the modernization plan for the entire laboratory," said Bo Arnold, deputy chief operations officer.

TCS will provide space for up to 750 offices and will house the mathematics and computer sciences (MCS), environmental science (EVS) and computing and information systems (CIS) divisions, as well as the Argonne Leadership Computing Facility (ALCF) and Computation Institute researchers and staff. The Argonne library will be consolidated from five locations on campus to a modern, two-story space in the TCS building.

There will be three large, multi-story computational laboratory spaces with raised floors to support the research of the Futures Lab, CIS and MCS divisions. The Supercomputer Support Facility is a 25,000 square-foot wing in which the Argonne Leadership Computing Facility and other key computing projects will conduct research on state-of-the-art computing systems that include the IBM BlueGene P, recently named the fastest supercomputer in the world for open science.

TCS will also offer a publicly accessible conference area outside the security barrier where researchers, university partners and the local community can hold meetings of up to 200 people in a large auditorium with four multipurpose breakout rooms.

"TCS supports Argonne's scientific strategy by providing for the integration of computer science and computational science needs across Argonne divisions," said Rick Stevens (CLS), associate lab director for computing and life sciences. "There is an exciting opportunity to use TCS to promote collaboration among the university, public sector and industry scientists."

"The TCS facility provides an unprecedented platform at Argonne to advance the mission of DOE and the opportunity to enhance the nation's science and science education agenda," said Angela Harvey, TCS federal project director.

TCS originated with the Department of Energy leasing land to a non-profit entity, the TCSB Trust, to allow for the finance, design and construction of the facility. TCS is located on approximately 13 acres near North Gate. Once built, Argonne will lease and occupy the entire building.

As of mid-June, construction is on schedule and TCS is expected to be occupied in the summer of 2009. Excess dirt from the construction site will be used for restoration and remediation projects at Argonne, and dust kicked up as a result of construction should settle within a couple of weeks.

See "TCS" on page 3

DARPA funds Argonne-led project to develop technology for advanced radar, communications systems

By Angela Hardin

The Defense Advanced Research Projects Agency (DARPA) is providing $1.4 million to a Phase III research project led by Argonne to develop high-performance integrated diamond materials for radar and mobile communications using an Argonne developed and patented ultrananocrystalline diamond film technology.

Argonne's program partners are Advanced Diamond Technologies, Inc. (ADT), Innovative Micro Technology (IMT), MEMtronics Corp., Peregrine Semiconductor, the University of Pennsylvania and Leigh University.

The project's principal investigator and project manager is Derrick Mancini, associate division director for facilities and technology at the Center for Nanoscale Materials (CNM) at Argonne. The project's technical leader is Orlando Auciello, a senior scientist in Argonne's Materials Science Division and the CNM. Anirudha Sumant, an assistant materials scientist in the CNM, is a major contributor to Argonne's part of the program.

DARPA, a U.S. Department of Defense organization that supports high-risk, transformational research, is interested in the development of advanced phased-array radar and communication systems for military and commercial applications. The integration of capacitive radio frequency (RF) microelectro-mechanical systems (MEMS) and complementary metal-oxide-semiconductors devices (CMOS) devices will enable rapid electronic steering of radar beams to substantially improve radar speed and precision. Monolithic RF MEMS/CMOS device integration will also greatly improve the multifunction performance of state-of-the-art wireless devices.

RF MEMS devices like resonators (tiny diving board-like structures at very high frequencies) and switches (tiny membranes that establish or disconnect electrical pathways) may substantially improve the functionality and performance of RF and microwave systems.

"The UNCD film technology has the potential to improve the reliability of MEMS switches because of a unique combination of properties such as resistance to adhesion between two surfaces in physical contact that can lead to premature switch failure, and because of demonstrated tunability of dielectric properties and leakage current," Auciello said. "In addition, UNCD films exhibit the highest Young's modulus — the measure of a material's stiffness under stress — of any material being investigated for MEMS resonators, and is currently the only technology that can produce

See "DARPA" on page 2

Employee committee to provide feedback, input on safety

A new Employee Safety and Health Committee is being formed to promote a safe work environment at the laboratory through employee involvement.

Established by Chief Operations Officer Steve Richardson, the committee will be responsible for working with management to make safety programs more effective by:

• Touring work areas at the laboratory with the EQO safety and health professionals to familiarize committee members with employee jobs and their work environments.

• Identifying areas where employees are at risk, either through direct experience, observation or through concerns brought to their attention by other employees.

• Reviewing safety suggestions and concerns submitted by other employees: Committee members will validate and prioritize suggestions and concerns and forward them to the Director's Safety Council.

• Reviewing incidents that result in work-related injuries, illnesses and complaints, and making recommendations to the DSC and laboratory employees for preventing their reoccurrence.

• Conducting an annual review of training programs related to safety and offering thoughts on how these programs can be best structured in order to be most effective.

Membership is voluntary; members must be non-managers approved by the appropriate director. Initial members will serve one, two, or three-year terms.

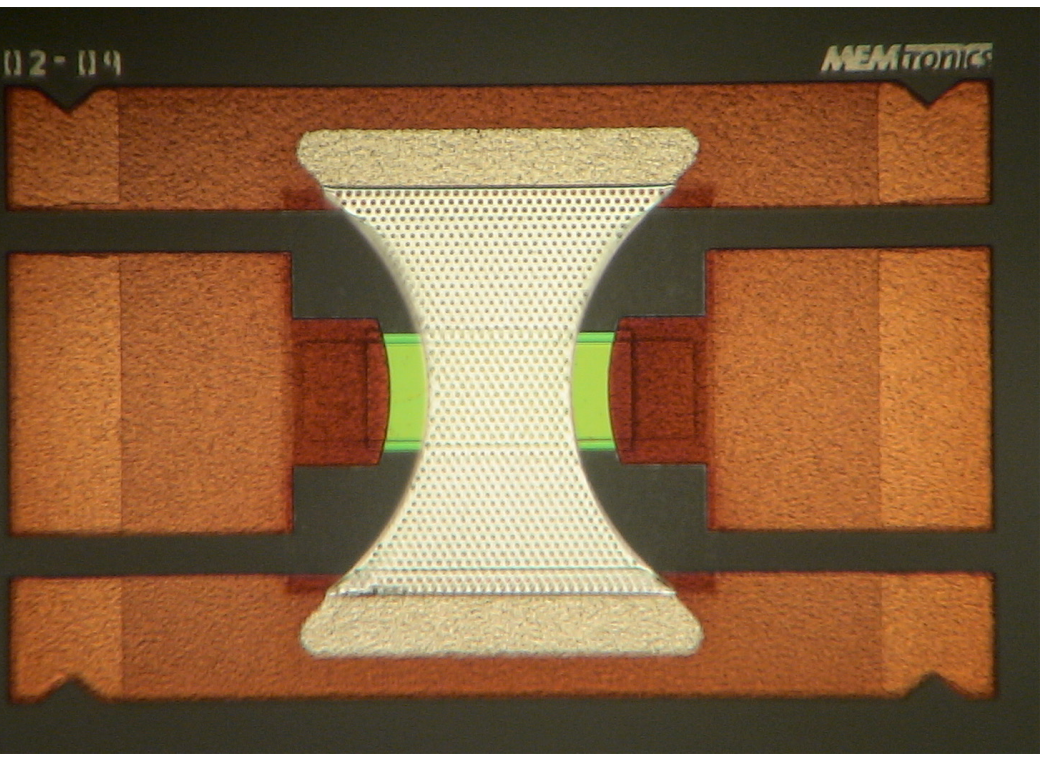
To volunteer, contact Tracy Ercoli (OTD) at ext. 2-3321.

UChicago Argonne LLC

Office of Science U.S. DEPARTMENT OF ENERGY

ARGONNE NATIONAL LABORATORY IS MANAGED BY UCHICAGO ARGONNE, LLC FOR THE U.S. DEPARTMENT OF ENERGY

DARPA



The radio frequency micro-electric mechanical system switch under development in the DARPA-funded Argonne-led project is based on MEMtronics design and IMT fabrication, and uses Ultrananocrystalline Diamond film technology from Argonne and ADT.

Continued from page 1

films at temperatures less than or equal to 400 degrees Celsius. Both characteristics provide critical parameters for producing resonators for very high frequency operations and the integration of diamond MEMS with advanced microelectronics, respectively."

In the DARPA Phase II program, the Argonne-led team achieved several key goals:

• materials integration and processes to fabricate UNCD-based resonators;

• integration of UNCD films with CMOS devices;

• demonstration of UNCD dielectric properties suitable for application as low-charge/low-force of adhesion dielectric layer for RF capacitive MEMS switches;

• and demonstration of UNDC-dielectric-based RF MEMS switches that surpassed one-billion switching cycles with low insertion losses (approximately 0.17-decibel) at about 10 gigahertz.

Argonne is the world leader in the fundamental and applied science of UNCD film technology and works jointly with academia and industry to develop new UNCD-based MEMS and other hybrid technologies. These include the integration of oxide piezoelectric and UNCD films that produce the lowest power piezoelectrically-actuated UNCD resonators and nanoswitches demonstrated today. The CNM currently has the world's only microwave plasma chemical vapor deposition system for growing UNCD films at less than or equal to 400 degrees Celsius on up to 200-millimeter wafers. the system is located in a clean room environment for nanoelectro-mechanical systems fabrication. The CNM provides the main expertise and infrastructure at Argonne, critical to the success of the DARPA Phase III program. UNCD is prized for its exceptionally small grain size of 5 nanometers, which is thousands of times smaller than grains in traditional microcrystalline diamond films.

Air Force general speaks at colloquium

Lt. General Robert J. Elder Jr., the commander of the Eighth Air Force, spoke on "Strategic Deterrence and Network Analysis" at a Director's Special Colloquium June 20. From left to right are Argonne Director Robert Rosner; Sandra Biedron (ESE), director of Argonne's Department of Defense Project Office; Col. Warren Ward and Col. Jeffrey Smith, Air University Fellows formerly stationed at Argonne; and Elder. Air University Fellows serve one-year tours at distinguished civilian institutions; this is Argonne's fourth year of hosting Air University Fellows. Photo by Wes Agresta.

Argonne's supercomputer named world's fastest for open science, third overall

By Angela Hardin

Argonne's IBM Blue Gene/P high-performance computing system is now the fastest supercomputer in the world for open science, according to the semi-annual Top500 List of the world's fastest computers.

The Top500 List was announced during the International Supercomputing Conference in Dresden, Germany.

The Blue Gene/P — known as Intrepid and located at the Argonne Leadership Computing Facility (ALCF) — also ranked third fastest overall. Both rankings represent the first time an Argonne-based supercomputing system has ranked in the top five of the industry's definitive list of supercomputers.

The Blue Gene/P has a peak performance of 557 Teraflops (557 million calculations per second). Intrepid achieved a speed of 450.3 Teraflops on the Linpack application used to measure speed for the Top500 rankings.

"Intrepid's speed and power reflect the DOE Office of Science's determined effort to provide the research and development community with powerful tools that enable them to make innovative and high-impact science and engineering breakthroughs," said Rick Stevens, associate laboratory director for computing, environmental and life sciences at Argonne.

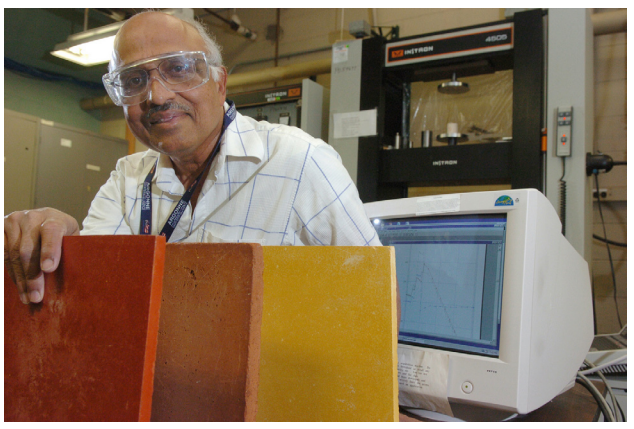
"The ALCF and Intrepid have only just begun to have a meaningful impact on scientific research," Stevens continued. "In addition, continued expansion of ALCF computing resources will not only be instrumental in addressing critical scientific research challenges related to climate change, energy, health and our basic understanding of the world, but in the future will transform and advance how science research and engineering experiments are conducted and attract social sciences research projects, as well."

"Scientists and society are already benefitting from ALCF resources," said Peter Beckman, ALCF acting director. "For example, ALCF's Blue Gene resources have allowed researchers to make major strides in evaluating the molecular and environmental features that may lead to the clinical diagnosis of Parkinson's disease and Lewy body dementia, as well as to simulate materials and designs that are important to the safe and reliable use of nuclear energy plants."

Eighty percent of Intrepid's computing time has been set aside for open-science research through the DOE Office of Science's (SC) highly select Innovative and Novel Computational Impact on Theory and Experiment (INCITE) program. There are currently 20 INCITE projects at the ALCF that will use 111 million hours of computing time this year. SC's Office of Advanced Scientific Computing Research provides high-level computer power focused on large-scale installations used by scientists and engineers in many disciplines.

The Top500 List is compiled by Hans Meuer of the University of Mannheim in Germany, Jack Dongarra of the University of Tennessee and Oak Ridge National Laboratory, and Erich Strohmaier and Horst Simon of DOE's National Energy Research Scientific Computing Center at Lawrence Berkley National Laboratory.

Argonne scientist named ACS fellow



Argonne materials scientist and newly named American Ceramic Society Fellow Arun Wagh displays three plates made of Ceramicrete, the same composite that is now used as the basis for casks that can safely store nuclear material.

Argonne's Arun Wagh (ES) has been elected a fellow of the American Ceramic Society.

American Ceramic Society fellows are elected for their outstanding contributions to the ceramic arts or sciences, through broad and productive scholarship in ceramic science and technology, by achievement in the ceramic industry or by outstanding service to the society.

Wagh has authored more than 120 scientific articles, written a book, *Chemically Bonded Phosphate Ceramics*, and has won several awards for outstanding achievement, including the Intellectual Property Law Association of Chicago's *2006 Inventor of the Year Award*, the 2000 Federal Laboratory Consortium Award for *Excellence in Technology Transfer* (both for the Development of Ceramicrete®) and the *2004 R&D 100 Award* for Grancrete®. He is also the current chair of the American Ceramic Society's Art Division.

Wagh has worked at Argonne since 1990. He holds a Bachelor of Science degree in physics from Bombay University in India, a Master of Arts degree in physics from Temple University in Philadelphia and a Ph.D. in physics from State University of New York, Buffalo.

His election to fellow will be recognized at the ACerS Honors and Awards Banquet at the American Ceramic Society's 110th Annual Meeting Oct. 6, in Pittsburgh.

Submit classified ads online at www.anl.gov/Media_Center/Argonne_News/Classified_Ads. Deadline for all materials is 5 p.m. Friday. Argonne National Laboratory is managed by UChicago Argonne, LLC for the U.S. Department of Energy.

Taking out the trash: Argonne to dispose of waste at no cost to the lab

By Rachel Lichtenfeld

After a successful audit of Argonne's waste certification program, the Department of Energy's Nevada Test Site (NTS) has reauthorized Argonne for low-level radioactive waste shipments to the NTS. Shipments in 2008 will be at no disposal cost to the lab.

Low-level waste includes many forms of radioactive material and items that have become contaminated with radioactive material, such as protective clothing, experimental equipment, and environmental materials.

"In the universe of radioactive waste, it's the vast majority of the waste produced — somewhere around 75 percent," said Sue Lorenz (NOD), manager of waste management operations.

In recent years, this low-level waste had been shipped from Argonne to commercial sites. This year the Department of Energy is financing the cost for waste burial at the NTS, saving Argonne approximately $8,000 per shipment of low-level waste.

Preparation for the audit and the reinstatement of Argonne's NTS waste certification program necessitated a revamp of many Argonne waste generation and handling procedures.

"I think the biggest challenge in this process was the training," Todd Clark (NOD) said. "In the end, we had to have a program that delivers 100 percent."

Larger than many small countries at approximately 1,375 square miles, the Nevada Test Site is one of the largest restricted areas in the U.S. In addition to waste disposal sites, NTS hosts massive research facilities and contains 1,100 buildings as well as 400 miles of paved roads. Used for over 40 years as the nation's primary nuclear weapon proving ground, the NTS is an ideal location for disposal of low-level waste.

"It's not like this is the city dump," Lorenz said.

Waste disposed at NTS is meticulously catalogued for compliance and safety reasons, but the information-gathering serves another important purpose — should a buried material be determined non-compliant or valuable at a later date, NTS will be able to retrieve it from the disposal site.

"Shipping waste to NTS is a very orderly process, which requires our certification system to be just as orderly," Clark said.

Argonne is currently approved to ship three waste profiles to NTS; by the time Waste Management completes additional necessary profiles, this number should increase to between six and eight.

"Right now we're sorting through our outgoing waste to make sure it meets NTS standards," said Peery Shaffer, Argonne's NTS Waste Certification official. "In the end this program will help get the labs cleaned up."

Pioneers plan 23rd reunion

The Argonne Pioneers will hold their 23rd annual reunion dinner Sunday, Oct. 5. Pioneers include all current and former Argonne, Met Lab, Atomic Energy Commission (AEC/DOE) and Credit Union employees who worked in these organizations between 1942 and 1978. This also includes all present employees with 30 years or more of service. Spouses and guests of those attending are welcome.

The dinner will be held at the Orland Chateau Restaurant, 14500 LaGrange Road, Orland Park. The cost is $25 per person, which includes tax and tip for the family-style dinner. Registration and friendship time will be 2 - 4 p.m, immediately followed by dinner. A cash bar will be available, and music for dancing will be provided.

Reservations must be made by Monday, Sept. 29. The restaurant requires a firm commitment of the number of attendees, so reservations cannot be accepted, nor will refunds be made, after that date. Checks should be sent and made payable to Argonne Pioneers Reunion, c/o Evie Fagan, 1032 Pinewood Drive, Downers Grove, IL 60516.

Attendance at the annual reunion dinner has been declining, so the Pioneers encourage attendees to bring their friends and family members so the event can continue.

NAME OF PIONEER _____

ADDRESS _____

CITY, ST ZIP _____

□ I am a "PIONEER" and plan to attend the reunion on 10-5-08

□ I plan to bring my spuse/guest. "PIONEER" □ Yes □ No

Name of spouse/guest _____

If "Yes":

Years employed: From _____ To_____ Dept/Div_____

□ Enclosed is my check in the amount of $25 made out to the Argonne Pioneers Reunion.

□ I will not be able to attend but would like to be informed of any future events.

□ I will not be able to attend and would like to be deleted from your mailing list.

TCS

Drawing depicting the design of the interior of the TCS Building currently under construction at Argonne.

Continued from page 1

"It's really a minor inconvenience for what the lab will gain from this construction," said Karen Hellman (FMS), director of the office of project management. "The impact to people on-site should be minimal."

Any employees who have questions regarding TCS construction should contact Jeff Sims, Office of Project Management at 2-3515 or at *jsims@anl.gov*. Interest in other aspects of the TCS project should be directed to Mary Spada, TCS Contractor Project Lead, at 2-7715 or at *spada@mcs.anl.gov*.

Service awards

50 years
Norbert W. Golchert (EQO)
Leonard Leibowitz (CSE)

45 years
Harry R. Bell (FMS)

40 years
Robert C. Kendall (FMS)
Dennis J. Kilsdonk (NE)
Mike J. Monczynski (CIS)
K. Natesan (NE)

35 years
Darlene J. Tonelli (CIS)

30 years
Delbert L. Bowers (CSE)
Judith L. Carlson (NE)
Raymond L. Carlson (CIS)
Timothy M. Carothers (OCF)
Lee F Essenmacher (NOD)
Vivian Kay Johnson (FMS)
Eugene A. Rackow (CIS)
Margaret K. Singh (ES)
Jo K. Young (CIS)
Gary P. Zinkann (PHY)

25 years
Judy A. Benigno (OCF)
James P. Byrnes (EQO)
George J. Joch (TSD)
Nghe Thi Nguyen (OCF)
Clifford R Pitts, Jr. (AES)
Edward Porlier (OCF)
Elizabeth H. Rizzo (PHY)
Hsien-Hau Wang (MSD)

20 years
James J. Laidler (ESE)
Jessie Morales (FMS)
Robert D. Olson (MCS)
Mohan Ramanathan (AES)
Janice T. Sejut (OCF)

15 years
Kurt Alford (CSE)
Steven J. Bettenhausen (SCD)
Kevin Byrne (NE)
Judy Frantini (FMS)
Gerald McMichael (PNS)
Scott W. Petersen (AES)
Jerry J. Rice (AES)
Hugh Wheeler (FMS)

10 years
Richard B. Crowley (OCF)
Francesco De Carlo (XSD)
Paul F. Fischer (MCS)
Nicole J. Green (COA)
James R. Grogan (DIS)
Sandra A. Guendling (SCD)
Mark S. Jaski (ASD)
Keith B. Knight (AES)
Gregory K. Krumdick (ES)
Ali Mashayekhi (XSD)
JoAnn Nelson (FMS)
Thomas P. O'Connor (PHY)
Joseph A. Pomykala Jr. (ES)
Donna J. Shaw (ESE)
Robert T. Soliday (ASD)
Stephen K. Streiffer (CNM)
Richard L. Swartz (SCD)
Michelle A. Walden (HR)
Yuejun Eugene Yan (EVS)

5 years
Robert C. Arthurs (EQO)
Zachary J. Bubinas (NOD)
Edward Diaz (EQO)
Ron S. Faibish (NE)
Brent A. Finney (SCD)
Harold H. Harper (FMS)
Peter M. Heine (NE)
Eric C. Landahl (XSD)
Kyeong O. Lee (ES)
Janice L. Marco (NS)
Marlene Metz (MSD)
William B. Rinker (SCD)
Alec R. Sandy (XSD)
Gregory W. Walker (FMS)
Robert P. Winarski (CNM)
Joseph Z. Xu (AES)

Argonne NATIONAL LABORATORY

Argonne News is published biweekly for Argonne employees by Communications and Public Affairs. Send news items to Abigail Allred, Building 201, Room 2U-11 (C&PA-201). Voice: ext. 2-5545. Fax: ext. 2-5274. E-mail: *aallred@anl.gov*.

Safety actions recognized with SPOT Awards

The SPOT Award recognizes employees' contributions to safety and quality at the laboratory. The award recognizes employees "on the spot" who exhibit good safety behavior or initiative.

• **Brandon Fisher** (CNM) noticed a strong odor when entering a lab. An immediate search revealed that the odor came from an overheated roughing pump. Upon further inspection it was revealed that the overheating was due to old oil. By replacing the oil, Fisher re-established a safe work environment and protected the equipment.

• **Joe Gregar** and **Dale Ferguson** (both CNM) were removing a laboratory glassware drain board and found that the hardware used to support the drain board was inadequate. Gregar and Ferguson notified a supervisor who discussed the finding with the division safety coordinator. The safety coordinator agreed that the hardware was not adequate for the application and directed that all drain boards in the division be checked and corrected using hardware designed for the application.

• **Jonathan Baldwin** (XSD/BTS) brought forth a concern for fellow employee safety when using powered vehicles at the APS.

• **David Pepalis** (EQO/HP) observed a grounding problem with a power cord while inspecting a test apparatus in the Building 202 Instrument Shop. Pepalis could have fixed the power cord plug and stopped there, however he took the initiative to contact another employee to see if this was a broad laboratory issue. Pepalis found that all of the almost 70 installations at APS had the same problem with their plugs. Pepalis' investigation may have prevented an electrical shock injury.

• **William Swanson** (FMS) noticed that power cords and instrumentation had been staged on and around the Building 310 dock and stairway areas. There were no caution barriers or signs to warn of the tripping hazard. Swanson took it upon himself to post caution tape and the appropriate signs to warn of the tripping hazard.

• **Frank Collart**, **Ed O'Loughlin**, **Norma Duke** and **Raj Pokkuluri** (all BIO) have put forth consistent extra effort as members of the BIO Safety Committee through the review of details related to the experimental safety review process.

• **Bradley Ullrick** (LEG) noticed that the lights at the bottom of the east stairwell of Building 201 were out. Ullrick brought it to the attention of appropriate personnel so the lights could be repaired or replaced quickly.

• **Robert Latham** (MCS) verified the integrity of an e-mail by calling the sender before opening. This is the recommended action to take per the phishing course required for all employees in the Training Management System.

• **Darin Wills** (OCF-BUD) also verified the integrity of an e-mail by calling the sender before opening.

• **Stanley Pasky** (ASD/APS) took the initiative to improve the safe operations of an APS injector.

• **Jon Warner**, **Eric Michaud** and **Bob Aeschlimann** (all NE) discovered an instrument that was leaking gallium in Building 206. Warner, Michaud and Aeschlimann worked as a team to notify the necessary authorities, check the MSDS and alert others in the building about the issue. Once the identity of the material was determined, Warner, Michaud and Aeschlimann cleaned up the spill even though it was not formally their responsibility. The team followed the correct ESH procedures, had good safety awareness, notified the necessary authorities promptly and pitched in to help even though this was not their assignment.

• **William Luck** (LEG) noticed that the rubber strip on a stair was torn, creating a tripping hazard. Luck brought it to the attention of the appropriate personnel so it could be repaired before someone was injured.

• **Sandra Classen** (LEG) noticed several large puddles of water in the hallway in front of the vending machines. Classen arranged for immediate clean-up so the slipping hazard was removed.

• While performing a safety inspection in his area of responsibility, **Arthur Frigo** (NOD) took the initiative to observe and note safety issues in adjoining areas. By doing so, Frigo demonstrated his commitment to safety and concern for co-workers.

• **Candace Rose** (EVS) alerted the EVS/203 ESH coordinator to a potential radiological safety issue. Rose told the ESH coordinator that occasionally their liquid nitrogen tanks are taken to another area of 203. Rose realized that there are controlled areas in Building 203 and that if her group's tanks are taken in and out of controlled areas, they should be surveyed by Health Physics.

• **Brian Skwarek** (DIS) detected a frayed wire on the AC power supply during routine servicing of a laptop computer. The frayed wire left a conductor exposed, presenting a shock hazard. Skwarek removed the item from service.

Any authorized manager or supervisor may give a Spot Award to an employee when safe behavior or initiative is displayed, which gives the employee immediate recognition. Authorization is up to the discretion of the division director.

Quarterly radiation badge exchange is under way

The quarterly radiation badge exchange is in progress. Second-quarter radiation badges should be returned to their assigned racks or to the local badge distribution office by Monday, June 30, or as soon as possible thereafter. On-time return of the badges will help assure timely reporting of radiation exposures and minimize processing costs. Users with questions may contact External Dosimetry at ext. 2-3355.

Classified ads

MISCELLANEOUS

STROLLERS – Jog stroller good for infants four months through 40 lbs., with sun shade, two cup holders and large storage bin, adjustable handle bars and seat, excellent condition. $50. Deluxe backpack/stroller combo, super for anywhere a full-size stroller isn't convenient, padded shoulder and hip straps, lightweight steel frame, removable/adjustable tilt-top canopy, safety harness, stands alone or converts to stroller, accommodates up to 35 pounds, excellent condition. $25. Jenny Stricker. (630) 243-9675.

MISCELLANEOUS - Honeywell HE-360 whole-house humidifier (previously installed, works fine). $50. DirecTV 3-LNB satellite dish. Works fine, we upgraded service and got a new dish. Free. Robert Olson. (630) 790-8426.

MISCELLANEOUS - Yakima Bike Racks 4 Q-Towers, 52" cross bars, 2 Raptor type bike racks, 2 StrapThangs, six lock cores. $300. Sears car top carrier. $35. Timothy Kendall. (630) 964-6417.

TELEVISIONS - Mitsubishi 27". $20. Zenith 23". $5. Jeffrey Fortner. (630) 730-9099.

DINING SET - Dining room table with seven chairs, two leaves, and a china cabinet. In good condition. $400 O.B.O. Cecil Pinder. (815) 463- 8885.

GARAGE DOOR ACCESSORIES - Used receiver and hand transmitter. $25. The following are brand new and compatible with Chamberlain-made openers (Craftsman, Chamberlain, Lift Master, etc.): 315 Mhz wireless keyless entry pad, new, $40. $20. Two laser parking assists, new price $25. $15 each. Ira Charak. (630) 325-2205.

POOL FILTER - Hayward ASL Series filter, model C1250, includes Hayward EP series pump and microprocessor control/timer. Used one season, $400 new. $250 or best offer. Tony Pietryla. (630) 294-6803.

MISCELLANEOUS – NordicTrack C1800s treadmill, with floor mat, 5 yrs old but like new. $300 OBO. Two large potted Areca palms. $25 each OBO. David Ayres. (630) 969-0192.

CONCERT TICKETS - Jimmy Buffet tickets for Saturday, July 26th at Toyota Park. Section C5, row 23, seats 13-18. Face value $155 each. Paul Vanderwall. (815) 838-2716.

MINI FRIDGE - 27h x 19w x 19d, wood grain finish, works just fine. Will deliver to lab. $65. Ron Kmak. (708) 301-1269.

PORTABLE DVD PLAYER – 1 year old, Mintek MDP 1030, 10.2 in screen, remote control, auto and AC charge, originally $225. Asking $125. Tish Kaatz. (630) 306-7235.

LAPTOP – Dell XPS 1530 Laptop, new in box with warranty, Duo core, remote, back-up CDs with Photoshop plus elements, case, N-band, NVida video card, 2 gb ram, retail is more than $1,200 plus tax. $850. R. Martello. (630) 319-2744.

AUTOMOBILES

2003 CHRYSLER - PT Cruiser, clean, 44,000 mi. Chrysler 7 yr/70,000 mi. warranty, new tires. $7,295 OBO. Richard Raffenetti. (630) 960-2049.

2001 NISSAN - Sentra 102k miles, very good condition. $3,500 O.B.O. Konrad Swierczek. (307) 220-3248.

2005 BMW – X3, 18k miles, black/black, AWD, Panoramic sunroof, excellent condition, power all, heated seats, still under factory warranty. $23,000 OBO. Vanessa Due. (630) 359-5445.

1992 FORD - Taurus sedan, 68K miles, all regular maintenance. Recently tuned up, new brakes, new exhaust, new battery, and new distributor cap. $1,200. Melanie Johnson. (708) 349-1514.

2004 YAMAHA - 80cc Mini-Raptor Quad. Excellent condition. Original owner. $1,000. Crystal Baltsen. (630) 739-6408.

1973 MERCEDES – 280C, dual overhead cam for restoration. Have parts, running, moving, must sell. $700 OBO. Eric Lindert. (815) 886-4504.

2004 NISSAN – Quest SE minivan, excellent condition, $30,392 miles. Garage kept, sky view rood, rear sonar, leather seats and trim, exterior silver, interior beige. $17,995. B. Venigalia. (630) 991-6077.

HOUSING

HOUSE/RENT – 4 BR, 3 BA, Naperville SD 203, Maplebrook subdivision, walking distance to grade school and junior high. Great family neighborhood. Fenced back yard. $1800/mo. Maryka Bhattacharyya. (630) 357-9557.

HOUSE/SALE - 4-bedroom, 2.5-bath house, approx. 1900 square feet, in southwest Bolingbrook, convenient to I-55 and Weber Road. Plainfield schools. New water heater, new gas range and microwave, rosewood floors in kitchen and family room, professional landscaping and paver patio, full unfinished basement, attached 2-car garage. MLS number is 06889080. $269,990. Kevin A. Brown. (630) 378-4630.

WANTED

POOL FILTRATION SYSTEM – for 24-foot round pool. Jack Burke. (815) 474-4599.