

Subtlety of superconductivity revealed

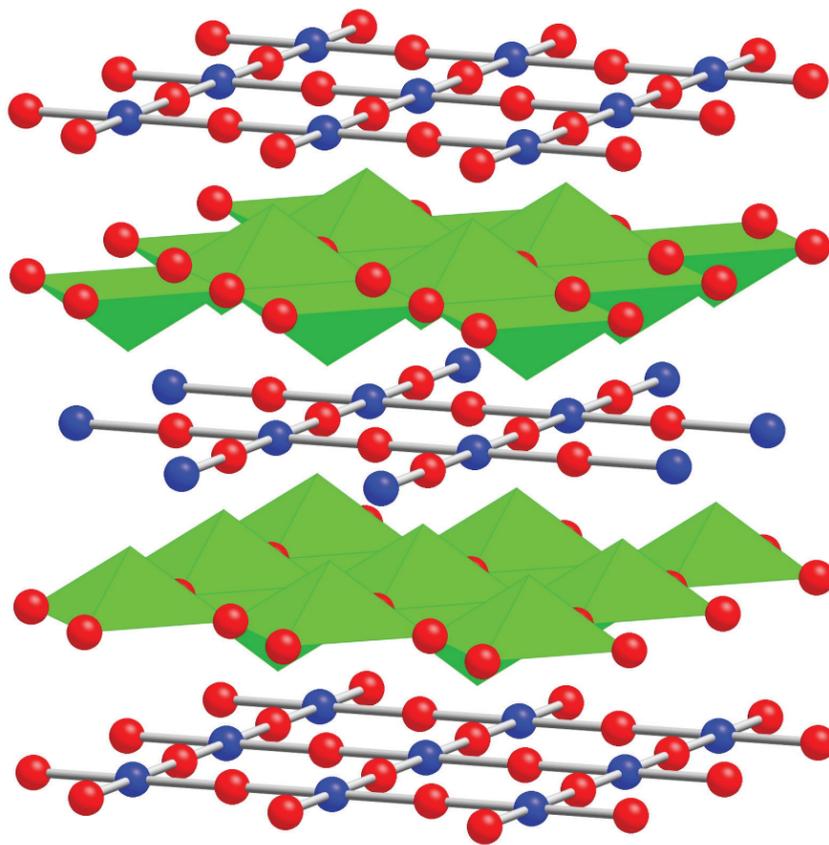
ARGONNE scientists helped lead the superconducting revolution 20 years ago this month with their landmark solution of the structure of the most widely known high-temperature superconductor $\text{YBa}_2\text{Cu}_3\text{O}_7$. Now, they have solved another tantalizing superconductivity mystery: how a subtle change in the structure of so-called electron-doped superconductors switches the phenomenon of superconductivity on and off.

Superconductivity is the loss of all resistance to the flow of electric current at very low temperature, a surprising phenomenon with the potential to save enormous quantities of energy if it can be applied to the electric power grid. Twenty years ago, a new class of materials that superconduct at dramatically higher temperatures, up to 164K, was discovered, promising widespread energy-saving applications. Most of these superconductors are “hole-doped,” so named because their superconductivity is triggered by removing electrons (adding “holes”) to an insulating magnetic compound. A few of the high-temperature superconductors, however, are “electron-doped,” requiring the addition of electrons to produce superconductivity.

The mystery of these electron-doped superconductors is that in addition to electron doping, they must be heated to a high temperature during their manufacture to enable them to superconduct. No one could understand why the heat treatment was necessary; it did not seem to alter the structure or composition of the material, yet it dramatically transformed the material from an insulator to a superconductor.

“Our discovery opens the door to understanding how electron-doped superconductors work,” said Stephan Rosenkranz (MSD), an Argonne scientist on the experimental team. “We didn’t realize the interplay of structure and superconductivity was so subtle. But now that we know what is good for superconductivity, we can vary the amount of the good and bad stuff in systematic ways to find out what makes them tick.”

The research team led by scientists from Argonne, the University of Tennessee, and Brigham Young University found that heating the electron-doped superconductor $\text{Pr}_{1-x}\text{LaCe}_x\text{CuO}_4$ repaired subtle flaws in the microscopic structure of the material. These flaws are so delicate that their repair by heating escaped detection for nearly two decades. The Argonne team found them by effectively looking with two magnifying glasses. They correlated measurements of copper atom positions using X-rays at Argonne’s Advanced Photon Source (APS) with measurements of the oxygen atom positions by neutrons at the National Institute for Standards and Technology Center for Neutron Research.



Argonne researchers have revealed the subtle interplay of atomic structure and loss of electrical resistance in a certain type of superconductor. A small change in the placement of both copper and oxygen atoms takes place during heat treatment, leading to a perfect structure and superconductivity.

The combination of these two measurements revealed a small change in the placement of both copper and oxygen atoms taking place during the heat treatment, leading to a perfect structure and superconductivity. Furthermore, the change is fully reversible: The material could be cycled from the flawed to the perfect structure, switching the superconductivity off or on.

The X-ray experiments for this work were led by Rosenkranz and Argonne’s Peter Chupas (XSD) and Peter Lee (XSD). They used the high-intensity X-ray beams produced by the APS to determine the precise location and type of each atom in the crystal structure. Branton Campbell, another member of the research team and former postdoctoral researcher at Argonne, now at Brigham Young University, compared this technique to putting an object on a table, hitting it with baseballs thrown from different angles, and then using the marks left where the bounced balls struck the surrounding walls to figure out what the object looks like. Other members of the experimental team include Pengcheng Dai from the University of Tennessee and Oak Ridge National Laboratory, Hye-Jung Kang, now at the National Institute of Standards and Technology, and scientists from Tokyo’s Central Research Institute of Electric Power Industry, who made the samples.

The detailed results of these findings were published in the *Nature Materials* paper “Microscopic Annealing Process and its Impact on Superconductivity in

T’-Structure Electron-Doped Copper Oxides,” which is available online. Funding for this research was provided by DOE’s Office of Basic Energy Science, the U.S. National Science Foundation and the Japan Society for the Promotion of Science. ■

www.nature.com/nmat/journal/v6/n3/abs/nmat1847.html

LDRD strategic initiatives to be discussed

Open topical discussion meetings for laboratory-directed research and development (LDRD) strategic initiatives will be held March 26 and 29. Topics to be discussed include initiatives in environment, energy, engineering and technology, national security, scientific facilities, life sciences, high-performance computing applications and nanoscience and nanotechnology.

A full schedule with topics and discussion leaders has been posted online.

These meetings are designed to solicit suggestions about the use of LDRD funds to provide strategic direction for the laboratory, not proposal ideas for individual projects. Discussions will center on the significant problem that the proposed initiative would be trying to solve, how Argonne would propose to solve it, identifying Argonne’s strengths and capabilities in the area, recognizing competitors and their strengths, and determining which government or industry organization would become the sustaining sponsoring organization for future funding.

Additional meetings on energy, environmental and several other initiatives will be held in coming weeks. A full schedule, and additional information, has been posted online.

These discussions are a follow-up to the Feb. 1 LDRD strategic initiatives “conclave.” At that meeting, 10 topical discussion areas were defined, and leaders were identified to facilitate the discussions. ■

www.anl.gov/LDRD

CRADA team recognized for award-winning collaboration in environmental innovation

ARGONNE, the U.S. Council for Automotive Research’s Vehicle Recycling Partnership and the Plastics Division of the American Chemistry Council have been awarded the Plastics Recycling and Sustainability Award in Enabling Technologies by the Society of Plastics Engineers for their work in the optimum recycling of plastics and other materials from end-of-life vehicles.

The three entities are research partners whose work is being conducted under a cooperative research and development agreement (CRADA) among Argonne, the Plastics Division of the American Chemistry Council (ACC-PD) and USCAR’s Vehicle Recycling Partnership (VRP), whose members are DaimlerChrysler Corporation, Ford Motor Company and General Motors Corporation.

The award recognizes technological

innovations that demonstrate significant impact and environmental benefits.

“Sustainable end-of-life vehicle recycling is a global issue, and we are honored to be recognized for our efforts and technologies,” said Ed Daniels, director of Argonne’s Energy Systems Division. “Our achievements were made possible through the successful collaboration of the entire team, which was driven by our shared environmental concerns.”

“It’s wonderful to see Argonne, the Plastics Division of the ACC and the VRP members — DaimlerChrysler, (See “CRADA”, page 2)

MORE NEWS AND LATE-BREAKING UPDATES:

INSIDE ARGONNE
www.inside.anl.gov

CRADA (Continued from page 1)

Argonne, USCAR's Vehicle Recycling Partnership and the American Chemistry Council demonstrate how plastics in shredder residue can become reusable materials. Here, chemical engineer Jeff Spangenberg (ES) sifts plastic chips ground from shredder residue, which is cleaned and sorted by froth floatation in Argonne's pilot plant.

Ford and General Motors — receive recognition for their longtime collaboration and environmental leadership,” said Don Walkowicz, USCAR executive director. “The CRADA team’s work in implementing sustainable recycling solutions that keep waste out of landfills, save energy and put materials into reuse demonstrates the power of collaboration in addressing societal issues.”

The team has been working together on mechanical recycling technologies as well as processes for chemical conversion of end-of-life vehicle materials to fuels and chemicals. The team also is working to anticipate and meet the recycling needs for components and parts in future and emerging vehicles, such as hybrids and fuel cell vehicles.

CRADA funding is provided by the three U.S. automakers comprising

the VRP, the ACC-PD and the U.S. DOE Office of FreedomCAR and Vehicle Technologies.

Founded in 1992, USCAR is the umbrella organization for collaborative research among DaimlerChrysler Corporation, Ford Motor Company and General Motors Corporation. The goal of USCAR is to further strengthen the technology base of the domestic auto industry through cooperative research and development.

The Plastics Division of the American Chemistry Council, a leading trade association of resin producers, advocates unlimited opportunities for plastics and promotes their economic, environmental and societal benefits. ■

More information is available at: http://www.es.anl.gov/Energy_systems/CRADA_Team_Link/Index.html

South Dakota State signs research agreement with Argonne

SOUTH Dakota State University and Argonne will collaborate on research that may include bioprocessing, biofuels, nanoscience genomics, physics, and engineering and computational sciences.

Norman Peterson, assistant to the Argonne director, represented the laboratory at the formal signing of a memorandum of understanding at SDSU. Peterson has advised a number of universities and states with alliances that include technology transfer projects and economic development programs for start-up, technology-driven businesses.

SDSU President David Chicoine served on the Board of Governors for Argonne in his former post as vice president at the University of Illinois, where he worked with Peterson and others at Argonne.

“The goal is to develop opportunities for SDSU faculty and students,” Chicoine said, “working in partnership with Argonne to pursue



fields of science and technology that are of mutual interest and that, importantly, advance science and technology-driven economic development in South Dakota.” ■

Slips, trips and falls major source of injuries in DOE system

A recent analysis of Office of Science Occurrence Reporting and Processing System (ORPS) reports focused on slips, trips and falls. A total of 25 ORPS reports fit this category; none applied to Argonne. Below is a summary of the analysis based on the predominant causes and injury types.

Causes

- Six cases involved a loss of balance (24 percent)
- Six cases involved stairs/stairwells (24 percent)
- Four cases involved uneven walking surfaces (16 percent)
- Three cases involved ice or snow (12 percent)
- 18 cases resulted in bone fractures (72 percent)
- Four cases resulted in less severe injuries that still met ORPS reporting criteria (16 percent)

Although Argonne did not have any ORPS reports that fell into this category for the past six months, laboratory employees did sustain injuries due to slips, trips and falls. Below is a summary of 15 Argonne cases for the past six months based on U.S. Occupational Safety and Health Administration recordability criteria and the predominant causes and injury types.

- 12 cases were reported as first aid (80 percent)

- Two cases were reported as OSHA Recordable - medical treatment (13 percent)
- Seven cases involved ice/snow (47 percent)
- Three cases involved debris or obstructions in walkways (20 percent)
- 13 cases resulted in minor injuries - abrasions, contusions, bruises, sprains (87 percent)
- One case resulted in a bone fracture (seven percent)

The above analysis of Argonne cases involving slips, trips and falls reinforces the need for all Argonne employees and subcontractors to continue to take their time when walking, use cleared walkways, wear slip-resistant footwear and to immediately report any icy or obstructed walking surfaces to building management. In addition, all Argonne employees and subcontractors should remain aware of potential hidden hazards while walking to and from buildings or their vehicles while onsite.

Watch out for:

- Divots and rocks in open lawns or fields
- Raised tree roots in forested areas
- Uneven sidewalk sections
- Slippery embankments
- Utilities obstructed by brush overgrowth ■

CHORAL GROUP PLANS APRIL 26 CONCERT

The Argonne Choral Group will hold a concert Thursday, April 26, at 6 p.m. in the Building 362 Auditorium. The group will perform a medley from “Phantom of the Opera,” classic choral music standards and a special vocal quartet performance.

A \$5 donation at the door is requested.

The club is now planning year-round performances and is always looking for more singers, said Katie Weber (NOD-WMO), who directs the group.

“We could especially use a few more women sopranos and altos,” Williams said. “Of course, we could always use more men as well.” The group welcomes singers of any talent level, she said.

Rehearsals are held Mondays and Thursdays from 11:45 a.m. to 12:30 p.m. in the Building 362 Auditorium. For more information, contact Weber at kweber@anl.gov.

MUSICIANS, VOCALISTS INVITED TO OPEN-MIKE NIGHT

The Argonne Music Club will host an open-mike night at the Building 617 Lower Level Thursday, March 29, from 4:30 - 8 p.m. Musicians and vocalists of all skill levels and musical genres are welcome to join in, and all are welcome to listen. A drum kit and P.A. system will be provided.

The Argonne Music Club brings Argonne’s diverse community together through the universal language of music and showcases the musical talents of Argonne employees.

The club is open to everyone, regardless of skill level or area of musical interest.

For more information, see the club’s Web site.

www.argonneclub.anl.gov/music/

TEMPLATES FOR MACS’ ‘KEYNOTE’ PRESENTATION SOFTWARE NOW ONLINE

Templates for Keynote, the Macintosh presentation software, have been posted online. The templates reflect proper use of the new Argonne logo and visual identity.

PowerPoint templates that work for both PC and Macintosh computers are also available online at the same location.

Employees should use the templates for all presentations that represent the laboratory and its activities.

<http://inside.anl.gov/resources/standards/presentations.html>

RADIATION BADGES SHOULD BE EXCHANGED

It’s time for the quarterly radiation badge exchange. Each user should return his or her radiation badge to its assigned rack or to the local badge distribution office before the close of business Friday, March 30. 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.

Free lecture series to explore most violent places in the universe

NINE free lectures at The University of Chicago will explore how black holes, remnants of exploded stars and other exotic celestial objects emit streams of powerful gamma rays.

“The Quest for Gamma Rays: Exploring the Most Violent Places in the Universe,” is the title of this year’s Arthur Holly Compton Lectures, sponsored each spring and fall by the university’s Enrico Fermi Institute. The 65th series of these public lectures will begin Saturday, March 24, and will be held each Saturday through June 2 (except for April 21 and May 26, when there will be no lectures). The lectures will be given from 11 a.m. to noon in Room 106 of the Kersten Physics Teaching Center, 5720 S. Ellis Ave.

Compton Lectures are intended to make science accessible to a general audience and to convey the excitement of new discoveries in the physical sciences. Delivering the lectures this spring will be Elizabeth Hays, research associate in the Fermi Institute and at Argonne.

Among her topics, Hays will discuss the work of VERITAS (Very Energetic Radiation Imaging Telescope Array System). An array of four telescopes at Kitt Peak in southern Arizona, VERITAS is one of the most sensitive high-energy gamma-ray observatories in the world.

The Compton Lectures are named for Arthur Holly Compton. A former physicist at the university, Compton is best known for demonstrating that light has the characteristics of both a wave and a particle. He organized the effort to produce plutonium for the atomic bomb and directed the Metallurgical Laboratory, where Fermi and his colleagues produced the first controlled, nuclear chain reaction in 1942.

For more information about the lecture series, call (773) 702-7823. ■



The Very Energetic Radiation Imaging Telescope Array System (VERITAS), shown here in an artist's impression, will be the topic of an Arthur Holly Compton lecture at The University of Chicago. Delivering the lectures this spring will be Elizabeth Hays, research associate in the Fermi Institute and at Argonne. VERITAS is a new major ground-based gamma-ray observatory with an array of four 12-meter optical reflectors for gamma-ray astronomy in the GeV – TeV energy range. *Image courtesy of The Veritas Collaboration.*

Arts at Argonne to host vocal ensemble ‘Tapestry’



TAPESTRY, a vocal ensemble, will perform at Argonne’s Building 402 Conference Center Saturday, May 12, at 8 p.m.

The trademark of the ensemble is combining medieval repertory and contemporary compositions in bold conceptual programs. Critics have hailed the rich distinctive voices of the ensemble, their “technically spot-on singing,” their emotionally charged performances, their impeccably delivered harmony and complex counterpoint. Tapestry has appeared throughout the United States, Canada and Europe, and has recorded four CDs for Telarc and more recently with the

German label MDG.

The concert is open to the public. Visitors who are U.S. citizens need photo identification to enter the site and should call to register before the concert. Non-U.S. citizens must register before the event by calling (630) 252-3751 during business hours.

Admission is \$25. To order tickets, call ext. 2-3751 or mail a request using the online ticket request form. Remaining tickets will be available the week of May 7 in the Building 213 Cafeteria between noon and 1 p.m. ■

www.anl.gov/ARTS/upcoming.html

CIS offers computing classes

COMPUTING classes offered by the Computing and Information Systems Division are held in Building 201, Room 167C. Unless otherwise noted, classes cost \$225 and are limited to eight participants. Complete class descriptions, schedules and enrollment forms are online. For more information about enrollment procedures, contact Diane Cavazos (CIS) at ext. 2-7153 or dkcavazos@anl.gov.

- Classes offered in April will include:
- “Advanced Word 2003” (CIS124) - Monday, April 16, 8:30 a.m. - 4:30 p.m. Prerequisites: Introduction and Intermediate Word.
 - “Advanced Excel 2003” (CIS127) - Tuesday, April 17, 8:30 a.m. - 4:30 p.m. Prerequisite: Intermediate Excel.
 - “Advanced Access 2003” (CIS130) - Wednesday, April 18, 8:30 a.m. - 4:30 p.m. Prerequisite: Intermediate Access.
 - “Introduction to PowerPoint 2003 (CIS131) — Thursday, April 19, 8:30 a.m. - 4:30 p.m.

http://inside.anl.gov/cis/services/computer_training/index.html

IN MEMORIAM

PETER COLLINS, a retired physicist with 22 years of service at Argonne-West, died Feb. 27. His wife Margaret survives him.

MELVIN DAVIS, a senior engineering technician with 24 years of service at Argonne-West, died Jan. 12. His daughters, Vicki Crowley, Ronda Spraker and Connie Goodwin, survive him.

STANLEY GEDEIKA, a retired stockman with 18 years of service in PO, died Feb. 17. His daughter Maryann and son Ronald survive him.

ELSIE GULYAS, a retired associate chemist with 14 years of service in CHM, died Jan. 20. Her friend Kathleen Rafferty survives her.

JOHN HOLLISTER, a retired instrument maker with 35 years of service in CS, died Feb. 13. He is survived by his five children.

ARTHUR KASTL, a retired fire department captain with 41 years of service in SSD, died Feb. 9. His sons Arthur and Gregory survive him.

JACQUELINE KIEFER, a retired human resource specialist with 22 years of service in HR, died Feb. 10. Her daughter Marsha Reeves survives her.

RONALD C. KILLIAN, a retired heavy equipment operator with 31 years of service in LTD, died Jan. 24. His wife Bonnie survives him.

KARREN D. NEWCOMB, a retired material handler with 13 years of service in AW, died Feb. 9. Her son Allen survives her.

DIANE REDMAN, a clerk with 23 years of service in IPD, died Dec. 10. Her daughter Debbie Counter survives her.

HENRY T. SMIGIEL, a retired maintenance mechanic with 29 years of service in PFS, died Feb. 7. His wife Jane survives him.

HERBERT WOLF, a retired heavy equipment operator with 34 years of service in PFS, died Feb. 27. His son Gerald and his daughter Eleanor Prokop survive him.

NEED A RIDE TO THE UNIVERSITY OF CHICAGO? A FREE SHUTTLE BUS MAKES ROUND TRIPS EVERY WORK DAY. FOR MORE INFO, SEE www.anl.gov/Visiting/shuttle.html

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Argonne Today, the laboratory's daily e-mail broadcast, delivers the latest news updates, seminar listings, safety tips and cafeteria menus right to your computer.

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Argonne... “For a brighter future”

RETIREEES

MARY A. COGLIANESE (TSD) retired Feb. 2 with 20 years of service.

CANDY F. DOYLE (EVS) retired March 2 with 30 years of service.

GIAN P. FELCHER (MSD) retired Feb. 15 with 41 years of service.

JOHN D. B. LAMBERT (NE) retired Jan. 31 with 36 years of service.

C. DAVID LIVENGOOD (ES) retired Jan. 31 with 31 years of service.

CHUN-KEUNG LOONG (IPNS) retired Feb. 28 with 24 years of service.

JAMES L. OLDANI (SCD) retired Jan. 30 with 40 years of service.

WILLIAM SHACK (NE) retired Feb. 6 with 31 years of service.

JAMES L. SNELGROVE (NE) retired Feb. 6 with 38 years of service.

LENORE WELKO (SCD) retired March 2 with 12 years of service.

SHARI ZUSSMAN (CMT) retired Feb. 28 with 30 years of service.

SERVICE AWARDS FOR APRIL INCLUDE:

60 YEARS
Dieter Gruen (MSD)

35 YEARS
Marquis Kirk, Jr. (MSD)

30 YEARS
David Cook (EVS), Barbara Richardson (EQO)

20 YEARS
Karen Kerwin (EQO), Daniel Miller (DIS), Catherine Riblon (CNM), Raymond Rucinski (TSD)

15 YEARS
Kay Borman (FMS), Edmund Chang (AES), Darryl Howe (HR), Daniel Huml (FMS), John Lazarz (BIO), Neil MacDonald (FMS), Corrie Patterson Kamiya (FMS), Glenn Willes (FMS)

10 YEARS
Melvin Brown III (SCD), Frederick Carter (AES), Gary Drake (HEP), Anthony Ferrazzi (SCD), Guy Savard (PHY), Dana Stasiak (CIS), John Vaughey (CMT), Gennadiy Yershov (ES)

5 YEARS
William Bedford III (FMS), David Brown (DIS), Anna Bukowski (AIP), Javier Figueroa (CMT), Millicent Firestone (MSD), Di-Jia Liu (CMT), Stephan Rosenkranz (MSD)

OUTSTANDING SERVICE AWARD NOMINATION DEADLINE IS MARCH 27

The deadline for nominations for the 2007 University of Chicago Outstanding Service Awards is drawing near. The award program, which complements the Awards for Distinguished Performance, recognizes those in support positions who have, through their exceptional contributions, furthered the goals and missions of Argonne.

The award consists of an engraved plaque plus \$3,500. Forward nominations to Cynthia Sullivan (HR), Building 201, or csullivan@anl.gov by March 27. More information about the award program is online.

www.tis.anl.gov/db/memos/download/DDD/2173A.pdf

REACTOR LEAGUE SEEKS GOLFERS

The Argonne Reactor Golf League is seeking new members. The league has eight teams and plays nine-hole, handicapped matches Thursday evenings at the Gleneagles golf course on McCarthy Road in Lemont. The season begins April 19 and continues through August, when the league's annual outing is held.

The Reactor Golf League is open to all current and former Argonne employees, their families and friends. Golfers of all abilities are welcome. For more information, contact Kurt Picel (EVS) at ext. 2-4018 or kpichel@anl.gov.

FLEXIBLE SPENDING ACCOUNT CLAIMS DUE

Flexible spending account claims for 2006 must be postmarked by Saturday, March 31.

Employees can find claim forms in the Human Resources Benefits Department in Building 201, on the WageWorks Web site and on Inside Argonne (go to Resources,

Benefits, Benefits Manual, Flexible Spending Accounts, Forms). The claim forms can be faxed or mailed to WageWorks.

For more information, contact WageWorks Customer Service, weekdays from 7 a.m. to 7 p.m. at 877-924-3967, or e-mail help@wageworks.com.

Employees can also contact Fran Perri (HR) at ext. 2-2989.

www.wageworks.com/
www.inside.anl.gov

VOLUNTEERS NEEDED FOR BOY SCOUT SCIENCE BADGE DAY

Argonne will host approximately 200 boy scouts and their troop leaders for Argonne Boy Scout Science Badge Day Saturday, March 24, from 8:30 a.m. - 3 p.m.

The scouts will earn badges in chemistry, computers, electricity, energy, engineering, geology and nuclear science. Volunteers are especially needed in the electricity and geology badge classes.

Contact Deon Ettinger (DEP) at ext. 2-4272 or ettinger@dep.anl.gov to register or for more information.

ARGONNE EMPLOYEES CAN GET DISCOUNTS ON MICROSOFT PRODUCTS

As a benefit of the laboratory's Microsoft licensing agreement, employees are eligible to purchase some of Microsoft's most popular consumer software and hardware at discounted prices.

This includes products such as Microsoft® Office XP Professional, Microsoft Windows® XP Professional, Microsoft Money 2007 and some of the newest games and hardware.

Details are available online.
http://inside.anl.gov/cis/employee_purchases/microsoft.html

Retirement vendors to visit for one-on-one meetings

THE laboratory's retirement vendors will send representatives to Argonne to meet individually with employees to answer their questions about retirement plans

and assets. To schedule an appointment, call the number listed. Appointments are for one-half hour each. ■

VENDOR	DAY	FOR APPOINTMENTS, CALL:
Fidelity	Thursday, April 12, and Thursday, April 26	(800) 642-7131 Appointment Desk
TIAA-CREF	Wednesday, April 4, Thursday, April 5, Friday, April 6	(800) 842-2005 or www.tiaa-cref.org/moc
Prudential **	Wednesday, April 4, and Wednesday, April 18	Appointment Desk – Cheryl (630) 285-8876

**Prudential meetings are held in the morning until noon.

AAAS seeks proposals for 2008 meeting

THE American Association for the Advancement of Science (AAAS) is seeking symposium proposals for its 2008 annual meeting, which will be held Feb. 14-18 in Boston.

The AAAS annual meeting brings together a diverse array of leading scientists, engineers, educators and policy-makers. It includes up to 10,000 participants and hundreds of members of the national and international media.

Between 150 and 175 symposia are presented each year. The deadline for symposium proposals for the 2008 meeting is 10 a.m. Wednesday, May 2.

The theme of the 2008 meeting — “Science and Technology from a Global Perspective” — emphasizes the power of science, technology and education to assist less-

developed segments of the world society, improve partnerships among developed countries and to spur knowledge-driven transformations. The AAAS Annual Meeting Scientific Program Committee is particularly interested in sessions that would highlight this theme.

Detailed instructions on proposal preparation have been posted to Inside Argonne. A link to the 2008 proposal submission site can be found at the AAAS meeting Web page. Free registration is required. ■

AAAS meeting Web page:

www.aaas.org/meetings/Annual_Meeting/

Proposal instructions:

http://inside.anl.gov/portal/news/stories/2007/2008_aaas.pdf

Classified Ads**MISCELLANEOUS**

FORMULA — Infant formula, Similac Advance, 10 cans, good through November 2009. \$10 each. Cathy Eyberger, (630) 968-1154.

MOTORHOME — 2004 Jayco Class C, 28', 2 slideouts, all options, less than 7K miles. \$50,000. Richard Buric, (708)479-1934.

INKJET — Cartridges, Lexmark 2-pack black 70, 12A1970, never opened. William Haberichter, (708) 349-2789.

FURNITURE — Sectional sofa with recliner at each end, 9'x9'; blue, mauve and cream. 2, blue easy chairs. “Atlas” coffee table with 3' round glass top. Pictures available. \$200 for all. Candy Doyle (630) 257-7569.

WAVERUNNER — 2003 Yamaha GP1300R with trailer and cover, 72mph, 3 cyl, 2 stroke, 165hp, 108 hrs ec, one owner. \$6,500. Rod Habbe, (815) 838-3444.

FURNITURE — Kitchen table and four roller chairs. \$150 o.b.o. Colleen Tobolic, (815) 439-1604.

MISCELLANEOUS — Electrical panel, 100 amp, 120/240, 1ph, indoor, NEMA 1, flush or surface mounting, main breaker included, new in the box. \$50. Eugene Swetin, (847) 940-0199.

MISCELLANEOUS — Carlo Robelli steel string, cutaway, acoustic guitar, model CSX34CEVS, onboard, electric peizo pickup and controls, solid top, gig bag, excellent condition. \$100 o.b.o. TV, Sanyo 20", model DS20930 stereo, front/rear AV, s-video input, remote control. \$40. Leather office chair, high back, arms, black. \$20. Cathy Harland, (630) 303-3039.

BOAT — 17ft. fishing boat, 2000 Tuffy Bass-Marauder, 75hp, Mercury motor, new seats, new trailer tires, 2 depth finder, 1998 minn-kota trolling motor, 42cb thrust, 2, 6 gallon gas tanks. Robert Smejkal, (630) 985-7377.

MISCELLANEOUS — Stainless steel barsink, small with faucet. \$20. Large trunk. \$5. 3 piece, Samsonite luggage, hard case. \$20. Folding table legs, steel. 7 ft. aluminum step ladder. \$10. 10 ton bottle jack. \$20. Cliff Pitts, (708) 430-9104.

AUTOMOBILE

1979 CHEVY — Camaro Z28, T-tops, PS, PB, PW, automatic, newer engine, some body damage, pictures available by e-mail. Best offer. Gary Sprau, (630) 985-6641.

2004 LEXUS — ES330, 34K miles, one owner, garage kept, 6 disc CD changer, heated leather seats, sun/moon roof, excellent condition. \$22,999. Archana Ranginani, (630) 209-0774.

1997 TOYOTA — ACURA, 90K miles, 2.2CL premium, AT, ABS, moonroof, climate control, new timing belt, dealer-maintenance records. \$6,300 o.b.o. Xuemei Cheng, (630) 743-3662.

HOUSING

APARTMENT/RENT — Westmont, 2 bedroom, 1 bath, hardwood floors, 925 square feet. Gas, heat and water included. \$825 per month. Xiaoyan Zhong, (630) 783-8563.

TO BE GIVEN AWAY

MISCELLANEOUS — Weslo Cardence 875 treadmill, 15"x50" belt, 2 hp. 7 1/2 ft. artificial Christmas tree with stand, in box. You haul. Thanh Hua, (630) 637-1873.

LOST AND FOUND

FOUND — Silver bracelet by the cafeteria. Judy Carlson, 2-5933.