

Magnetic 'handedness' could lead to better magnetic storage devices

SYLVIA CARSON

BETTER magnetic storage devices for computers and other electronics could result from new work by researchers in the United States and Germany.

Their findings demonstrate that chirality – a spiral-like “handedness” – in nanoscale magnets may play a crucial role in data transmission and manipulation in spintronic devices, where the spin rather than the charge of an electron is used to store data.

While the spins in ferromagnetic materials are simply oriented along one common direction, some nanomagnets were found to exhibit chirality. The term chirality refers to objects that differ from their mirror image like the human hand.

“In nature many systems have chirality,” said Matthias Bode, a scientist at Argonne’s Center for Nanoscale Materials, “such as elementary particles with electro-weak interactions, organic molecules, hurricanes and even galaxies. Solids with magnetic order of unique chirality are prime candidates for applications, because their peculiar symmetry allows the mixing of electronic, optic, magnetic and structural properties.”

The researchers used spin-sensitive scanning tunneling microscopy (STM) and first-principles electronic structure calculations to identify the magnetic order. By making the STM technique sensitive to the spin, it allowed for the observation of the magnetism of single atoms. This extension of STM is known as spin-polarized STM or SP-STM and was developed by Bode.

Using his enhanced technique, Bode demonstrated that under a magnetic field the pattern shifted in a given direction, which identified the unique chirality.

Results of the research were published in the May 10 issue of the journal *Nature*.

The premise for this work was inspired by the pioneering effort of Soviet physicist Igor Dzyaloshinski. He showed that magnetic order may get twisted into helices with long periods in crystals lacking inversion symmetry, if the spin-orbit interactions are strong enough.

“In the past, this interaction had been considered unimportant in the scientific community,” Bode said. “Now its relevance in nanostructures of any dimensionality such as thin films or magnetic particles is realized.”

Other researchers involved in this study are M. Heide, G. Bihlmayer and S. Blugel of Julich, Germany and K. von Bergmann, P. Ferriani, S. Heinze, A. Kubetzka, O. Pietzsch and R. Wiesendanger of Institute of Applied Physics and Microstructure Research



Matthias Bode (CNM) is shown with his enhanced spin polarized scanning tunneling microscope. His enhanced technique allows scientists to observe the magnetism of single atoms. Use of this method could lead to better magnetic storage devices for computers and other electronics.

Center, University of Hamburg, Hamburg, Germany.

Funding for this work was provided by the German Science Foundation.

An antiferromagnet first

Other Argonne research recently featured in *Nature* was conducted by Argonne’s Oleg Shpyrko and Eric Isaacs and their colleagues at The University of Chicago. Their findings led to a major breakthrough in the understanding of antiferromagnets — materials in which the spins of electrons align in a regular pattern with neighboring spins pointing in opposite directions.

By exploiting a technique called “X-ray photon correlation spectroscopy,” the researchers were able to see the internal workings of antiferromagnets, such as the metal chromium, for the very first time, thus bringing into focus previously invisible phenomena.

In addition to producing the first holograms of an antiferromagnet, the research revealed that the holograms are actually time-dependent, even down to the lowest temperatures. This implies that the antiferromagnet is never truly at rest, and the responsibility for this most likely lies with quantum mechanics and the uncertainties it imposes not only on conventional particles such as electrons and atoms, but also on objects such as domain walls in magnets. The new experiments thus help to open the prospect of exploiting antiferromagnets in emerging technologies such as quantum computing.

Work on this project at the Center for Nanoscale Materials and the Advanced Photon Source was supported by the Department of Energy’s Office of Science, Office of Basic Energy Sciences. Work at the London Centre

for Nanotechnology was funded by a Royal Society Wolfson Research Merit Award and the Basic Technologies program of Research Councils United Kingdom. Work at the University of Chicago was supported by the National Science Foundation.

The results of this research can be found in the May 3 issue of *Nature*. ■

Physics employee receives SPOT award

ANDREA CIPRIANI



Fallis

Jennifer Fallis (PHY) was presented with a SPOT Award for her initiative and quick actions after she noticed a potential safety issue.

Fallis was moving an empty gas cylinder into the empty cylinder storage room on the Building 203 dock when she noticed the safety cap on a cylinder of carbon dioxide in the room was frosted over. She went directly to the ATLAS control room and informed the operators, who contacted the building’s area emergency supervisor. A call was placed to 911, and the cylinder was moved to a designated safe area by the fire department. Although no immediate danger from this event was discovered, Fallis’ actions showed a strong sense of initiative and safety responsibility for herself and others.

The SPOT Award recognizes employees’ contribution to safety and quality at the laboratory. Send nominations for SPOT awards directly to EQO Director Bob McCook at mccook@anl.gov. ■

University-Fermilab collaborations can include Argonne researchers

A new program of strategic collaborative initiatives has been established to provide support for collaborative research projects between University of Chicago faculty and Fermilab scientists and engineers. Proposals for collaborative projects that include researchers from Argonne will also be considered under this program.

Research funded under this program will be new projects intended to provide the basis for future collaborative research between the university and the laboratory. Support for ongoing work, or work being performed mainly by one of the principal investigators (PIs), will not be considered.

Proposals will be evaluated according to the importance of the work — whether the collaboration creates a more powerful or convincing research program than could be achieved by working independently, and the potential to achieve an ongoing collaboration.

Proposals should be assembled and submitted using the guidelines and forms available online. They should clearly make the scientific case, identify PIs and other personnel, the resources existing in this and related areas, and the resources sought. There must be at least one applicant from each institution on each proposal and university applicants must be PI-eligible. Proposal budgets should be in the range of \$50,000-\$100,000 for one year. Since this is a new program, proposals will be funded for only one year in the first instance; however, continued funding of an ongoing project for up to two additional years will be considered in subsequent proposal rounds. A total of \$250,000 is expected to be awarded each year in two annual competitions.

Laboratory directors, the relevant deans, and others as needed will evaluate the proposals and provide advice regarding their relative merits. The final selection will be made by Sept. 1. Proposals that are not funded will remain on record for two subsequent rounds and will be considered in those rounds if the PIs make a written request for further consideration. At that time the PIs may either request consideration of the original proposal or may submit an updated proposal. On completion of the project, PIs will provide a brief written report on the scientific results of the project and on how the funds were used.

Proposals should be submitted electronically by PDF attachment to mesquive@uchicago.edu. The deadline for proposals is Saturday, June 30. The deadline for the second round will be Dec. 31. For more information, contact Larry Hill, associate vice president for national laboratories, at lhill@uchicago.edu or 773-702-2060. ■

<http://research.uchicago.edu>

Argonne, Air Force research lab to collaborate on defense tech, research

CATHERINE FOSTER

OFFICIALS from Argonne and the Air Force Research Laboratory signed an agreement May 14 that promises to speed the delivery of technological advances to American military forces while saving taxpayer dollars.

The memorandum of understanding will promote a cooperative exchange of technical requirements, science and technology information and result in leveraged program development between the two labs. Officials expect the agreement to improve the cost, schedule and performance goals associated with developing critical technologies for the nation through the coordination of related efforts and information exchanges.

The new relationship between Argonne and the Air Force Research Laboratory (AFRL) will provide an opportunity to establish a common and consistent path into the respective technology bases of each facility.

"Argonne and AFRL can access each other's technologies and capabilities to meet our nation's needs," said Sandra Biedron, director of Argonne's Department of Defense Project Office.

Also as part of the agreement, AFRL scientists will have access to Argonne's world-class research facilities, such as the Advanced Photon Source, the Intense Pulsed Neutron Source, the Electron Microscopy Center and the Center for Nanoscale Materials. The AFRL will include Argonne researchers in its Integrated Product Teams and other working groups as appropriate.

Argonne Laboratory Director Robert Rosner predicted great advances for the nation's security coming from this relationship. "This agreement provides an opportunity to establish a common and consistent path into our respective technology bases," Rosner said. "This collaborative research effort will help



Air Force Major Gen. Ted F. Bowlds signs an agreement between Argonne and the Air Force Research Laboratory (AFRL) as Jack Blackhurst, technical advisor, AFRL Plans and Programs Office; Al Sattelberger, Argonne's interim associate laboratory director for applied science and technology; and Sandra Biedron, director of Argonne's Department of Defense Project Office, look on. Photo by George Joch.

meet the needs and requirements of emerging national and homeland security challenges."

Signing the agreement were Rosner and Maj. Gen. Ted F. Bowlds, Commander of the Air Force Research Laboratory at Wright-Patterson Air Force Base, Ohio.

"This MOU with Argonne will enable AFRL and the Air Force to leverage some of the top research scientists and facilities in the country. In turn, we will provide Argonne access to AFRL's finest scientists and resources. We have already begun work with Argonne and already are seeing big payoffs," said Maj. Gen. Bowlds.

The Air Force Research Laboratory is responsible for the Air Force's \$1.5 billion science and technology program as well as additional customer funded research and development for the U.S. Air Force. The lab also oversees basic and applied research as well as advanced technologies that support the Air Force. ■

James Miller (CMT) is document challenge winner

THE guesstimates have been tabulated, and the Argonne Document Challenge has a winner. James Miller (CMT) guessed that there are a total of 1,130 policies, procedures and work instructions currently governing the laboratory. He came closest to the Laboratory Management System Implementation Team's actual count of 1,152.

Miller will receive a pizza party for himself and 11 co-workers.

"Submissions ranged from 46 to '42x10⁷,'" said Deputy Laboratory Director Don Joyce, who is leading the Laboratory Management System (LMS) initiative. "That gives some perspective to the way it feels for some of us. Thanks to all who submitted entries to the challenge, and congratulations James!"

Over the next months, many of these documents will be shelved. Policies, procedures and work instructions will be carefully reviewed. Those with

content and intention that add value will be consolidated and incorporated into laboratory-wide procedures under configuration management.

Argonne's quest for ISO 9001 and 14001 registration by September 2008 depends on clear, accurate, intentional, controlled and applied documentation.

The Laboratory Management System is committed to efficient management practices that provide research and development products and services that satisfy the Department of Energy and other customers. It will integrate recognized management systems — ISO 9001:2000 (quality) and ISO 14001:2004 (environmental) — into a framework to honor commitments to customers and the environment.

More information about LMS is online and forthcoming. ■

<http://inside.anl.gov/lms>

Foreign business travel requires approval

ARGONNE employees who travel outside the United States must comply with the U.S. Department of Energy's Foreign Travel Order. These trips must be entered into the Foreign Travel Management System (FTMS) and approvals must be obtained from the appropriate program office. Employees going on foreign travel must complete a DOE F 551.1 form (formerly SF 1512), obtain proper division and associate laboratory director approvals and submit it to the Foreign Travel Office. The Foreign Travel Office will ensure the trip is entered into FTMS and that further documentation is provided to the various program offices, if necessary.

While a DOE F 551.1 is going through the signature process, a draft version can be faxed to the Foreign Travel Office (ext. 2- 6111), and the trip can be put into FTMS while awaiting completion of the signature process. If, at any time during the signature process, a trip is denied by the division or ALD office, the trip can be canceled in FTMS. It is much better to cancel a trip in FTMS than trying to rush it through the process.

The U.S. Department of Energy deadline for entry of a foreign travel request into FTMS for travel to non-sensitive countries is 30 calendar days; the deadline for travel to sensitive countries is 45 calendar days. The Foreign Travel Office must receive requests in time to meet these deadlines so DOE Headquarters can process the necessary reviews and approvals. Part of the necessity for the advance request

is that before DOE Headquarters can approve the foreign travel request, they must receive country clearance from the American Embassy in the country being visited.

The only exception to the above is an employee who is going to a foreign country solely for vacation or other personal reasons. This means that the employee will not be attending meetings or conducting any work or discussions that are in any way related to their work at Argonne. If that is the case, DOE does not require that a DOE F 551.1 be submitted. If, however, an employee will be conducting any type of business on a personal trip, the DOE F 551.1 must be completed and the above foreign travel approval process must take place. Taking vacation as a result of not receiving trip approval is not a viable strategy, and initiates external responses which potentially can bar the option of future travel.

Travelers will receive e-mail notification from FTMS when the trip is approved. An employee who does not receive this e-mail in a timely manner should contact the Foreign Travel Office at ext. 2-1070 to check on status of the approval. New procedures have recently been initiated whereby the traveler, as well as his or her division director, will be advised by e-mail as to any trips that are not approved prior to the scheduled date of departure.

For additional information on the foreign travel procedures and policies, contact Foreign Travel Administrator Patty Combs (SCD) at ext. 2-1070. ■

Hot weather may prompt 'air pollution action days'

DURING hot weather, Argonne may be notified that an "air pollution action day" has been announced by the U.S. Environmental Protection Agency. Employees will be notified by the site-wide public address system and asked to take steps to reduce air pollution.

During periods of hot weather, volatile organic compounds and emissions from cars and other sources can cause the formation of ozone and fine particulates that exceed healthy limits. Excessive levels of ozone and fine particulates can contribute to respiratory problems, especially in children, the elderly and those with pre-existing health conditions.

There are several ways to reduce ozone and fine particulates on air pollution action days:

- Limit driving: combine trips, car pool, or limit trips to early morning or evening hours.
- Refuel vehicles after 7:30 p.m.
- Postpone lawn mowing and other activities using gasoline-powered equipment.
- Use water-based paints instead of oil-based paints, or postpone if possible until cooler weather.
- Limit the use of household spray products that emit volatile organic compounds and aerosol particulates.

For more information, see www.cleanteair.org. ■

OPSEC applies to laptop and mobile devices

ACCORDING to FBI statistics, one out of every 10 laptop computers will be stolen within the first 12 months of purchase, and 90 percent of them will never be recovered. Laptops may be stolen for the value of the computer itself or for the information inside.

Laptop and mobile device users should follow these basic tips to help prevent theft:

- Keep the device with you at all times.
- Don't put the device in checked baggage.
- Don't put the device on the airport conveyor belt until you are sure you won't be delayed.
- Consider putting the device in a bag that does not look like a computer case.
- Do not store the device in the open; for example, in the front seat of a car in plain view.

Data stored on mobile devices should never contain collections of personal information such as Social Security numbers, credit card numbers or medical information. Unauthorized access to this type of data can often lead to identity theft.

Questions or concerns can be directed to the Argonne Cyber Security Office at ext. 2-3456 or cyber@anl.gov. Report lost or stolen laptops to a divisional property representative. For more information about Argonne's OPSEC Program, call Pat Berglund (SCD) at ext. 2-2946. ■

Strategic Leadership Program to train laboratory's future leaders

UChicago Argonne, LLC has announced the Strategic Laboratory Leadership Program, a non-degree executive education leadership program for the programmatic and operations staff of Argonne and Fermilab. Fifteen Argonne employees and 10 Fermi employees will be selected annually to participate in the year-long leadership program.

The Strategic Laboratory Leadership Program provides an opportunity for Argonne to identify and develop leaders capable of moving the laboratory forward and establishing Argonne as a leading U.S. Department of Energy laboratory. The University of Chicago committed to this program as part of the laboratory management contract and will provide resources to support this program for five years beginning September 2007.

The University of Chicago Graduate School of Business (Chicago GSB) developed the curriculum with input from both Argonne and Fermilab. During the course of the program year, program participants can expect three intensive weeklong periods away from the laboratory.

Chicago GSB faculty will conduct sessions on effective leadership, strategic thinking and leading change and innovation. Attendees will also select an elective Chicago GSB course and participate in related activities between sessions. The first session on effective leadership will be held Sept. 4-7 at The University of Chicago's Gleacher Center in downtown Chicago.

Argonne candidates will be nominated by ALDs by Monday, June 25. Laboratory Director Robert Rosner will announce the 2007 Strategic Laboratory Leadership Program participants by mid-July.

Successful candidates will have demonstrated exceptional work in a key mission area, formal or informal leadership abilities, capability to work collaboratively, ability to work effectively across traditional laboratory boundaries and innovation and creativity in problem-solving.

Employees who are interested in this development opportunity should contact their division directors. Employees must be full-time, exempt and may not have received an Executive MBA from The University of Chicago or Northwestern University.

The Strategic Laboratory Leadership Program is coordinated by HR/Performance Development. More information is available on Inside Argonne or contact Kathy Whitney at kwhitney@anl.gov ■

http://inside.anl.gov/leadership_program

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'Green' remodeling project leads to Best in Class Award



GEORGE Norek (FMS-ENG) and Keith Trychta (BIO) received the Pollution Prevention and Environmental Stewardship Award for their efforts to protect the environment during a remodeling project in Building 202's QA-wing.

The award recognizes work that protects the environment in sustainable design and green buildings while saving money and resources. Norek and Trychta won the award for the design and conversion of old storage space in Building 202 into office space. Norek and Trychta were presented with their certificate of appreciation May 7 by Ron Lutha, manager of the U.S. Department

of Energy Argonne Site Office. George Norek (FMS-ENG) and Keith Trychta (BIO) were presented with the 2006 Office of Science Award for Best in Class. From left to right are Norek, DOE Argonne Site Office Manager Ron Lutha, Argonne Director Bob Rosner, Trychta and Gregg Kulma.

of Energy Argonne Site Office.

DOE solicits nominations every December for projects in sustainable design/green buildings, environmental management systems, waste pollution/prevention and electronics stewardship and recycling. Nominations for projects in any of these categories can be sent directly to Gregg Kulma at gkulma@anl.gov. ■

IN MEMORIAM

OLAF M. BEITH, a retired instrument maker with 24 years of service in CS, died April 21. His brother, Stanley Kieras, and friend, Esther Grosser, survive him.

JOEL HEINEMAN, a retired mechanical engineer with 28 years of service in RA, died May 3. His children, JB, John, Jeffrey and Jill Bazylykut, survive him.

JAMES KANTOR, a retired instrument machinist with 34 years of service in CS, died April 11. His four children, James, Jeffrey, Kathleen Jeffrey and Kristine Currier, survive him.

RICHARD MALECHA, a retired mechanical engineer with 52 years of service in CMT, died April 17. His wife, Dolores, survives him.

PAUL MCCARTHY, a retired mechanical engineer with 25 years of service in RE, died May 8. His wife, Eleanor, survives him.

HARRY O. MONSON, a retired senior engineer with 29 years of service in RPD, died May 3. His wife, Jane, survives him.

VIRGINIA NICKLESKI, a retired senior secretary with 20 years of service in ECT-COM, died April 10. Her husband, Stanley, survives her.

ROBERT A. NOLAND, a retired senior metallurgical engineer with 40 years of service in RAS, died April 18. His nephew, Philip Sweeney, survives him.

EVERETT R. PROUD, a retired staff executive with 16 years of service in OTD, died April 27. His sons, James and Stephen, survive him.

MELVIN THOMPSON, a retired instrument machinist with 20 years of service in CS, died February 20. His daughter, Charyn Manietta, survives him.

ANGELA TURK, a retired data entry specialist senior with 32 years of service in CSD, died May 13. Her daughter, Georgene Spier, survives her.

CARL HARRY YOUNGQUIST, a retired mechanical engineer with 30 years of service in CHM, died May 6. His wife, Dorothy, survives him.

CYBERINFRASTRUCTURE 'COMMUNITY BUILDING' WORKSHOP PLANNED FOR JULY 9-11

A Cyberinfrastructure Training, Education, Advancement and Mentoring (CI-TEAM) community-building workshop will be held July 9-11 in Washington, D.C.

The workshop is designed to:

- Foster community-building among the currently funded CI-TEAM projects, related projects funded through other programs, and aspiring grantees in the next round of solicitations;
- Share experiences and lessons learned among all participants for enhanced cyberinfrastructure impact that may be addressed by leveraged efforts and/or specified in new solicitations; and
- Inform the community of the CI-TEAM program and encourage their creative participation in the next solicitation and in the evolution of the CI-TEAM program.

More information is available online.

<http://www.eotepic.org/page.php?file=citeam/index.html>

CHORAL GROUP SEEKS NEW MEMBERS FOR EARLY FALL CONCERT

The Argonne Choral Group — now planning year-round performances — is looking for new members.

"We could especially use a few more women sopranos and altos," said director Katie Weber. "Of course, we could always use more men as well." The group welcomes singers of any type, talent or ability.

Rehearsals are held Mondays and Thursdays beginning Monday, June 4, from 11:45 a.m. to 12:30 p.m. in the Building 362 Auditorium. For more information, contact Pat Garner, president of the Argonne Choral Group, at plgarner@anl.gov.

WEIGHT WATCHERS TO HOLD OPEN HOUSE MEETING

Weight Watchers will have an Open House Meeting Wednesday, June 27, at noon in Building 200, Room J183. The cost to participate in Weight Watchers is \$144 for 12 weeks, with one week free. A minimum of 15

enrollees is required.

For more information, please call ext. 2-2803.

FOOT DISORDER SCREENING OFFERED

Argonne's Medical Department will hold a Foot Disorder Screening Clinic Wednesday, June 27, from 8:30 a.m. to 2:30 p.m. The cost is \$25, and checks should be made payable to Dr. Paul Martin.

Call ext. 2-2803 to register. The Medical Department will conduct screenings by appointment only.

RETIREES - MAY 2007

RICHARD W. BLOGG (OCF) retired April 30 with 30 years of service.

MARK DONNELLY (BIO) retired May 2 with 15 years of service.

JOHNNY WRIGHT (FMS-GR) retired May 18 with 38 years of service.

SALLY PETERS (OCF-PRO) retired May 25 with 38 years of service.



Employees invited to bike to work

ALL Argonne divisions are invited to compete in a divisional challenge to see which division can have the most participants and the most miles biked during the annual Chicago "Bike to Work Week Commuter Challenge," June 9-15. Biking to work is a fun and healthy way to start and end the workday, and it's good for the environment.

In past years, 55 to 60 Argonne bicyclists participated in Bike to Work Week and prevented the emission of hundreds of pounds of toxic pollution, decreased the combustion of hundreds of gallons of fossil fuels, burned

hundreds of thousands of calories and rode more than 4,000 miles.

To participate or find out more information, contact John Valdes at ext. 2-8754 or valdes@anl.gov or Gregg Kulma at ext. 2-9147 or gakulma@anl.gov. The Chicago Bike to Work Week Commuter Challenge is sponsored by the Chicagoland Bicycle Federation.

Bicyclists should remember to share the road safely with motorists and other cyclists, and always wear a helmet, both on and off-site. ■

http://www.biketraffic.org/content.php?id=44_0_8_0



Rube Goldberg winner demonstrates machine

MAINE South High School, Park Ridge, the winner of Argonne's Rube Goldberg machine contest for Chicago-area high schools, received its first-place trophy and demonstrated its winning machine May 24 in the Building 213 Cafeteria. Their machine uses more than 10 steps to take a whole orange, juice it and pour the juice from a pitcher into a cup.

Argonne's Educational Programs and Communications and Public Affairs divisions sponsor the contest in collaboration with Chicago Children's Museum and Rube Goldberg, Inc. ■



TOP: Renee Carder, deputy to the laboratory director, presents the winning team with their trophy.

ABOVE: Argonne employees inspect Maine South's Rube Goldberg machine. Photos by Wes Agresta.

Classified Ads

MISCELLANEOUS

BOOKCASES — Tenneco, model B53, steel, all welded construction, champagne/putty, new in shipping box, 2 available. \$100 ea. Ralph Niemann, (630) 985-5745.

MISCELLANEOUS — Craftsman mower, 6.75hp. \$150. Frigidaire, 6hp, electric start. \$150. Toro personal pace, 6hp. \$180. Scott Gildo, (630) 834-1550.

BEDROOM SET — Twin size, walnut, 2 headboards, box spring, mattress, 9-drawer chest, desk, chair, hutch, night table. \$800. Tony Juscius, (708) 460-8913.

DEHUMIDIFIER — Removes up to 25 pints of moisture, automatic on/off humidity control, detachable water container, continuous run to hose drain. \$25. Richard Konecny, (630) 964-3660.

MISCELLANEOUS — 1988 Jason ski boat, 19' open bow, 165hp I/O, covers, camper top, skis, tube, ropes, life jackets. \$5,000. Flat-bed trailer from pop-up camper, hydraulically-activated brakes, 6.5'x12'. \$100. Don Timmerman, (815) 478-3431.

DVD PLAYER — GE, good working condition. \$10. Jay Johnson, (630) 378-1248.

DRUM SET — 1987 Premier Special Edition, 5-piece, red vinyl wrap finish, very good condition, racer_41@yahoo.com. \$500 without stands or cases, \$650 for everything. Geoff Amann, (708) 799-1298.

SAXOPHONE — Jupiter Saxophone, Alto. 1990's model. \$100. Mike Jagger, (630) 910.4831.

DOG KENNEL — 6'x12'. Originally \$200, asking \$100. Julie McGillen, (815) 715-8130.

FURNITURE — Glass top pedestal dining room table, 4 cloth covered skirted dining room chairs. \$200 o.b.o. Tracy Ercoli, (630) 253-3270.

BEDROOM SET — Child's, natural maple finish, crib, changing table/dresser, mirror, dresser/hutch, spindle headboard/footboard, twin, pictures available, pick-up only. \$700. Rob Ptorkowski, (708) 479-6854.

MISCELLANEOUS — Little Tikes imagine sounds playhouse. \$85. Burley d'lite bicycle trailer, for 2 children, stroller kit. \$250. Toddler dump truck sandbox. Free. Linda Pierce, (630) 778-1375.

FURNITURE — Matching couch, chair, camel color. Solid wood end table, 3, 2 with doors. Cocktail table. \$50 ea. Gordon Veerman, (815) 485-4944.

DESK — Oak, "L" shape, bookshelf on top,

48"x60". \$100. Ann Murray, (630) 257-7145.

TV — Philips, 25", remote control, perfect condition. \$60. Ruobing Xie, (847) 849-0888.

MISCELLANEOUS — Kenmore Cold Spot Chest Freezer, 1989, 13.3 cu. ft. \$100. American Standard, 1-piece toilet, 1.6 GPF, linen color, elongated bowl, no chips/scratches. \$60. Nicole Green, (815) 735-4524.

CLOTHES — Teen girl, sizes small/medium (2-5), shirts, tanks, sweatshirts, sweaters, pants, jacket, skirt, over 50 items. \$75. Denise Moores, (630) 778-0250.

MISCELLANEOUS — Organizing a Russian school in Naperville, children 5-12 years old, www.russian-school.org. Irina Kosheev, (630) 759-2280.

AUTOMOBILES

1999 MERCURY — Villager, 4 door, V6 3.3L, red, 60K miles, very good condition, new brakes/belts. \$5,100. Tae Lee, (630) 753-0491.

2007 TOYOTA — Yaris, 1.3K miles, leaving country. Mike Jagger, (630) 337-4308.

1977 KAWASAKI — KZ1000, 20K miles, good condition, super sport wind jammer black, custom seat. \$1,500 o.b.o. Kevin Kufeldt, (630) 518-5694.

1997 FORD — Taurus, 68K miles, good condition. \$2,500. Kevin Lo, (630) 327-9198.

HOUSING

CONDO/RENT — Lemont, 2/3 bedroom, call for details. Bruce Hoster, (630) 257-2780.

APARTMENT/SHARE — 2 bedroom, 5 minutes from lab. \$470 mo. Kujtim Latifi, (630) 242-0668.

ROOM/RENT — Room in house, furnished, private bath, laundry facility. \$440 plus utilities. Lixin Fan, (630) 606-9052.

WANTED

BICYCLE — Must be in ready to use condition, ride to work. Sri Hari Krishna Narayanan, (814) 574-5334.

LOST AND FOUND

MEMORY STICK — Found May 24 at Building 312, southeast dock. Contact Michael Cardamone at mcardamone@anl.gov.



Argonne running team sets record

THE Argonne Running Club's relay team took third place in the Corporate Division at the annual River to River Relay in southern Illinois.

The race started on the bluffs overlooking the Mississippi River, wound its way over hilly, backcountry roads in the Shawnee National Forest and finished on banks of the Ohio River in Golconda.

This year's team finished the challenging 80-mile race in 10 hours, six minutes and 53 seconds, breaking the team record established last year by seven minutes and 30 seconds.

Argonne has competed in this event for the past 13 years with a combination of 27 different runners. For information on the Argonne Running Club, contact John Hyzer at jhyzer@anl.gov.

PHOTO CAPTION:

Argonne Running Club's 2007 River to River relay team crossed the state from the Mississippi to the Ohio River in just over 10 hours. Front row (from left to right): Conrad Zadlo, Christine Buitter, Jeff Elam and Ron Krnak; Back row: Dan Milinko, Jim Kuiper, John Schlueter and Tom Buffington.

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