ORNL’s Jaguar supercomputer passed the 100-terafl ops mark in early April. Not too many years ago that performance power milestone would have been like achieving computing nirvana. Now it’s just a step along the way to the current target—250 terafl ops, or 250 trillion floating point operations per second, which could be in service at the Leadership Computing Facility by the end of the year.

The new goals are petafl ops, or quadrillions of floating point operations per second, or even exafl ops, a quintillion.

In 1992 100 terafl ops seemed inconceivable. In fact, 15 years ago this month ORNL and DOE’s Office of Energy Research (now the Office of Science) decided to get serious about high-performance computing with the establishment of the High Performance Computing Research Center.

At the time, Ed Oliver, who headed the Lab’s Office of Laboratory Computing, said that ORNL computing was emerging from an era of “slim pickings.” The Laboratory had once been a leader in computational research thanks to mathematician Alston Householder and the Oak Ridge Automatic Computer and Logistical Engine, which was based on a system pioneered by the mathematician John von Neumann. ORACLE was used for the difficult calculations needed for projects such as the nuclear airplane project and radiation and shielding research.

Computing eventually gravitated to the realm of business system mainframes, which remained fairly content with the status quo’s incremental performance advances.

In the late 1980s ORNL’s biggest computer was a Cray actually located at the East Tennessee Technological Park, or K-25. Buddy Bland, now the director of ORNL’s Center for Computational Sciences, managed that Cray.

“We purchased the 100-megafl ops Cray in February 1985. It was our first big scientific machine for general use,” Buddy says. In the early 1990s Lab Director Al Trivelpiece and Oliver directly supported the Cray, which brought more users.

In 1991 DOE issued a call for proposals for a High Performance Computing and Communications program. ORNL joined with three other national labs and seven universities to propose a “Partnership in Computational Science.” The proposal led to the establishment of the Lab’s Center for Computational Sciences, one of two under the HPCC program.

Advances in microprocessor technology fueled the development of computers. In 1995, with great fanfare, ORNL cut the ribbon on one of the results: a brand-new supercomputer called the Intel Paragon XP/S, a 150-gigafl ops powerhouse located in Building 4500-North.

“For a brief moment we had the fastest computer in the world,” Buddy says.

‘On to exaflops’
15 years after ORNL got serious about scientific computing, Lab is setting the pace

If you’re wondering whether the plethora of wellness programs that have cropped up at ORNL in the past few years are making a difference, look no further than Darlene and Ron Bounds.

Between them, they’ve lost approximately 130 pounds. Most of the success is Darlene’s, who has shed more than 90 pounds since she entered the Weight Watchers program and began using ORNL’s Fitness Center last July.

“It has made a 100-percent difference in my life,” she says.

Darlene works in Health Services as a Facilities & Operations Craft Resources support person. Her husband, Ron, also of Craft Resources, has lost around 30 pounds since his wife went on her diet.

She says it’s because he has to eat what she fixies. Ron says he’s no victim.

“I went along with it. I needed to lose some too,” he says. “I support her and she supports me.”

Mutual support has likely played a prominent role, and the Bounds have been successful by any measure. Darlene says she not only feels better but does her job better. Losing the weight has made a tremendous difference in how she feels and what she is able to do.

“I used to dread having to walk to the other end of the building. I had 90 more pounds to carry around, and I dreaded it,” she says.

“No I just zip there and back.”
Maintain a healthy lifestyle: Activities, facilities keep wellness at the forefront

ORNL’s Wellness Program has a number of ongoing events and activities to help Lab staff members adopt and maintain healthier lifestyles. For more information, contact wellness coordinator Joan Lawson, 576-9120, lawsonjw@ornl.gov.

Continuous activities
ESH&Q Director Karen Downer leads a Wellness Walk on Tuesdays and Thursdays. Walkers meet at 11 a.m. at Building 4500-North’s Flagpole Lobby.

Weight Watchers-at-Work meet at 11:30 a.m. Wednesdays in Room 246, Building 4500-North. Contact Gayle Jones, 574-2496, jonesjg2@ornl.gov.

The ORNL Fitness Center, open 24/7, has facilities in Building 4500-South and at the Spallation Neutron Source.

The Mayo Clinic Wellness Website (https://secure.mayoclinic.com) has tons of health and wellness information and access to the world’s leading wellness experts.

Annual activities
Covenant Health Marathon Events—these March and April yearly events encourage employees to participate in the Fittest Company Challenge marathon, half-marathon, 5K and marathon relay to attain a higher level of fitness.

HealthFest Month—During the month of May the ORNL Wellness Program sponsors various activities such as 10K and 5K runs, walks, bike rides and numerous group fitness classes to celebrate National Employee Health and Fitness Day.

Santaclausophobia is the fear of looking like Santa Clause after the holidays. The Wellness Program offers a simple weight management program.

October’s Benefits and Wellness Fair offers numerous health screenings and provides various wellness educational booths.

Health Risk Assessment, a tool created by Mayo Clinic experts, assesses health risk factors based on current medical guidelines. Participants receive a Personal Health Report that explains any health risk factors and identifies things they can do to reduce their number of health risks.

Monthly activities and events
The 2007 ORNL Health and Wellness Seminar Series offers staff the opportunity to learn about a wide variety of health issues and conditions. Conveniently held on-location at the Laboratory, the goals of the program are to educate ORNL staff about ways to stay healthy, prevent disease and illness through early identification of health problems via screenings and lower health care costs for ORNL and our employees.

Each month focuses on a different health topic. Seminars, screenings and other events bring medical experts, clinics and other professionals to the Lab, at no cost to staff.

One-time activities and events
The Colorful Choices program encourages eating more fruits and vegetables. Weekly e-mails and nutritional quizzes keeps the participants motivated and give lots of ideas and tips. A nutritionist conducts seminars on healthy eating, and other activities are planned, as well.

The American Cancer Society’s NuPa Study encourages physical activity and nutritious eating habits.

Tennessee on the Move encourages more physical activity and reduction in caloric intake.

Walk to Wellness is a 28-day Mayo Clinic walking program to encourage the sedentary population to become physically active.
REDC lands fuel reprocessing demo

The Radiochemical Engineering Development Center’s hot-cell manipulator room isn’t the most typical place to have a luncheon, but these aren’t typical times for REDC, whose staff members celebrated a big win on April 26.

The nuclear materials processing facility at the High Flux Isotope Reactor site has been announced as the site of a coupled end-to-end demonstration of commercial nuclear fuel reprocessing technology. This means that REDC has won the program to demonstrate how the nation’s stocks of spent reactor fuel can be reprocessed for permanent storage or transmuted into fuel for “burner reactors,” key elements of the Global Nuclear Energy Project plan to both deal with nuclear waste storage and set a path toward safe and efficient nuclear power production.

“This puts REDC on the very ground floor of closing the nuclear fuel cycle,” says Nuclear Operations Director Kelly Beierschmitt.

Lab Director Jeff Wadsworth, citing the Lab’s nuclear heritage, told the assembly that REDC proved that it had the “people, the reputation, and facilities and the history” to demonstrate the technologies that could very well jump-start re-establishing nuclear power as a critically needed energy alternative.

The demonstration, funded by DOE’s Office of Nuclear Energy, will be a multiyear, multimillion-dollar program for ORNL.

Not quite Bug Tussle

April’s Nano Nexus conference at ORNL turned out to be an informative success for both researchers and venture capital representatives. Communications’ Mike Bradley recalls a conversation he had with Doug Jamison, president of New York-based Harris & Harris.

The night before the event, Jamison and John Chen, senior associate at Battery Ventures in Menlo Park, Calif., were discussing their doubts about whether the trip to East Tennessee was worth their time. Specifically, they wondered if the Spallation Neutron Source merited all the acclaim they had heard.

“There’s always some skepticism when we leave New York or Silicon Valley,” said Jamison. “So we headed down south with a bit of hubris.

“John’s father (Sow-Hsin Chen) is a renowned researcher at MIT. So John said ‘If the SNS was really the premier place to be, my father would be the first one to use it,’” Jamison said.

At Jamison’s suggestion, Chen cell-phoned his dad to tell him he was in Oak Ridge, just to see if he got any reaction. He did.

“His father said, ‘Oh, yes, and I’m first in line to use the Spallation Neutron Source. Researchers around the world are very excited by it,’” Jamison told Mike.

Earth Day: Research makes a difference

Since Earth Day fell on Sunday this year, the Laboratory celebrated it during the week with a contest for kids, a seminar, some music, some tours and the highlight of the day: the release of native species turtles and fish into the Conference Center pond.

The turtles seem to like their new digs. The sliders can be seen lounging on the wooden structures that were placed in the pond for them. The hope is that the native-species will help control the nonnatives that persist in the pond and restore its ecological balance.

Corporate Fellow Tom Wilbanks’ talk centered on environmental sustainability and the difference researchers can make. He cited one area where ORNL has made a big difference: In the 1960s, researcher Eric Hirst published a paper warning that unrestricted growth in electric power generation had the potential to harm the environment. The report was controversial and the research was attacked, but ultimately ORNL’s work played an important role in forming the National Environmental Policy Act.

Tom says he was attracted to ORNL by...
The Paragon had 1,024 computing nodes and 3,096 processors. The prefix *giga* means billion, so by today’s standard it performed at 0.15 teraflops.

The CCS used the Paragon on “Grand Challenge” problems related to energy research, astrophysics, climate modeling and groundwater flow simulation.

Though quickly overtaken in a rapidly accelerating computing race, the Paragon was a watershed in one important aspect: It revealed to the Lab what it would take to become a major player in high-performance computing.

“ORNL had been a pioneer in massively parallel computing under Bob Ward’s mathematics group [the forerunner of the Computer Science & Mathematics Division],” Buddy says. Later, Al Geist’s computer science research team won acclaim for the Parallel Virtue Machine, a program that enabled computers of different architectures to be linked to work on a single problem simultaneously, paving the way for massively parallel programming.

Over in the Metals & Ceramics Division, researcher Thomas Zacharia produced for the Department of Transportation the first automotive crash analysis simulations in a massively parallel environment. The work combined the forces of M&C researchers, the Paragon’s operators and the ORNL garage—which helped disassemble an SUV—in an early indication of ORNL interdisciplinary strength.

One problem the industry had to grapple with was how to handle the reams of data that began pouring out of the new computers. This had always been something of a challenge; now information threatened to swamp the industry. Working in a large partnership, ORNL helped develop the High Performance Storage System, a data storage and retrieval mechanism that is still state of the art.

A key requirement with supercomputers is having a place to put them. Their electronics use lots of power and generate lots of damaging heat, requiring a huge infrastructure. Building 4500-North was barely adequate for the Paragon. The machines truly needed to have homes specially built for them.

“We discussed putting a new facility between wings 4 and 5 of 4500-North, and there were plans for a new building in the flagpole lot,” Buddy recalls. “None of these was really the answer.”

The turning point in ORNL computing, Buddy says, was UT-Battelle’s modernization campaign. The new contractor arrived at ORNL in 2000, the same year ORNL started up IBM’s Eagle, the Lab’s first machine to break the one teraflops barrier. Eagle and GRAIL, the Gene Recognition and Analysis Internet Link developed at ORNL, played a significant role in the success of the Human Genome Project.

By now scientific computing was evolving into what DOE’s Under Secretary for Science, Ray Orbach, was terming a “third leg of science.” Researchers were taking advantage of the new computing power to break through the barriers of what time and resources simply didn’t allow with older, slower technology. With data- and variable-intensive problems such as climate modeling or simulating the performance of new nuclear weapon designs, science was driving the development of massively parallel computing. UT-Battelle’s modernization campaign included a computational sciences component of the privately funded buildings, which included large bays for computers with the necessary cooling and electricity infrastructure.

At the same time as the modernization plans were kicking off, Orbach, then director of the Office of Science, held a workshop to discuss the news that Japan had completed the 35-teraflops Earth Simulator. The United States had lost the lead in the now key area of high-performance computing, a situation he termed “potentially grave.”

By the time of Orbach’s wake-up call, Zacharia, the crash-test modeler, was leading the Lab’s Computing and Computational Sciences Directorate.

Although puny by today’s standards, ORACLE led its peers and scores extra points for its art deco design.

ORNL’s first big computer, the Oak Ridge Automatic Computer and Logistical Engine, was the best of its kind in its time, which was the 1950s. It could do 100 man-years of computing in eight hours.

We asked Bronson Messer, a computational scientist specializing in astrophysics, how that compares with the Cray XT4 Jaguar.

“ Hmmmm,” responds Bronson. “The simplest thing to do is to think that statistic for ORACLE was based on a man [or woman] doing a calculation every second. If you multiply that out, ORACLE did about 100,000 operations a second. That’s 100 kFLOPS, but not really, as ORACLE was a fixed-point machine and couldn’t do floating point operations.”

“Jaguar now does 119 teraflops: 119 x 10^12 / 100 x 10^12 ~1.1, i.e. a billion times faster. So, the translation might be: Jaguar can do 100 billion man-years of computing in eight hours.”

Bronson also provides an astronomical angle: “There are about 100 billion galaxies visible to us right now in the observable universe. So, if you had one person in each galaxy in the observable universe computing for a year, Jaguar would beat them to an answer by day two.”
Snijders latest Wigner fellow

Paul Snijders is the most recent recipient of ORNL’s Eugene P. Wigner Fellowship. The fellowships are two-year postdoctoral appointments, named for the Nobel laureate who was ORNL’s first science director.

Paul received his Ph.D in 2006 in low dimensional condensed matter systems from the Kavli Institute of Nanoscience, Delft University of Technology, The Netherlands. As a student, Paul was a 2006 recipient of the Wayne B. Nottingham Prize at the Physical Electronics Conference.

In the Low-Dimensional Materials Physics group in the Materials Science & Technology Division, his work with John Wendelken will focus on spin-order in highly correlated electron systems at surfaces using state-of-the-art scanning probe techniques.

Outside of work, Paul, who is originally from The Netherlands, enjoys photography and riding motorcycles.

Bonnett leads Concerns Program

Steven Bonnett has been appointed coordinator of ORNL’s Concerns Program, effective May 1. The Concerns Program is a rotational assignment within the Audit & Oversight Directorate, reporting to Scott Branham.

In addition to the coordinator role, Steven will continue to perform audits and other assessments. He can be reached at 241-2255, bonnettsb@ornl.gov.

Steven brings more than 15 years of business operational experience from ALCOA and Ford Motor Company. He holds a bachelor of science in statistics and a master’s degree in industrial engineering from the University of Tennessee and an M.B.A. from Auburn University.

Cindy Kendrick, who has led the Concerns Program for the past three years, joins the Technology Transfer and Economic Development Directorate providing assistance to the user facilities program.

Reporting fraud, waste and abuse

UT-Battelle is committed to performing its business activities with the highest standards of integrity, honesty and professional competency. As a UT-Battelle employee, you play an important role in our commitment to maintaining the highest business standards through your individual commitment to excellence.

Further, you have the responsibility to provide notice of inappropriate activities which threaten our joint dedication to integrity in the workplace and which may prevent us from meeting the expectations of DOE and our other customers.

For work done under the DOE contract, UT-Battelle employees have a number of options for expressing their concerns about activities they may view as inappropriate on the job. Any employee with information about alleged fraud, waste, abuse, corruption or mismanagement relating to DOE programs, operations, funds or contracts may provide information directly to the following:

• Line management
• Scott Branham, director of the Audit and Oversight Directorate (241-7614) or http://home.ornl.gov/directorates/audit_assessment/form_fraud.shtml
• Steven Bonnett, Staff Concerns Coordinator (241-2255) or http://home.ornl.gov/programs/employee_concerns/
• The Office of Inspector General (IG), 1-800-541-1625. The toll-free hotline number is operated 24 hours a day to permit immediate access by any employee.

All such disclosures may be made without fear of employer reprisal. Employees are also free to refuse to engage in illegal or dangerous activities which the employee believes to be unsafe; to violate laws, rules or regulations; or to involve fraud, mismanagement, waste or abuse.

Also, it is important that all employees work cooperatively with internal and external auditors and investigators.

Scott Branham, Director
Audit and Oversight Directorate
Significant Event Awards laud outstanding efforts

Significant Event Awards were distributed recently to staff members for their outstanding accomplishments in research and operations. Congratulations to all.

**Biology and Environmental Sciences**
Sequencing the first tree genome: For scientific and technical leadership provided during a five-year period leading up to the DOE-sponsored sequencing of the first tree genome (*Populus*); the assembly and annotation of that genome; and the September 2006 publication of those results in the prestigious journal *Science*: Gerald A. Tuskan, Udaya Kalluri, Lee Gunter, Tongming Yin and Edward C. Uberbacher

Setup and operation of multi-species chemostat: Tommy Joe Phelps, Steven David Brown, Dawn Marie Klingeman, Sue Carroll, Lisa Anne Fagan and Steven Cline

Loss of 8.6 million dollars in uranium from Germany to Russia in the Republic of Indonesia: Jacqueline L. Shipwash

Successfully providing an inventory reestablishment workshop for Iraqi team: Scarlett Clark, Susan Jennings and Donna Sneed

**Neutron Sciences**
The world’s first demonstration of efficient laser-stripping points the way to higher-power spallation neutron sources: Warren Grice, Alexander Aleksandrov, Viatcheslav Danilov, Yun Liu, Saeed Assadi, Willem Blokland, Craig Deibele, Jeffrey Holmes, Andrei Shishlo, Anthony Webster and David Brown

SNS recovery from critical target component failure without delaying operations: Mark Rennich, Peter Rosenblad, Joe DeVore, David Sparks, David Christopher Dunning, Robert Sangrey and David Alan Craft

**Physical Sciences**
Achievement of proof of principle for 3D in-situ imaging in water: Niels De Jonge

Self-sustained tag for tagging and tracking initiatives involving high-valued assets and positive combat identification: Linda Lewis, David Glasgow, Robert Smithwick III, Lynn Boater, Stephen Allison, Joanne Oxendine Ramey, Jim Kiggans and James Bogard

HRIBF High-Power Target Laboratory design: Darryl Dowling, Raymond Jurasek, Martha Meigs, Gerald Mills, John William Sinclair, Daniel Stracener and Brian Alan Tatum

Development of alumina-forming stainless steels: Michael Brady, Zhao Ping Lu, Philip Maziasz and Bruce Pint

**Business & Information Services**
Conference travel approval process: Kathy Davis, Greg Grzulski, Gail Calloway, Susan Perkins, Connie Begovich, Dionne Harper and Regina Ford

**Communications and External Relations**
Proposal for the Computing and Computational Sciences and Biology and Environmental Sciences directorates: Jeanne Dole, Deborah Counce, Brenda Phillips, Brett Hopwood

**Environment, Safety, Health & Quality**
10 CFR 851 regulation implementation: Sharon Kohler, Douglas Freels, Michael McIntosh, Kim Jeskie, Debbie Jenkins, Deborah Sumner and Crystal A. Schrof

Elimination of facility hazard categorization deficiences for ORNL interim status radiological facilities: Lisa Jeanne Bowie, Timothy Gillespie, Jim Scircle, Brian Sparks, Richard Uterra and William Wolfe

Quality Improvement Initiative: Steve F. Alvanas

**Infrastructure**

**Facilities & Operations**
Completion of the new TVA substation at ORNL and successful transition of the ORNL electrical distribution system from existing electrical substation to the new TVA substation: Donald L. Garrett, Lynn Degenhart, Richard Haun, Charles Bruce, Bill K. Needham Jr., Buddy Johnson Jr., C.J. Josaphat and David Jeremy French

Significant reduction in Facilities Development Division construction injuries over 30 months; over one full year (17 months) without a recordable injury on FDD-managed (non-SNS) construction work: Douglass Gregory Rowland, J. Robert Ihle and Wayne Underwood

Replacement of F&O Electronic Work Accountability System: Cheryl Shinklin, Michael Pung, Sandy Odom, Kenda Norris Evans, Loretta Lewis and James Edward Lee

Receiving Office activities for FY 2006 Year-end: Marie Stooksbury

Demonstration of CCA expertise: Leslie Wilkerson and Jacqueline Williams

**Human Resources**
Automating the termination and leave of absence process: Becky Parks, Lynne Harrison, Janice Ishie, David Rupert and David Broughton

**Legal**
Aggressive settlement of workers’ compensation cases: Robin King, Alan Parker, Scott McIntyre, and Melissa Lawson
Coming up: Smokies, rafting, Titans

May 23, Car & Motorcycle Show. On-line registration for this event began on April 23. In addition to the 47 slots available for vintage autos, Club ORNL has added spaces for 25 vintage motorcycles. Prime viewing times will be between 11 a.m. and 1 p.m., when owners will be with their vehicles and available to answer questions. A free bag lunch will be available for attendees. Retirees who do not have access to the on-line sign up can contact Liyuan Liang (liangl@ornl.gov, 241-3933), or Peg Tinnel (tinnelpj@ornl.gov, 574-7851).

Club ORNL Sneak Peek

June 15. Club ORNL Annual Futbol Game
June 23. River Rafting (day trip)
June 30. ORNL Night at Oak Ridge Playhouse
July 14. Smokies Baseball
August 23. Concert on Main Street

December 9. Tennessee Titans vs San Diego Chargers. A Club ORNL sponsored Tennessee Titans football game and titanic tailgate party, noon, Sunday, December 9, 2007, at Nashville’s LP Stadium. Ticket registration began in April at the ORNL Credit Union’s on-site branch. Participants will travel by chartered motor coach to Nashville. Cost is $70 per person – limit of two tickets per person. Full payment due when you register. Price includes transportation, tickets (upper deck/corner), private Zone tent with all-you-can-eat buffet, Zone VIP.

Interested in the most up-to-date Club ORNL News?

Check out the club’s Web page online via the ORNL home page. To gain access to the ORNL home page, one must first register in XCAMS by going to http://www.ornl.gov/adm/clubornl_signup.shtml. After receiving your XCAMS account and Club ORNL membership, retirees can then go directly to https://www.ornl.gov/adm/clubornl. Nancy Gray (576-9479, graynl@ornl.gov) is Club ORNL’s point of contact for retirees.

Service Anniversaries

May 2007

40 years: Kenneth E. Parks, Craft Resources

35 years: Kathy S. Shelton, Craft Resources; Mary Ruth Lay, Physics; Jerry A. Klein, Energy & Engineering Sciences Dir.; Michael C. Willard, Human Resources Dir.; S.W. Schwenterly, Fusion Energy


25 years: James E. Radle, Steve T. Baker and David K. Felde, Nuclear Science & Technology

20 years: Diane Maddox, Environmental Protection & Waste Svs; Mark B. Rogers, Information Technology Services; Patrick H. Worley, Computer Science and Mathematics; David B. Geohegan and Donna L. Balltrip, Materials Science and Technology; Robert A. Dean, Facilities Development; J. David Snider, Nuclear Science & Technology; Debbie Lynn Smith, Business & Information Services Dir.; Kara L. Kruse, Computational Sciences & Engineering; V. Gail Beyersdorf, Communications & External Relations Dir.

Deaths

Barkley Eugene Batmon died Sunday, April 29, at his home in Knoxville. Gene was an electrician in Craft Resources with 36 years of service at ORNL. He was 55.
Lab Director Jeff Wadsworth announced ORNL winners of the President’s Volunteer Service Awards, a White House initiative, at his April 30 senior staff meeting. Receiving the President’s Call to Service Award for 4,000 or more hours of volunteer service were

Gary T. Alley, in the youth achievement category;

James Hardy, for healthy communities;

Sherry E. Livengood, for healthy communities;

Patrick Martin, for youth achievement, parks and open spaces and healthy communities;

Jeffery E. Sipes, for youth achievement, parks and open spaces and healthy communities; and

Becky Verastegui, for healthy communities and public safety & emergency response.

Dan O’Connor received the Gold Award for 500 or more hours of service. Beverly Abele received the Silver Award for 250-499 hours of service.

Tim Burchell and Fred Baker, researchers in the Materials S&T Division’s Carbon Materials Technology group, have been elected fellows of the American Carbon Society, which promotes interdisciplinary research and technology in the field of carbon science.

The Physics Division’s Thomas Papenbrock, who holds a joint faculty appointment with the University of Tennessee, has received an Outstanding Junior Faculty award from DOE’s Office of Science, Office of Nuclear Physics. The purpose of the program is to support the development of individual research programs of outstanding scientists early in their careers.

Among the new leaders of the U.S. Burning Plasma Organization is the Fusion Energy Division’s Nermin Uckan, who will assume the new position of assistant director for ITER Liaison. She will also serve as leader of the BPO’s topical group on fusion engineering sciences.

In April, the conference organizing committee for the series of International Conferences on Wear of Materials decided to name the best conference poster award after Materials S&T Division staff member Peter Blau. Peter has attended every WOM conference since 1979 (the biannual meetings began in 1977) and has served on the conference organizing committee in a number of capacities, including general chairman for the 1997 conference. The first “Peter J. Blau Best Poster Award” will be given in 2009 in Las Vegas.

ORNL employees, more than 40 of them, participated in a rainy Covenant Health Marathon “Fittest Company Challenge” on April 15, running some 617.4 miles. The ORNL Co-ed Marathon team placed first. Congratulations to members of that team: Mats Froebberg (3:07:41), Nickolay Lavrik (3:11:44) and Laura Harvey (5:20:23); total time, 11:39:48. The ORNL Co-ed Half-Marathon team came in third. Team members were Jeff Christian (1:34), Charles Ramsey (1:47), and Joan Lawson (2:29); total time, 5:51.