

NewsLetter

Week of Jan. 31, 2005

Vol. 6, No. 3

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I've got the power
 Employees in Building 40, Technical Area 3, can now state a similar conviction after a successful electrical upgrade project brought building occupants the power and electricity they need to do their jobs.Page 3

JIT technical interview events

In the last of a series of articles spotlighting the Lab's best practices in recruiting, Beth McCormick of Staffing (HR-S) discusses the Laboratory's Just-in-Time technical interview event series. . . .Page 4



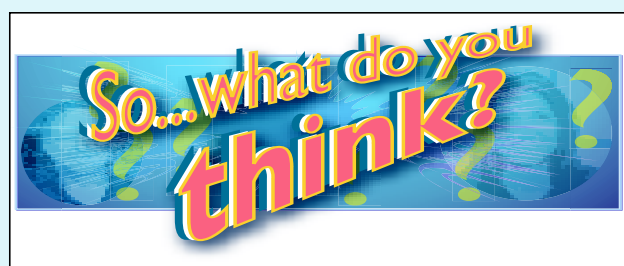
Lab employees receive Awards of Excellence in Technology Transfer

Three Laboratory employees recently received 2004 Awards of Excellence in Technology Transfer from the Federal Laboratory Consortium (FLC). The awards recognize outstanding work with industry to turn Los Alamos technologies into commercially useful products.Page 7

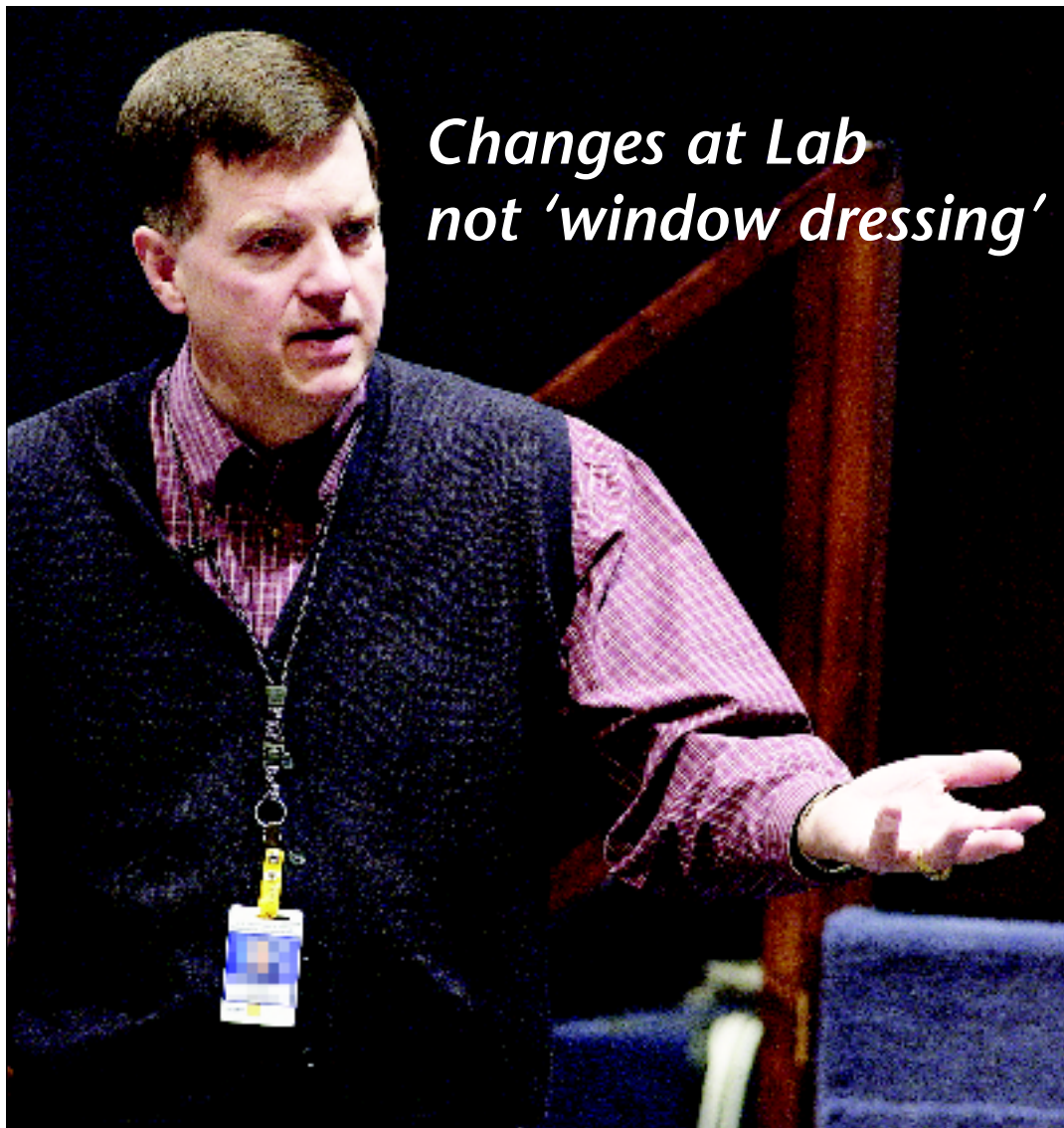


Scoring after the buzzer
 Danny Lujan of Pit Disposition Science and Technology (NMT-15) has been refereeing middle- and high-school basketball games throughout Northern New Mexico

for the past 27 years.Page 8



How an individual feels, often affects how he or she performs on the job. What two things do you do on a regular basis to help ensure good health? Learn what your co-workers had to say on Page 6.



Nanos describes resumption status, fiscal year objectives in all-employee talk

by Brooke Kent

“None of us can succeed alone. We all have a piece of the problem, and the question is, what can we do to help the institution move forward,” Laboratory Director Pete Nanos said at an all-employee meeting in the Administration Building Auditorium at Technical Area 3.

Nanos thanked all employees, as well as the University of California, for their hard work and active collaboration throughout the resumption process. “My commitment to you,” Nanos pledged, is that “I’m not going to give up the progress we made in resumption ... It’s been a long six months, and we’ve all paid the price in one way or another. I’m proud of the Lab ... and I’m very proud of [our progress].”

Nanos detailed the resumption effort’s depth and breadth, saying that 3,000 issues were identified and numerous local corrective action plans were developed. The goal was for all divisions either to have resumed activities or to operate under a Level 0 essential status by Jan. 31. By that time, it “should look like a normal day at Los Alamos” in which productive work proceeds without impediment, Nanos said.

Nanos also outlined the Lab’s corporate objectives for the coming year, which include the following:

- achieve a 90 percent outstanding rating on Appendix F objectives;
- complete the Dynamic Experimentation (DX) Division’s March hydro dynamic experiments;
- complete the resumption process;
- make the Technical Area 18 move;
- develop a business model for science;
- focus on a behavior-based safety program;
- implement the Operational Efficiency Project; and

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For Your Safety

Driving at a safe speed



The following are some tips to help avoid speeding from the National Safety Council.

Speeding is a contributing factor in crashes that kill approximately 12,000 people each year. Speeding reduces the time a driver has to avoid a crash and increases the likelihood and severity of a crash.

Every 10 mph traveled over 50 mph doubles the risk of death if a crash occurs. For example, at 80 mph the chances of dying if involved in a crash are eight times greater than at 50 mph. On a 10-mile trip, this increased risk results in only four minutes of reduced travel time.

The dangers of speeding far outweigh the travel time saved. Choosing to exceed the speed limit or driving too fast for traffic, road, vehicle or driver conditions can result in not just a speeding ticket but injury or death. Speed limits are not just guidelines; they save lives.

Tips you can use:

- Know the current speed limit.
- Assess current driving conditions and adjust speed to those conditions. In certain conditions, the posted limit may be too fast.
- Allow enough time to reach your destination. If running late, call ahead. Do not rush.
- Check the speedometer.
- Recheck the speedometer.
- Slow down when being tailgated to encourage the other driver to pass. Don't speed up.
- Reduce speed in work and school zones. Be cautious and alert.



Laboratory Director Pete Nanos answers employee questions following his all-employee meeting in the Administration Building at Technical Area 3. Photos by LeRoy N. Sanchez

Nanos describes resumption status ...

continued from Page 1

- manage the Lab's classified removable electronic media (CREM), including completing the "red" network for the nuclear weapons program.

He also emphasized the Lab's focus on sustaining the quality of science.

"All our goals for [fiscal year 2005] are institutional and nothing is left to a single directorate to solve," said Nanos. "By making our key goals [into] corporate goals, we are guaranteeing that the whole institution lines up in support of what we say we want to do in the coming year."

According to Nanos, fulfilling these objectives demands that the Lab take the disciplines and processes developed through the resumption process and [put] them into a user-friendly form that becomes part of the fabric and structure of the [Lab] in the long-term. "We paid a price to restart this lab ... and we want a continually improving state where we don't slip backwards," said Nanos.

"The changes we are making are not window dressing," he explained, citing the Lab's forthcoming behavior-based safety program as one example. The program, according to Nanos, hinges on the full realization that the person responsible for safety is the individual. It consists of a series of modules that will be trained in a cascading fashion from the director down to line-level employees.

In this or any other program, scientific leadership remains critical to the Lab's success. "Los Alamos is the premier institution in the country that brings together science and the national security mission. If we lose that [combination], we lose Los Alamos' unique contribution to the country," Nanos said, noting that the quality of the Lab's scientific leadership impacts not just the health of this institution, but the national and international scientific communities. He also urged Lab scientists to take a leadership role in making Los Alamos "a good, viable place to do science."

In response to a question about improving employee morale, Nanos said that he was committed to introducing flexible scheduling that gives employees a day off per pay period. He said the issue now is how to implement that option in a manner that lets the Lab remain fully functional with at least 75 percent of staff members present on all days. Don Cobb, acting deputy Laboratory director, has the action to develop a program that will accomplish both goals.

In concluding, Nanos bore a simple message to every corner of the institution: "This will be a tough year ... but I feel that fundamentally we are moving in the right direction and laying the groundwork to ensure this institution's future and your future."

'Los Alamos is the premier institution in the country that brings together science and the national security mission. If we lose that [combination], we lose Los Alamos' unique contribution to the country.'

Los Alamos National Laboratory NewsLetter

The Los Alamos NewsLetter, the Laboratory bi-weekly publication for employees and retirees, is published by the Public Affairs Office in the Communications and External Relations (CER) Division. The staff is located in the IT Corp. Building at 135 B Central Park Square and can be reached by e-mail at newsbulletin@lanl.gov, by fax at 5-5552, by regular Lab mail at Mail Stop C177 or by calling the individual telephone numbers listed below. For change of address, call 7-3565. To adjust the number of copies received, call the mailroom at 7-4166.

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Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA's Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



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I've got the power

"Power only tires those who do not have it."

—Italian Prime Minister Giulio Andreotti, 1919

by Kathy DeLucas

Employees in Building 40 at Technical Area 3 can now state a similar conviction after a successful electrical upgrade project brought building occupants the power and electricity they need to do their jobs. The Electrical Infrastructure and Safety Upgrades Project for that facility was recently completed, ahead of schedule and under budget.

Building 40, a 90,000-square-foot 45 year-old building, houses a significant portion of the Physics (P) and Materials Science and Technology (MST) divisions. The electrical

upgrades involved the design and installation of a new power distribution system to meet current electrical codes and standards. Electrical safety hazards, such as inadequate grounding systems, overloaded branch circuits and outdated electrical equipment, exposed employees and occupants to potential risks such as fires, arc blasts, shock or electrocution hazards. All these deficiencies were corrected through a total replacement of the electrical system within the building.

The project involved 20,000 staff hours — more than 85 percent performed during normal working hours — with zero safety or security incidents. The construction work was strategically planned during the design phase to allow the new power distribution system to be installed in sections, which minimized the occupants' exposure to hazards and the amount of downtime to programmatic and scientific projects. No office was out of service for more than one week.

"The team kept in constant communication with the building occupants so that people could plan their activities according to the construction schedules," said Martin Aguilera, deputy project team leader of

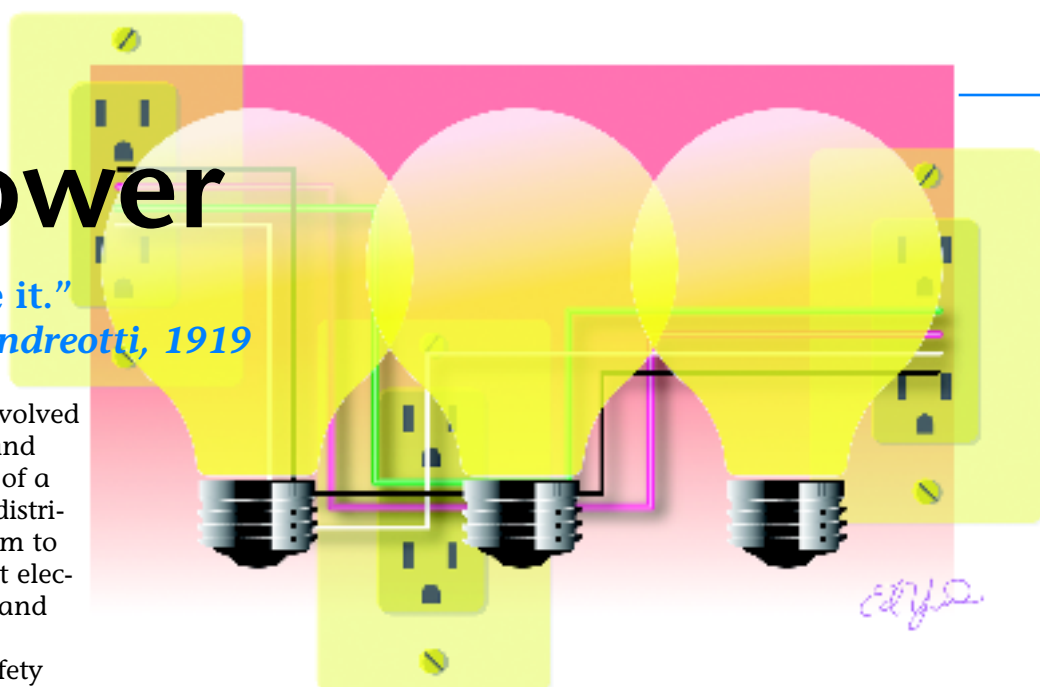
Deployed Services (PM-DS).

Although major electrical outages were required to replace the old equipment and wiring, the outages were planned in advance, coordinated with building residents and scheduled for weekends. Some work was done off normal working hours, however, overtime was less than 10 percent of the 20,000 hours worked.

"This represents a major achievement for the Laboratory to be able to perform construction work safely and securely in an occupied facility," Aguilera said.

The EISU Building 40 Project cost a total of \$2.9 million and is only a portion of the larger EISU Project Laboratory-wide \$67 million effort to upgrade electrical power systems in buildings that are old or do not meet current electrical safety codes.

In addition, the EISU Project received a 2004 Pollution Prevention Award for waste minimization. More than 170,000 pounds of construction debris, including conduit, wire and other electrical equipment has been recycled.



A time to reflect

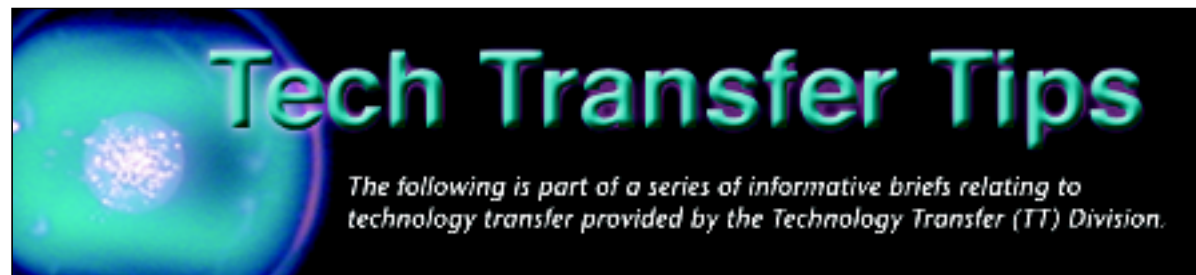
by Tom Bowles,
chief science officer



I realize that there is tremendous concern on the part of everyone at the Laboratory over the upcoming process to rebid the contract to operate Los Alamos. The two concerns that

I hear most often are about how the new contract will impact our ability to do science and how benefits will be affected. On the first issue, the fact that the science and mission part of the draft request for proposals (RFP) has the highest percentage single weight (32.5 percent) of all the components that go into scoring the bids clearly indicates that the National Nuclear Security Administration (NNSA) fully understands the importance of science in delivering on our missions. The message on the issue of benefits is less clear, as the draft RFP is not completely explicit about what will happen to people's benefits, including retirement. While I agree this is a cause for concern, I would like to reassure everyone that you do not have to take immediate action to preserve your benefits or your options. The University of California, the Laboratory, and the community have all provided input to the NNSA about these issues. NNSA is being fully responsive to the concerns being voiced — this [was] clearly evidenced by the decision to extend the period for comment by two weeks.

Ambassador [Linton] Brooks has visited Los Alamos twice in the last few months to meet with [Lab] staff to get direct input on people's concerns. The degree of concern that the staff has over the draft RFP terms was very clearly communicated to [Brooks] during his visit just before Christmas. It is clear to me that he is doing everything possible to ensure that the outcome of the contract rebid is fair and equitable. Thus, I would urge everyone to let the contract process continue to the point where the final RFP is released before making any decisions about the future. You have absolutely nothing to lose by doing that and a lot to gain by having all of the information at hand in making a decision.



Intellectual property

What comprises the Laboratory's intellectual property? Intellectual property (IP) includes the inventions, discoveries, software, drawings and technical know-how of Laboratory staff.

Why should employees protect the Lab's intellectual property?

The Laboratory's ability to use the results of its own scientific research and to effectively meet its congressionally mandated technology transfer mission depends on how well it protects its IP. Patents and copyrights provide an inflow of royalties from licenses and funds from industrial partnerships. A portion of this income is distributed to innovators as well as to their divisions. Division royalty funds can be used for research, education, or research and development activities. When employees accept a position with the Laboratory, they agree to report any patentable device, process, or product discovered during their Laboratory employment (see "Patents" under the Policy Index at int.lanl.gov/policies/policy_index/index.shtml).

How do I know if my work should be protected?

A patent is granted for an original idea. The idea may be an invention (utility patent), a new ornamental design for an article of manufacture (design patent) or a distinct and new variety of plant (plant patent). In general, the Lab's IP is subject to a utility patent in one of the following classes:

- Process — a defined series of steps performed to change the nature or characteristics of a material, composition or article
- Machine — a group of elements or parts interacting to produce a given effect
- Article of manufacture — almost anything produced by a human
- Composition of matter — a chemical compound or mixture of ingredients
- New and useful improvements on the preceding classes of inventions

What is the criteria for "patentability"?

• Novelty — An invention must not have been described in any form of publication, placed in use or offered for sale — even by the inventor — more than one year before the date of the patent application.

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Best recruiting practices: JIT technical interview events

Editor's note: This article is the last in a series spotlighting the Lab's best practices in recruiting.

by Brooke Kent

Do you ever fantasize about ordering up the perfect technical candidate? In that case, Beth McCormick of Staffing (HR-S) will tempt you with one item on the Lab's recruiting menu: the Just-in-Time technical interview event series.

According to McCormick, who serves as the Lab's recruiting manager, the JIT process began in May 2001. "Hiring officials complained that they had too little time to sort through hundreds of résumés and to move forward quickly with offers to highly desirable early career candidates," McCormick said. "To address these concerns, we developed the JIT interview events, which streamline and condense the recruiting phase for managers and top candidates alike."

How does it work? The Lab's technical recruiters identify high-potential candidates through their visits to college recruiting events and technical or diversity conferences. The recruiters then use phone-screening to select a final group of 15 to 20 outstanding individuals. At this point, the recruiting office schedules a one-day technical interview event; its cross-Lab nature lets candidates interview with managers from several different groups, while allowing interested divisions to split the cost of the candidates' travel expenses, which average around \$1,200 per candidate. The process concludes quickly: managers must express interest in hiring candidates within 24 hours of the event's close and candidates respond shortly thereafter.

Matt Lewis, a technical staff member of Weapons Response (ESA-WR) said, "The JIT forum allowed me as an interviewer to meet with the very best candidates. The individual we hired through the JIT came from Rensselaer Polytechnic Institute, a



Doug Kautz (left), acting group leader for Weapon Component Technology (NMT-5), and Angelina Trujillo (center), NMT-5's chief of staff, interview Jae-Woo Choi, an electrical engineering graduate student from the California Institute of Technology, at the Jan. 14 Just-in-Time technical interview event.

Photo by LeRoy N. Sanchez

school I wouldn't have reached through my on-campus recruiting. So in that respect, the JIT process succeeded by connecting me with an outstanding candidate I would have overlooked."

Lori Primas, deputy group leader for Hydrodynamics (DX-3), concurs. "The JIT technical interview events are an excellent, efficient way to find qualified candidates. As a manager, the attendees being pre-screened saves me a lot of time," said Primas. "The JIT process works so well that several of the technical people I've hired recently have come from JITs."

Candidates also applauded the JIT model. Luca Maciucescu, an ESA-WR technical staff member hired through a JIT event, praised the process for allowing candidates to interview with a variety of groups and, thereby, gain a broad picture of work at the Lab. "The JIT events are a very good recruiting tool. Besides bringing me to Los Alamos, the JIT event introduced me to several other early career scientists, some of whom have

become my good friends," Maciucescu continued.

Replicating that success remains McCormick's goal. "The JIT events benefit both managers and candidates. On the hiring side, managers need only allocate one day to interview several pre-screened, high-quality candidates. And from the candidates' perspective, the JIT forum offers a relaxed setting for meeting with many different groups, while also connecting with other early career individuals.

"The bottom line is simple," McCormick concluded. "The process works. Between 80 to 85 percent of JIT candidates receive offers, and acceptance rates are similarly high. That's why the JIT technical interview events represent a Labwide best practice in recruiting."

For more information about the JIT process, see the Lab's recruiting Web page at lanl.gov/recruiting/interviewEvents.shtml online, or phone the Lab's recruiting office at 7-8849. The next JIT interview event is scheduled for Feb. 11.



Dog's nose knows where that missing person might be

David Coblentz of Geophysics (EES-11), far left, along with daughter Amaya in the striped shirt and son Kai, plays with Wendee Brunish's search and rescue dog, Halley.



Brunish, also of EES-11, answered audience questions at a presentation at the Bradbury Science Museum on the use and role of search and rescue dogs in the areas of homeland security, natural disasters, missing persons search and crime scene forensics. In the inset photo, Brunish gives Halley a whiff of coffee from a plastic container during a demonstration of Halley's keen sense of smell. Brunish's presentation provided insight into the process and methods dogs use in search and rescue missions.

Photos by Ed Vigil, Public Affairs



Editor's note: Some of the individuals listed below are no longer employed at the Laboratory but were at the time they applied for the patent.

Recently issued patent awards

NSample collection system for gel electrophoresis

Patent No. 6,793,790, issued Sept. 21, 2004
Jose Olivares of Spectroscopy, Imaging and Molecular Chemistry (B-4); **Peter Stark** and **Gustavo Roybal** of Applied Chemical Technologies (C-ACT); and **John Dunbar**, **Karen Hill** and **Cheryl Kuske** of Molecular Microbiology and Immunology (B-1)

Permeable polyaniline articles for gas separation

Patent No. 6,797,325, issued Sept. 28, 2004
Hsing-Lin Wang of B-4 and **Benjamin Mattes** of Physical Chemistry and Applied Spectroscopy (C-PCS)

Reduced AC losses in HTS coated conductors

Patent No. 6,800,321, issued Oct. 5, 2004
Stephen Ashworth of the Superconductivity Technology Center (MST-STC)

Method for monitoring the crystallization of an organic compound from a liquid

Patent No. 6,800,487, issued Oct. 5, 2004
Blaine Asay, **Steven Son** and **Peter Dickson** of Materials Dynamics (DX-2); and **Bryan Henson**, **Robert Sander** and **Jeanne Robinson** of C-PCS

Buffer layers on metal alloy substrates for superconducting tapes

Patent No. 6,800,591, issued Oct. 5, 2004
Quanxi Jia, **Stephen Foltyn**, **Paul Arendt** and **James Groves** of MST-STC

Guide-based optical chemical sensor

Patent No. 6,801,677, issued Oct. 5, 2004
Karen Grace of Space Instrumentation and System Engineering (ISR-4), **Basil Swanson** of B-4 and **Seppo Honkanen** of the University of Arizona

Continuous time-of-flight ion mass spectrometer

Patent No. 6,806,467, issued Oct. 19, 2004
Herbert Funsten Jr. of the Center for Space Science and Exploration (ISR-CSSE) and **William Feldman** of Space Science and Applications (ISR-1)

Single rotor turbine

Patent No. 6,807,802, issued Oct. 26, 2004
David Platts of Hydrodynamics and X-ray Physics (P-22)

Direct methanol fuel cell and system

Patent No. 6,808,838, issued Oct. 26, 2004
Mahlon Wilson of Electronic and Electrochemical Materials and Devices (MST-11)

In-situ leak testing of glovebox, isolator or containment unit gloves

Patent No. 6,810,715, issued Nov. 2, 2004
Julio Castro of Health Physics Operations (HSR-1), **John MacDonald** of Process and Engineering (NMT-10) and **Warren Steckle Jr.** of Polymers and Coatings (MST-7)



'Wake up, sit up, get up, speak up, stand up'
Abercrombie gives Lab's King Day talk

Eric Abercrombie, director of Ethnic Programs and the African-American Culture and Research Center at the University of Cincinnati, spoke passionately about Martin Luther King Jr. and his legacy in a talk at the Laboratory. The theme of the talk was "Remember! Celebrate! Act! A Day On ... Not a Day Off." At right, Abercrombie used a basketball analogy to make a point about the importance of embracing diversity. Abercrombie noted how the Amish community in Ohio hired an African American man to coach a youth basketball team and help expose Amish youth to the sport. Sixteen years later, after the coach's death, the Amish community created a youth basketball tournament to honor the coach. As each team in the tournament was introduced, an excerpt from King's "I Have a Dream" speech was played on a video screen, Abercrombie said. The lesson, Abercrombie noted, was that Amish youth learned how King's life affected them.



Theresa Cull of Industrial Hygiene and Safety (HSR-5) presents a plaque to Eric Abercrombie in the Administration Building Auditorium, thanking Abercrombie for delivering the Lab's Martin Luther King Jr. Day talk. The Laboratory and the Department of Energy's Los Alamos Site Office sponsored the talk with support from the Diversity Office (DVO), Diversity Affirmative Action Board and the African American Diversity Working Group. Photos by Ed Vigil, Public Affairs

So...what do you think?

Q: How an individual feels, often affects how he or she performs on the job. What two things do you do on a regular basis to help ensure good health?



Laurie Triplett of Atmospheric, Climate and Environmental Dynamics (EES-2)
 "I spend time with God daily and walk to work most days."



Victor Correa of the Materials Science and Technology (MST) Division
 "I really don't do anything."



Jon Weisheit of Plasma Theory (T-15)
 "Regular checkups, frequent exercise. And a third thing is I try to watch what I eat."



Phyllis Gordon of the Applied Physics (X) Division
 "I always eat a good breakfast and drink twig tea, freshly brewed, for stress."



Don Haynes of Thermonuclear Applications (X-2)
 "I use the stairs not the elevator, and I park far away. Those are not always choices, however."



Gabrielle Neil of Internal Security (ISEC)
 "I eat healthy and work out on a regular basis."



Dan Cooper, EES-2
 "I weigh myself several times a week, and I make sure I drink a lot of water everyday."



Mike Stevens of the Weapons Physics Directorate (ADWP)
 "I am a volunteer youth sports coach in Los Alamos, and I play golf whenever possible."



Danny Branch of the Communications and External Relations (CER) Division
 "I play basketball in two leagues in Albuquerque, one on Tuesday evenings and the other on Saturday afternoons. I also workout two to three times per week."

PEOPLE



Doug Beason

Beason named ADTR associate director

Doug Beason is the new associate director for Threat Reduction (ADTR).

Beason joined the Lab in 2001 after a long career in the U.S. Air Force. His assign-

ments at the Air Force Weapons Lab/Phillips Lab at Kirtland Air Force Base in Albuquerque included performing research on nuclear effects, plasma physics, and later as commander of the Phillips site from which he retired as colonel.

Beason has a doctoral degree in physics from the University of New Mexico based in part on work done at Los Alamos on simulating explosive iodine lasers. He also has a master's in physics from the University of New Mexico, a master's in national resource strategy from the National Defense University and a bachelor's in physics and mathematics from the United States Air Force Academy.

In two assignments at Lawrence Livermore National Laboratory, Beason worked on peer review design analysis of the W76, and with his collaborators, developed a closed solution to relativistic Compton scattering for radiation transport codes that are still used today; the latter led to

his election as a Fellow of the American Physical Society.

Beason also served on the White House staff in the Office of Science and Technology Policy and taught as an associate professor of physics at the Air Force Academy.

At Los Alamos, Beason has served as deputy associate director for Threat Reduction and International, Space and Response (ISR) Division leader. In his new post in ADTR, he will oversee the execution and development of the Los Alamos programs to eliminate threats from weapons of mass destruction and to defeat new and emerging threats.

Leasure new SFO principal deputy associate director



Craig Leasure

Craig Leasure is the new principal deputy associate director for the Security and Facilities Operations (SFO) Directorate.

"Craig brings extensive science and programmatic experience to a difficult job," Scott Gibbs, SFO acting associate director said in announcing Leasure's

appointment to the post. "Craig's background in both science and operations will

continued on Page 7

In Memoriam

Wessley Mangum

Laboratory retiree Wessley Mangum died Oct. 28, 2004. He was 65.

Originally from Black Creek, Texas, Mangum was a veteran of the U.S. Army and later served in the Marines from 1957 to 1964.

Mangum came to the Laboratory as a mechanical design draftsman in 1975. He later worked in several Laboratory organizations as a area coordinator, construction maintenance technician and specialist, a plant engineering specialist and later a technical facilities operator.

He retired in 1997 while working in the Physics (P) Division.

Herbert "Bert" Hanna Helmick

Laboratory retiree Herbert "Bert" Hanna Helmick died Dec. 5, 2004. He was 71.

Helmick, a nuclear physicist, joined the then Los Alamos Scientific Laboratory as a fulltime staff member in 1957 in the former Nuclear Rocket Propulsion (N) Division, though he had worked at the Lab as a student periodically between 1954 and 1956. He later worked in the former Energy (Q), Nuclear Safeguards, Reactor Safety and Technology (R), International Technology (IT), Health and Safety (HS) and Health, Safety and Environment (HSE) divisions, among others, as a staff member, assistant group leader and alternate group leader.

While at the Laboratory, Helmick was appointed U.S. instrumentation expert to the International Atomic Energy Agency and also was a member of the U.S. Nuclear Emergency Search Team.

Helmick left the Laboratory in October 1993; he was a staff member in Emergency Management and Response (EM&R) at the time of his retirement.

Helmick had a bachelor's degree in physics from Drake University and a master's degree in physics from the University of Indiana.

He is survived by his wife, Margaret, of Hedgesville, W.Va.; son Paul of Tijeras; daughter Catherine Helmick Shenk of Boulder, Colo.; sister Ruth Lier of Los Alamos and other relatives.

Anthony "Tony" Will Coca

Laboratory retiree Anthony "Tony" Will Coca died Dec. 13, 2004. He was 84.

Coca was born in Las Vegas, N.M. He attended school in Las Vegas until he entered the U.S. Army Air Corps, where he served for five years. In 1946, he participated in Project Y.

Coca joined the Laboratory in February 1949 as an employee in the former Explosives RND (GMX-2). He later worked in the former GMX Division (GMX-1) and Weapons Engineering (WX-1). Coca also was a plant engineer technician III in Explosives Technology (M-1).

He retired from the Laboratory in 1982.

He is survived by his wife, Elizabeth; son Michael Anthony; daughter Eileen Mraule and four grandchildren.

Leasure ...

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help the directorate ensure Laboratory success as the institution moves forward on its high priority goals."

Leasure has most recently been the acting program director for Stockpile, Air Force Systems in the Principal Associate Directorate for Nuclear Weapons (PADNP), where he led a small team to develop technical program baselines for the nuclear weapons program. Before that assignment, Leasure managed a \$120 million program enabling Laboratory nuclear facilities to operate safely and securely. Leasure also was

responsible for weapons manufacturing, including the production of detonators, neutron tube target loading, mock pits for flight tests and component surveillance and production support activities such as modeling, analysis and data systems.

Leasure joined the Laboratory in 1990 and served as the group leader for the former Environmental Chemistry Group and later as group leader for the formal Material Characterization Group. Before coming to the Laboratory, Leasure served in various supervisory and management positions with Lockheed Engineering and Sciences Company located at the NASA White Sands Test Facility.

Leasure has a doctoral degree in analytical chemistry from New Mexico State University.

Lyons appointed to Nuclear Regulatory Commission



Peter Lyons

Laboratory retiree Peter Lyons has been appointed to the Nuclear Regulatory Commission by President George W. Bush. Lyons was appointed to fill one of two vacancies on the five-person commission. At the time of the appointment, Lyons was serving as the nuclear policy adviser on the Senate

Energy and Natural Resources Committee.

From 1997 to 2002, Lyons served as science and technology adviser to Sen. Pete Domenici, R-N.M. In this advisory role, he assisted with issues involving the Senate Energy and Natural Resources Committee, as well as other senate committees. He also focused on military and civilian uses of nuclear technologies and national science policy in support of Domenici's extensive involvement with these issues.

Lyons joined the Laboratory in 1969 and worked for 28 years in various research and managerial positions, including deputy associate director for energy and environment, deputy associate director for defense research and applications and program director for nuclear defense research. During his last three years at the Lab, Lyons served as director of the Laboratory's former Industrial Partnership Office.

Lyons holds a doctorate in nuclear physics from California Institute of Technology and a bachelor's degree in physics and mathematics from the University of Arizona.

Lab employees receive Awards of Excellence in Technology Transfer

Laboratory employees Wu-chun Feng of Advanced Computing (CCS-1) and Laboratory Fellow Tom Terwilliger of Cell Biology, Structural Biology and Flow Cytometry (B-2) recently received 2004 Awards of Excellence in Technology Transfer from the Federal Laboratory Consortium (FLC). The awards recognize outstanding work with industry to turn Los Alamos technologies into commercially useful products.

In addition, Susan Sprake of the Technology Transfer (TT) Division was selected as FLC Representative of the Year, an honor recognizing an individual FLC representative who has made the most significant contribution to the FLC program in the past year.

Nominations were evaluated by a panel of technology transfer experts from industry, state and local government, academia and the federal laboratory system.



Wu-chun Feng

Wu-chun Feng received two awards — one for Green Destiny and mpiBLAST and another for his 10-Gigabit Ethernet Adapter.

According to Feng's award submission application, Green Destiny is the world's most efficient computer — up to 10 times higher performance/power ratio than other supercomputing platforms. mpiBLAST is an open-source parallelization of BLAST, an open-source software package distributed by the National Center for Biotechnology Information. The Lab has dramatically enhanced BLAST's throughput and minimized its response time. For example, a search of a 300-kilobyte query that

took 1,346 minutes (22.4 hours) using BLAST takes only a few minutes with mpiBLAST running on Green Destiny.

In his application, Feng described the 10-Gigabit Ethernet Adapter as a "super-adapter" whose plug-and-play installation, reliability and unprecedented speed will revolutionize how computers and the Internet positively impact our lives. The Lab optimized Intel's® PRO/10GbE LR Server Adapter and its associated subsystems, thereby enhancing its performance by 300 percent.

Tom Terwilliger

Terwilliger received an award for his work on SOLVE/RESOLVE. In the world of proteomics, SOLVE/RESOLVE are complementary software packages that help researchers get clear pictures of protein structures, allowing the researchers to develop new pharmaceuticals and to understand how proteins work. SOLVE automatically interprets X-ray crystallography data to generate an electron map, while RESOLVE uses a statistical

approach to integrate experimental data with a knowledge base to refine the electron density map.



Tom Terwilliger



Susan Sprake

Susan Sprake

In his nomination of Sprake for FLC Representative of the Year, David Holmes, chief of staff and alternate Laboratory representative to the FLC, said "Susan has been involved in the FLC for some 20 years, but took on a higher-profile and larger role in the FLC when she was elected FLC regional coordinator in 2000. Since that time, she has made major contributions to both the regional and national programs."

He added that as Mid-Continent Regional Coordinator, Sprake was responsible for bringing many new groups to the table from complementary organizations, such as New Mexico Institute of Mining and Technology, the U.S. Forest Service, International Association of Fire Chiefs, the National Interagency Fire Center, the Department of Energy's

Technology Partnerships Working Group (TPWG), the Clean Cities Program, Manufacturing Extension Partnership, Texas A&M University and the Department of Homeland Security's Emergency Response Technology Program.

Intellectual property

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- Not obvious — Someone skilled in the appropriate crafts should be unable to readily deduce how to make the invention.
- Utility — The invention must have a useful purpose.

What can be protected by copyrightable material?

Copyright is extended to the expression of ideas, not to the ideas themselves. For Laboratory personnel, the following works can be protected by copyright:

- computer programs
- user interfaces
- films, videos or recordings related to Laboratory work
- drawings, figures, blueprints and photographs related to Laboratory work
- certain technical papers

Copyright extends to the original expression of ideas, procedures, and processes, not to the ideas, procedures and processes themselves. In other words, a copyright does not protect information. However, it does protect an individual's unique way of presenting information, such as how one organizes and arranges facts. Elements found in the public domain are not protected, nor are elements copied from others.

For more information, go to the Technology Transfer (TT) Division Web site at www.lanl.gov/partnerships online or contact Christine Ramos of TT at 5-6846 or Ray Wilson of Intellectual Property (LC-IP) at 5-3112.



Scoring after the buzzer



Middle- and high-school basketball referees Fabian Trujillo, left, and Danny Lujan. Photos by LeRoy N. Sanchez

by Brooke Kent

Basketball has changed enormously since 1977 (think tiny shorts, big hair and no three-point line).

Fast-forward 27 years, though, and one local basketball figure remains constant: Danny Lujan of Pit Disposition Science and Technology (NMT-15). Lujan is still refereeing middle- and high-school basketball games throughout Northern New Mexico.

Lujan's motivation is simple: "I want to give something back to the kids. I only played "left bench" growing up in Pojoaque, which means that I sat on the sidelines and



cheered for the starting players. But even from the "left bench," I learned a lot about maturity, respect and teamwork from watching the officials."

Lujan continues that, "as an official, the court is my classroom ... I focus on instilling real-life principles like keeping your head up, energy high and attitude positive, even when the game's tough. Lessons like that stay with players long after the last buzzer sounds."

Lujan's enthusiasm is infectious. He refereed Fabian Trujillo of Test Engineering (DX-5) when Trujillo played point guard at Española Valley High School. Trujillo refereed after graduating to fund his studies at Northern New Mexico Community College; 11 years later, Trujillo officiates alongside Lujan, his former referee.

"As officials, we want to be role models for the players, just like Danny was a role model for me," said Trujillo. "Danny taught me how to be mature, professional, respectful and diligent ... Given today's competitive environment, those qualities matter even more off the court than on it."

Lujan and Trujillo position their efforts within the Lab's "good neighbor" mission. According to Kane Fisher, Lujan's supervisor, "What Danny and Fabian do epitomizes the Lab's outreach objectives. Partnering with nearby communities is a critical priority for this institution, and I wholeheartedly support their efforts."

Passion is key to Lujan's and Trujillo's success. Their



officiating territory spans Northern New Mexico, and overseeing three games each week eats up their weeknights and weekends — not to mention their tires. Add to that Lujan's mandate to oversee almost 80 referees as the New Mexico Activities Association's regional commissioner for basketball, and you understand why the area is so short on officials.

"Sometimes it's a thankless job, and opinionated spectators can give you a rough time," said Trujillo. "But Danny and I have a passion for the players and the game. We are committed to doing a job for the kids and the community. That's what refereeing's all about, and that's why we encourage more people to consider officiating."

Interested in donning a referee's black-and-white stripes? Contact Lujan at 7-2568, or go to the New Mexico Activities Association Web site at <http://www.nmact.org/> online.