

# NewsLetter

Week of Oct. 10, 2005

Vol. 6, No. 21

## Inside this issue ...

### Robot plays key role in B Division research

Earlier this year, a 4,000-pound robot was delivered to the Bioscience (B) Division that may revolutionize research in many arenas because of its ability to produce many proteins simultaneously that could otherwise take days of labor. . . . .Page 3



### Lab employees return home from Iraq

Since its inception in the 1940s, the Laboratory has unwittingly served as the origin of an admirable assortment of humble heroes. In this issue of the NewsLetter, get a personalized glimpse into the tumultuous lives and harrowing experiences faced by three Laboratory employees called to serve in Iraq. . . . .Pages 4 and 5

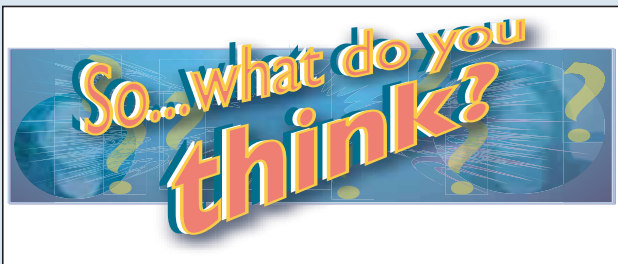
### Preschool made possible through the United Way

If you're looking for Joan Jamison, lead teacher of the Children's Zone Program at Santa Fe's Agua Fria Elementary School, don't look in her classroom. She is more likely to be outside, surrounded by children with smiling faces. . . .Page 7



### Hands-on role for Laboratory employee in creation of new Iraqi government institutions

Many Americans have watched the process of the creation of a new government in Iraq from the comfort of their homes on television, in newspaper reports or on the Internet. Laboratory employee Mike Wismer of Security Integration (S-2) watched it unfold in person. . . . .Page 8



President George W. Bush recently asked Americans to conserve gasoline by driving less. He also issued a directive for all federal agencies to cut their own energy use and to encourage employees to use public transportation. Are you doing anything differently or special to conserve energy? If so, what? Learn what your co-workers had to say on Page 6.



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# Laboratory names seven new Fellows

by Kevin N. Roark

Seven technical staff members are the newest Laboratory Fellows as selected by Director Bob Kuckuck. Recipients of the annual honor are technical staff members who have demonstrated excellence in programs important to the Laboratory's mission, made significant scientific discoveries that lead to widespread use, or have been recognized as leaders in their fields both inside and outside of the Laboratory.

"In welcoming these seven new Fellows, I want to thank the entire group of Fellows for their sustained contributions to the Laboratory," said Kuckuck. "They bring honor to each of us and to the institution."

The 2005 Laboratory Fellows are Alexander Balatsky of Condensed Matter and Statistical Physics (T-1), Michael Baskes of Structure/Property Relations (MST-8), Andrew Hime of Neutron Science and Technology (P-23), John Singleton of the National High Magnetic Field Laboratory (MST-NHMFL), James Theiler of Space and Remote Sensing Sciences (ISR-2), Gary Wall of Primary Design and Assessment (X-4) and Dan Winske of Plasma Physics (X-1).

A world-renowned expert in the theory of high-temperature superconductivity, heavy fermion systems and nanoscience, Alexander Balatsky developed a theory of impurities in unconventional superconductors, which recently was validated in scanning-tunneling microscope experiments.

Michael Baskes developed a new theoretical approach to predict the behavior of metals and alloys, including transition metals and actinides in the solid, liquid and amorphous states. He has been able to simulate and predict the behavior of materials, ranging from the diffusion of hydrogen in metals to the phase stability of plutonium and plutonium-gallium alloys as well as modeling the plasticity of polycrystalline metals.

One of the leading physicists in the world in the field of weak interactions, Andrew Hime's recent work has led to the discovery of neutrino mass, one of the most important



Alexander Balatsky



Michael Baskes



Andrew Hime



John Singleton



James Theiler



Gary Wall



Dan Winske

continued on Page 7

## Carbon monoxide poisoning prevention

Carbon monoxide is a colorless and practically odorless gas. It is poisonous to people and animals because it displaces oxygen in the blood. The gas is produced by the incomplete burning of solid, liquid and gaseous fuels. Appliances fueled with natural gas, liquefied petroleum, oil, kerosene, coal or wood may produce carbon monoxide.

According to the Consumer Product Safety Commission, every year more than 200 people in the United States die from carbon monoxide produced by fuel-burning appliances. Several thousand go to hospital emergency rooms each year for treatment for carbon monoxide poisoning.

The following tips can help prevent carbon monoxide poisoning:

- Install CO detectors/alarms in the home. Make sure it meets the requirements of the most recent Underwriters Laboratory Standard 2034.
- Make sure appliances are installed according to manufacturer's instructions and local building codes.
- Have the heating system (including chimneys and vents) inspected and serviced annually.
- Only burn charcoal outdoors, never inside a home, garage, vehicle or tent.
- Always make sure to turn off any gas-powered engine inside an attached garage or basement. Even if the garage door is open, a person still can be affected or killed by CO.
- Do not use gas appliances, such as ranges or ovens, for heating the home.
- If using a fuel-burning appliance for approved indoor uses (such as a heater), make sure it is vented to the outdoors following manufacturer's instructions.
- Open flues when fireplaces are in use.
- Choose properly sized wood-burning stoves that are certified to meet Environmental Protection Agency emission standards.
- Have a trained professional inspect, clean and tune-up the central heating system (furnaces, flues and chimneys) annually.

## Los Alamos National Laboratory NewsLetter

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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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## Members of the Los Alamos National Laboratory community

**Editor's note: The following is from a correspondence from University of California President Robert C. Dynes to UC Laboratory employees.**

With summer now behind us, I wanted to write to you about several issues of concern to all of us, including the upcoming open enrollment period; the recent presentation of Los Alamos National Security, LLC to the Department of Energy's Source Evaluation Board regarding our team's proposal for the future management of [the Laboratory]; and the status of the competition.

The most immediate issue is Open Enrollment, which is set to begin on Nov. 1. As in the past, you will have the opportunity to make changes to the health and welfare benefits you receive as a University of California Laboratory employee. There is good news on the health-care front. While health-care costs continue to rise around the country, UC is working to negotiate the best possible medical plan rates for all of our employees.

As Open Enrollment comes to an end, we expect that DOE will make or be close to a final decision regarding the future management of Los Alamos National Laboratory. This decision will not have any immediate impact on your current benefits or on the decisions you need to make during the Open Enrollment period. As a UC/Lab employee, your current benefits, including those that you choose or alter during Open Enrollment, will continue through May 31, 2006. We are working with our health-care providers to have an option, if the National Nuclear Security Administration and the new contractor concur, of assigning these contracts to the new contractor to avoid additional changes during the year.

I know that this period of transition is stressful and that there are many more questions than there are answers at this point. But let me assure you that the university is in the process of preparations for transition and will be prepared to provide answers to questions as soon as events permit. For example, today an employee can use online tools to calculate existing accrued pension benefits. After an announcement is made regarding who has been awarded the contract, the university will initiate additional communications programs to give employees the most current information available and to assist employees in making important decisions regarding their future.

I am sure each of you is very interested in our role in the competition for the management of the Laboratory. The university chose to join with the best in the nuclear industry for this competition, and we are an active member of LANS. The LANS oral presentation before the DOE Source Evaluation Board [recently] went very well. Led by LANS President Michael Anastasio, our team described how Bechtel National, BWXT, Washington Group International, and the New Mexico universities, led by [University of New Mexico] President Louis Caldera, have come together with the university to offer Los Alamos the best scientific and management expertise and resources in the country. We made the case that the LANS partners have substantial relevant experience and a proven record of accomplishment and accountability, as well as the focus to prepare the Laboratory for the demands of tomorrow's world. As you may know, DOE expects to announce its decision on or before Dec. 1.

While the LANS, LLC team looks forward to sharing details of the proposal, it still is premature to do so. But let me tell you a little about what you, as employees, should expect in the months ahead.

Whether the Department of Energy chooses the LANS, LLC team or another competitor, the university will work with you, the future contractor and DOE to ensure as seamless a transition as possible with minimal impact to you, your families and the work at the Laboratory. If, as we hope, the LANS, LLC team is successful in the competition, I am very confident that the transition will be as seamless as it could possibly be, given our knowledge and insight as to the benefits that are currently provided to you.

Let me make a final comment about benefits. As the university has said in the past, and I know from the commitment I have received from our LANS partners, we are committed to offering a compensation and benefits package that ensures our ability to retain and recruit the best scientific and technical minds, promoting a Laboratory work force of the highest quality. I would like to reiterate that it is the objective of our competition team, as endorsed by the [UC Board of] Regents in many of our meetings, that should our proposal be accepted that the pension program for transferring employees mirror UCRP as much as the law permits a non-governmental employer to do so, and that benefits for new employees be attractive as well.

Thank you for your patience and your commitment to the great work of the Los Alamos National Laboratory. As I indicated, I will provide you with more information as decisions are made by DOE.

Sincerely,  
Robert C. Dynes



University of California President Robert C. Dynes

**For Laboratory closures,  
delays or early  
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call UPDATE at 667-6622  
or 1-877-723-4101 (toll free).**



# Robot plays key role in B Division research

by Rebecca McIntosh  
of Bioscience (B) Division

Humans have long been fascinated with robots. Although evidence of robots, or machines that can do work for people, dates back to 250 B.C., many modern robots began to gain popularity in the 1950s with the idea that robots could perform household chores and other tedious tasks.

In addition to being useful for tasks that humans find tiresome, robots also can help expedite processes at rates humans just can't physically achieve. Earlier this year, a 4,000-pound robot was delivered to Bioscience (B) Division that may revolutionize research in many arenas because of its ability to produce many proteins simultaneously that could otherwise take days of labor.

The Protein Purification System robot, developed by the Genomics Institute of the Novartis Research Foundation and sold by Kalypsys, is one of only four others worldwide. In fact, the robot at B Division is the only one being used in an effectively academic research environment, such as the Lab, and not in a development setting such as a pharmaceutical company. Researchers led by Andrew Bradbury of Molecular Microbiology and Immunology (B-1) decided to purchase the robot because their research will require the production of thousands of proteins, which would be nearly impossible without some automated help.

"This provides a protein production capability that exists in only a few places in the world," said Bradbury. It's not only the increased quantity of production that the robot provides for researchers. Bradbury said it also allows for a highly standardized system and eliminates the possibilities of human error.

Protein purification itself can take days for technicians to complete. Researchers must first identify the correct genetic sequence for the desired protein. This genetic information, along with instructions for producing the protein, is then inserted into a bacterial cell. The inserted material instructs the bacterial cell to produce the desired protein, like a protein factory, and as the bacteria multiply, more protein is

produced. Finally, the cells are lysed, to release the protein, and the researchers must then purify the protein to strain away all the other molecules and liquids left over from the cell. Not only can the protein purification robot follow a specific recipe for this process, but it can simultaneously prepare 96 individual samples — thus creating the equivalent of 96 1-liter cultures of protein in one day, a task that could take nearly 30 technicians to complete.

Bradbury's research focuses on developing fluorobodies, which are fluorescing molecules that can bind to specific targets and promise to be useful as biosensors, research reagents, for diagnosis or detection of proteins and in bio-threat research.

Other research, such as programs within the Protein Structure Initiative (TB Structural Genomics Consortium and the Integrated Center for Structure and Function Innovation), that examine protein structures and their functions, will be able to enhance their efforts by easily producing proteins with the robot.

"We don't have to individually grow the cells and purify each; it's nearly possible with the push of a button," said Tom Terwilliger of Cell Biology, Structural Biology and Flow Cytometry (B-2), principal investigator for the Protein Structure Initiative projects. "It offers us the chance to dramatically increase our throughput."

The robot won't solve all the bottlenecks in these types of research. Terwilliger explained that one bottleneck is not having enough samples available to feed into the



Hugh Fisher of Molecular Microbiology and Immunology (B-1) loads bacteria samples into the robot at a recent training session at the Health Research Laboratory. Inset photo: The centrifuge rotor is located inside the robot apparatus. It holds 96 tubes; the centrifuge alone weighs about 160 pounds. Photos by McIntosh

robot. Nevertheless, the new robot will be an asset to these and other projects in B Division. And, because of the unique nature of its capabilities, it opens doors to possible collaboration with other areas of research, within the Laboratory and beyond.

"I'm very happy to help other people with their protein production needs. I'd like it to be a resource for the division, the Laboratory and outside research groups," said Bradbury. In fact, he already has been approached by Somatologic, a diagnostic company, about producing large numbers of proteins for its internal research efforts, and he is considering setting up a user facility to deal with such requests.

## Computing into the future

by Tom Bowles, chief science officer



This week, the Laboratory signed a lease for Coyote, a 15 teraflop computer with 5,272 nodes and 11 terabytes of memory. This [computer] will be installed by Christmas to increase our Institutional Computing capability by a factor of three. The IC project was started in 2002 to enable predictive science by providing high performance computing resources. Since HPC is so important to our research capabilities, last year the Laboratory increased our investment in IC to \$5 million a year.

The IC program supports research projects that range from quantum mechanical chaos to the structure of the universe, from the design of antibiotics to the DARHT second axis and from the aging of materials to meteor impacts. Proposals for IC resources are peer reviewed by the IC Technical Committee, which recommends allocations to the CSO. Today, we support 44 different projects on IC resources that have used a total of more than 14,000,000 CPU [central processing unit] hours.

Coyote will be connected to the Turquoise network, which is an open, collaborative network that is accessible to Laboratory users and their collaborators. Turquoise includes Pink (a 2048 Intel processor cluster) that is delivering about one million CPU hours per month and TLC (a 256 processor cluster) that provides access to a parallel computing platform by Los Alamos staff and students for learning, training or small-development activities. To tie [the Lab] in with the national scientific community, Turquoise has high-speed external connections. We are working in collaboration with the University of New Mexico, New Mexico Tech, New Mexico State University, Internet 2, ESNet and Qwest to significantly upgrade the external bandwidth on Turquoise. Finally, Turquoise provides 160 terabytes of high-speed and 2,000 terabytes of long-term data storage. By comparison, the Library of Congress contains about 136 terabytes of information. Turquoise will be fully operational in the 2006 fiscal year, providing a much-needed computing capability for open, unclassified research at the Laboratory.

Computer and computational science is vitally important to our research capabilities at the Laboratory. I am convinced it will be even more important in the future. Institutional Computing is an important way the Laboratory is investing in the future of science at the Lab.

Making a Difference  
for Generations... Los Alamos  
National Laboratory  
and United Way

2006



Called to duty

# Lab employees return home from Iraq

**“Do not take freedom for granted. Do not take America’s values and moral character for granted.”**

—Pia Romero of Staffing, Technical Support and Research and Development (SUP-10), Commander of the 1115th Transportation Company, Taos National Guard Unit.

by Hildi T. Kelsey

Since its inception in the 1940s, the Laboratory has unwittingly served as the origin of an admirable assortment of humble heroes: innovators in life-saving and freedom sustaining technologies; bold leaders with noble, solid characters; and brilliant, pioneering scientists who have changed the world. Today, this great tradition continues with employees like Pia Romero of Staffing, Technical Support and Research and Development (SUP-10), Melvin Borrego of the Manuel Lujan Neutron Scattering Center (LANSCE-12) and Jacob Edkin of Telecommunications (CCN-4).

They returned home this summer from a yearlong deployment in Camp Taji, Iraq (20 miles north of Baghdad) with the 1115th Transportation Company, Taos National Guard Unit. Bringing diverse backgrounds, qualities and skills to the unit, each of the three soldiers offers a personalized glimpse into the tumultuous lives and harrowing experiences faced by those called to serve in Iraq.

## Pia Romero



Motivation, determination, commitment, patriotism ... sacrifice. To her family, co-workers and troops, these traits characterize Pia Romero — recipient of the bronze star for her meritorious service in Iraq. Balancing work at the Lab, military training, family, physical fitness and school, she rocketed through the armed services ranks to become an officer in the National Guard and commander of the 1115th.

For Romero’s unit, which consisted of 170 National Guard troops from Taos, Grants, Gallup, Albuquerque, Santa Fe and an added platoon from Arkansas, its mission in Iraq was three-fold: 1) Conduct convoy operations, transporting humanitarian provisions to the Iraqi people and military supplies to United States Army troops in and around Baghdad and Mosul. 2) Provide force protection to Camp Taji, guarding the camp and acting as security. 3) Work at the First Cavalry Division distribution center, receiving orders and delivering supplies to the soldiers.

“We were pretty much in the center of it all,” said Romero. Because of the volatile nature of her unit’s operations and proximity to “the action,” Romero said she constantly feared for those soldiers who set out on convoy missions. During its deployment, the unit participated in more than 800 combat transportation missions, logging a total of 1.3 million combat miles.

One of the most apparent dangers to the convoys, Romero said, was from indirect fire, such as, incoming mortars or rockets. She said her unit’s convoys also were “hit” at least seven times with roadside bombs. “These types of missions were particularly challenging because soldiers were putting their lives on the line,” she said. “A lot of these soldiers I have grown up with; people from my hometown. I knew their parents. I prayed nothing would happen to them that I would have to explain to families or loved ones.”

Although some members were subject to bomb-related injuries or severely fired upon, no one in Romero’s unit died in Iraq. Romero contends that her unit got so good at “doing convoy missions” that her soldiers were asked to “help with security” with other units’ convoys. Romero’s pride in the 1115th is obvious. “It was personally rewarding to be able to command such a large unit with great soldiers,” she said.

After working from 6:30 a.m. to 9:30 p.m., six and a half days a week (with a half day off on Sunday), Romero is thrilled to be home — reunited with her husband and son — but misses the routine of the day-to-day management of her unit’s initiatives in Iraq. While much of her time was spent on multi-faceted operational processes, certain extraordinary efforts stand out in her mind.

“To me, the most monumental moment of the deployment was helping out in January with the [Iraqi] elections,” Romero said, referring to her unit’s delivery and

continued on  
Page 7

## Melvin Borrego



“It was close. The some helicopters that But, that wasn’t the convoy commander, sions and “getting the lost.” Sometimes, the

In fact, the first ro sives, known as a dai none of the other bon that, even if they had,

“Before each convoy came under fire,” he s to be. When you roll o Borrego said the eye- to face similar situation acted appropriately,” he

This preparation and convoy missions but sust experienced a minor bur. to “taking shrapnel” that was severely wounded by

Unfortunately, Camp T April 24, when Iraqi insur, attack that killed five Ame like family to us,” he said.

However, not everything the unit’s humanitarian mi and shoes — to the children describes as “rewarding,” re tary transport missions. Bor setting up Jersey barriers and from the polls on electio

While these significant acc about everything about home family — especially his two ch





**Borrego**

High atop a 20-foot guard tower positioned on the camp's perimeter, Sergeant Melvin Borrego stood vigilant looking out over miles of endless sand, while he endured another 140 degree summer day in the Iraqi desert. As sergeant of the Guard for his unit's force protection efforts and squad leader, responsible for manning five of the outpost's towers, Borrego became accustomed to taking small arms fire from "outside the wire" on occasion. But on this boiling day in June, he came face-to-face with a new danger when insurgents launched two rockets "straight at" his watchtower. "We ended up calling pretty much took them out." "We ended up calling the first "close call" for Borrego, who also served as manning the lead truck during the unit's convoy mission. The entire convoy from point A to point B without getting hit. The unit faced dire obstacles along the way. A roadside bomb his convoy hit was one in a series of explosions in the chain, set to go off in succession. Luckily for the unit, the bomb in the chain exploded. However, Borrego is confident his unit "was prepared for anything." "Everyone was on the same sheet of music. You had to be ready, we would go over our drills — what would happen if we were hit there, you don't know what is going to happen." "I missed the freedom to just go out — go to McDonalds and not have a mortar round come down on you on the way there," he said. But, Edkin and others found ways to cope with this bizarre lifestyle transition and not lose sight of home. While separated from family and friends by about 7,000 miles, advancements in communication technology made connecting with loved ones a more reasonable proposition. According to Edkin, the camp had four or five computer centers, consisting of between 10 and 20 computers, where soldiers had access to satellite Internet communication to the United States. Some troops also had satellite telephones, while others utilized the Iraq phone shop or purchased an AT&T calling card. Additionally, his shared, 12-by-12 foot, single-wide camp trailer offered some comfort to Edkin as a place for him to escape after his six-or-seven-day-a-week work schedule, even if only for a little while. "It was my own little space to get away from Iraq," he said. As assistant truck master and telecommunications expert, Edkin admits that "he had it good" compared to troops routinely assigned to force protection duty. Those soldiers worked four weeks at a time without a day off — mostly patrolling outside in the scorching desert sun, wearing full flack jackets with bulky ceramic protection plates and carrying heavy guns and extra ammunition. "It was nice being in the office most of the time and not out in the heat," Edkin said. For Edkin, his role as a gunner on a five-ton truck during the unit's return journey from

**Jacob Edkin**



“There is a sense of relief when you get back from Iraq — your focus is on home. Iraq becomes a distant memory that you don't want to think about,” said E4 Specialist Jacob Edkin, as he reluctantly recalled his experience in the Middle Eastern hotspot. Edkin, who earned two Army Commendation medals during his year in Iraq, officially served as assistant truck master for his unit — making sure maps were created in “good fashion, mission routes were planned well and troops were accounted for.” But his duties stretched far beyond that of a single title. During his tenure in Iraq, Edkin also helped distribute supplies, aided in force protection and used his technical expertise and computer knowledge to boost the performance of the camp's outdated PCs. “I was kind of like the unit's computer guru,” he joked. Additionally, Edkin worked on radios and trained people to use them. “Just like I do here at the Radio Shop.” Contemplating his existence in Iraq versus life in the United States, Edkin said he “missed his freedom the most.” He said that unless soldiers were out on a specific mission, they were confined to camp for safety purposes. “I missed the freedom to just go out — go to McDonalds and not have a mortar round come down on you on the way there,” he said. But, Edkin and others found ways to cope with this bizarre lifestyle transition and not lose sight of home. While separated from family and friends by about 7,000 miles, advancements in communication technology made connecting with loved ones a more reasonable proposition. According to Edkin, the camp had four or five computer centers, consisting of between 10 and 20 computers, where soldiers had access to satellite Internet communication to the United States. Some troops also had satellite telephones, while others utilized the Iraq phone shop or purchased an AT&T calling card. Additionally, his shared, 12-by-12 foot, single-wide camp trailer offered some comfort to Edkin as a place for him to escape after his six-or-seven-day-a-week work schedule, even if only for a little while. “It was my own little space to get away from Iraq,” he said. As assistant truck master and telecommunications expert, Edkin admits that “he had it good” compared to troops routinely assigned to force protection duty. Those soldiers worked four weeks at a time without a day off — mostly patrolling outside in the scorching desert sun, wearing full flack jackets with bulky ceramic protection plates and carrying heavy guns and extra ammunition. “It was nice being in the office most of the time and not out in the heat,” Edkin said. For Edkin, his role as a gunner on a five-ton truck during the unit's return journey from

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**Jason Manchester-Jones and Matt Montoya from Protection Technology Los Alamos also were deployed in Iraq as members of 1115th. In the past two years, 17 Lab employees have served or currently are serving on long-term (more than 30 days) active duty in the armed forces, while 45 employees were on short-term military leave from the Lab.**

# So...what do you think?

**Q.** President George W. Bush recently asked Americans to conserve gasoline by driving less. He also issued a directive for all federal agencies to cut their own energy use and to encourage employees to use public transportation. Are you doing anything differently or special to conserve energy? If so, what?



**Joe Grider** of Facility Management (FMU-3)

There's not much I can do, although I do think the 9/80s are helping, because we are driving less. As far as Laboratory buildings go, we are constantly looking at ways to conserve. In fact, we just finished an evaluation of our energy usage, and we are now realizing some energy savings.



**Kelly Herrera** of the Human Resources (HR) Division

Yes, I am commuting with three other human resources professionals from Albuquerque. This is saving time and money.



**Nick Salazar** of Safeguards and Security (NMT-4)

Actually, I continue to car pool, which is nothing new. Other than that, everything is pretty much the same.



**Patricia Rael** of Tritium Science Engineering (ESA-TSE)

I traded in my Ford Escape which got about 20 miles per gallon for a Hyundai, which gets about 35 mpg to save on gas when I am commuting to the Lab from my home in La Puebla.



**Labriano Lucero** of Information, Records and Media Services (IM-9)

It is very hard for us due to our budget. I could ride in a car pool or find some other ways to save, maybe using a smaller car.



**Melissa Schaum** of Staffing (HR-S)

We try to car pool back and forth to Albuquerque, where I am a student at the University of New Mexico. I also plan on keeping my thermostat turned down this winter.



**Jim Dalton** of FMU-3

Personally, most of the time my wife and I car pool to work, and we live here in town out by the airport. Of course, like everyone else, we are worried about heating costs this winter. I may get some Styrofoam panels to place in my windows this winter for added insulation.

## PEOPLE



### Lab employee, six retirees honored at Cryogenic Engineering Conference

Lab employee **J. Patrick Kelley** of Mechanical and Design Engineering (LANSCE-MDE) and Lab retirees **Frederick Edeskuty, Edward Hammel, William Keller, Walter Stewart, Rod Thurston** and **Adam Schuch** (recognized posthumously) received the Cryogenic Engineering Conference's 50th Anniversary Recognition Awards at the 2005 CEC-ICMC, a joint conference sponsored by the Cryogenic Engineering Conference (CEC) and the International Cryogenic Materials Conference (ICMC).

"We wanted to recognize all the people who contributed more than their fair share of work," said Klaus Timmerhaus, organizer of the anniversary event and an organizer of the first CEC in 1954. "It is the people from the Laboratory who have given us the greatest support in the cryogenic arena."

The joint conference, combining the CEC's focus on science and engineering required for cryogenic applications with the ICMC's concentration on the development, characterization, fabrication and optimization of the materials used in such applications, was held this summer.

In celebration of the CEC's 50th anniversary, award recipients were acknowledged during a special program honoring 50 individuals for exemplary leadership, vision and dedication to the conference over the past 50 years.

"Of the 50 recipients, seven were from [the Laboratory] — 14 percent [of the award winners]. No other institution came close to



*J. Patrick Kelley*

this number of honorees," said Kelley.

A summary provided by Timmerhaus stated that all 50 recipients combined devoted 312 years of service on the CEC Board of Directors, presented more than 640 technical papers at meetings, chaired or co-chaired 173 sessions and received all 12 CEC Collins (lifetime achievement) awards and 18 Scott (best paper) awards. Additionally, most of the recipients were recognized as fellows in other professional societies where they also obtained awards.

"These honors all recognize the exemplary contributions these individuals have made to the CEC and the cryogenic community," said Timmerhaus.

## In Memoriam

### Neil Davis

Laboratory retiree Neil Davis, 81, died Aug. 4. He was born Dec. 6, 1923, in Thorndale, Texas.

Davis came to Los Alamos in 1945 as part of the Manhattan Project in the U.S. Army Special Engineering Detachment and joined the Laboratory in 1946 in the former Operations Crossroads (B) Division. At the time of his retirement in 1991, Davis was a program manager in Nuclear Weapons Technology (NWT) Programs. He returned to NWT as a Lab associate from 1992 to 1996.

Davis received a bachelor's degree in electrical engineering from the University of Texas.

Davis is survived by his sons Scott of Mukilteo, Wash., and Tim of Spokane, Wash., four granddaughters, a niece and nephew.

### Matthew Dale Lusk

Laboratory employee Matthew Dale Lusk, 34, passed away unexpectedly Aug. 26.

He was born in 1970 and graduated from Rio Grande High School in Albuquerque in 1989. After graduation, he moved to Los Alamos and began taking classes at the University of New Mexico, Los Alamos.

In 1997, Lusk was accepted into the Laboratory's Electro-Mechanical Technician Training Program. After completing the program, he worked as an electrical technician in Accelerator Controls and Automation (LANSCE-8).

Lusk is survived by his mother, Claudette (Duncan) Wilmarth and her husband, Jim Wilmarth; father, George Lusk and wife, Janice; brother Mike Lusk; grandparents, Jennie and Jess Aldridge, and Lois Wyche; stepbrothers Dan Wilmarth, Jeff Wilmarth and Gary Michael; and many other relatives and friends.

### Ramon Romero

Laboratory retiree Ramon Romero died March 7 in El Porvenir, N.M. He was 77.

Romero first came to Los Alamos in 1947 after his discharge from the U.S. Army Air Corps. He worked for Zia Co., the Lab's facilities and support service contractor for more than 20 years before becoming a University of California Lab employee in October 1968. He left the Laboratory in 1988.

Romero was an isotope separation technician in the former Chemistry Metallurgy Fowler (CMF) Division, and later a fabrication technician in the former Isotope and Nuclear Chemistry (INC) Division. He also worked in the former Chemistry and Nuclear Chemistry (CNC) Division.

Survivors include his wife, Cila; daughters Claudia Romero and Rita Romero of Albuquerque and Martha Rose of Tucson; sons David and Robert of Albuquerque; three grandchildren; one great-grandchild; and a sister, Nieves Silva.

# Preschool made possible through the United Way

**Editor's Note: This is one in a series of stories profiling United Way agency providers in Northern New Mexico and Santa Fe. The profiles were developed by the Community Relations Office (CRO) and will be featured periodically during the Lab's 2006 United Way giving campaign.**

If you're looking for Joan Jamison, lead teacher of the Children's Zone Program at Santa Fe's Agua Fria Elementary School, don't look in her classroom. She is more likely to be outside, surrounded by children with smiling faces. And it's just possible the children will be smiling because they're counting bugs.

"My main goal is to have them learn lots of things through play," Jamison said, speaking of the children in her program, which is supported by United Way. "You can get them counting, because they're not just counting but playing with bugs. The idea is to get them to love to learn."

The Agua Fria Children's Zone is Santa

Fe's first preschool program in the public schools. Any 4-year-old in the Agua Fria Elementary zone is eligible to apply, and there's no charge. Under current funding, however, the program is limited to 16 children.

Jamison begins her daily exercises of "learning through play" with techniques designed to help the children learn basic knowledge while helping them mature and learn to work together. "We focus on the whole child with an emphasis on emotional and mental well-being," she said. "We make them feel comfortable in this environment."

Counting bugs is not the usual activity for teaching how to count, but it's something Jamison knows works. She says her students routinely go on to kindergarten with useful and important knowledge other students lack. "If you can come into kindergarten with that knowledge, then you have an advantage," said Jamison.

Former students of the preschool have another advantage; the ability to work well with other students in a learning environment in which they are familiar and comfortable. "So they are able to focus," Jamison says. "They are able to pay attention."

It is this kind of success that keeps Jamison working hard and feeling rewarded. "It's so needed, she said. "When we can give, it makes a huge difference in the community."

Jamison said there is nothing she enjoys more than knowing a child has learned something new. "It is so touching, and it never fails to fill me with joy. The biggest and best moment is the moment of comprehension."

With the help of the United Way, Jamison is able to see these moments of discovery in her students every day. And she shares her joy with those who work with her — teachers, aides and volunteers. "Everyone is here for the same reason," she says, "to learn and to have fun."



Photos courtesy of the United Way of Santa Fe County

## Romero ...

continued from Page 4

placement of Jersey barriers in strategic locations during the election process, "so Iraq citizens could vote."

With that experience in mind, Romero feels that despite the negative publicity surrounding the war in Iraq and the growing internal strife among members of the new Iraqi government over the details of the draft constitution, the presence of American troops in Iraq to help stabilize the region is necessary. "Remember, we were once a fledgling governance too. I firmly believe we didn't do our job in vain," she said.

The 1115th is still a functioning unit and Romero will remain in her command position until October.

## Borrego ...

continued from Page 4

children grow up. To miss my daughter's entire freshman year was pretty rough," he said.

But, generosity and good cheer from well-wishers at home did not go unnoticed and helped ease the pain of being thousands of miles away. Bringing another level to the meaning of "Support our Troops," teams of Lab employees sent over 40 care packages to the unit. Borrego shared a message for Lab staff who contributed to this effort: "I just want to emphasize that Lab employees sent out a nice set of care packages — enough to provide for the whole unit. It was like Christmas whenever we got a package. Just to know people cared — that we weren't forgotten — was a big deal. That was awesome. It was a real morale booster."

## Edkin ...

continued from Page 5

Iraq to Kuwait was both the most memorable and most frightening experience during his entire deployment. "The convoy back was scary. There we were on our way home. So far, no one from the unit was lost ... When we made it to Kuwait, we were so grateful. We were going home — everyone was going to make it back."

## Laboratory names ...

continued from Page 1

discoveries in physics during the past several decades. Because of this discovery, Hime was the principal author of the most cited articles in science for all of 2003.

John Singleton is the world-renowned expert in the field of experimental condensed matter physics. He has made seminal contributions in organic low-dimensional conductors, semiconductors and magnetic materials. He has pioneered several new experimental techniques using magnetic fields. He also produced the first evidence for inhomogeneous superconductivity, known as the Larkin-Ovchinnikov-Fulde-Ferrell state.

Critical to the success of the key remote sensing programs at the Laboratory, James Theiler has been the lead theoretical developer of the GENIE algorithm and instrumental in correcting motion problems in ALEXIS. He is lead author on a series of highly cited papers that introduce the "surrogate data" method, which has now become a widespread and standard tool in nonlinear time series analysis. He also played an important role in tracking the history of the HIV virus.

Gary Wall is a leader in the nuclear weapons program, developing primaries with insensitive high explosives, a major safety enhancement. He was the lead designer for several nuclear tests and a member of the design team for 25 additional tests. He was a member of the original design teams certifying the W76, W80 and B61 systems, three of the five systems in the U.S. nuclear weapons stockpile. He also is a leading weapons expert external to the Laboratory for the Department of Defense, emergency response and other organizations.

Recognized for his seminal and definitive work in the field of basic plasma physics and its application to both laboratory and space plasmas, Dan Winske is widely considered to be a founding father of hybrid simulations of space plasmas; his codes are among the most widely used and emulated tools for the study of intermediate scale dynamics in these media. He has been instrumental in the Laboratory's efforts to understand the effects of nuclear explosions in space, and he has made significant contributions to uncovering the effects of plasma turbulence on the early expansion phase of nuclear explosions in the ionosphere.

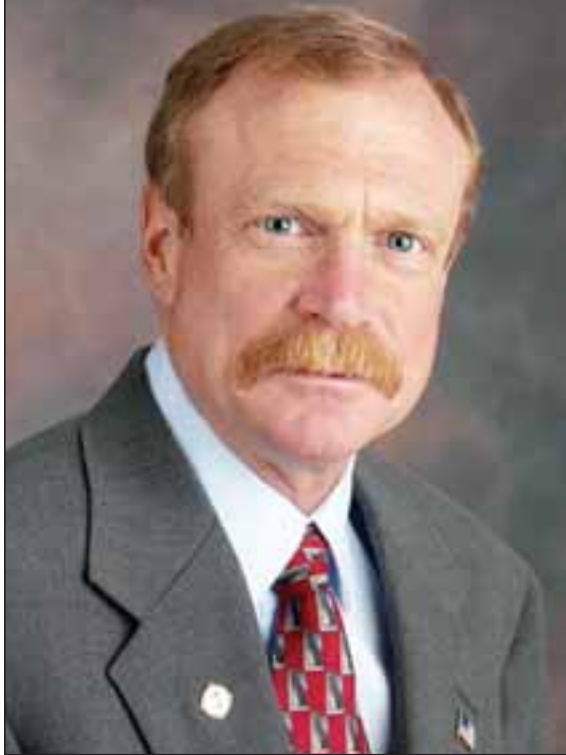
Laboratory Fellows are expected to continue to play an important scientific or technical role in the Laboratory and to contribute in significant ways to Laboratory programs and initiatives. Fellows are often called upon to provide critical analyses of significant issues affecting Laboratory programs and the work force. Only 2 percent of the Laboratory's current technical staff members can hold the title of "Fellow" at any one time.

Nominations were submitted to members of the Laboratory Fellows Screening Committee, who reviewed the nominations and then submitted their recommendations to Kuckuck. The director then selected these candidates for the honor.



# Hands-on role for Laboratory employee in creation of new Iraqi government institutions

by Ed Kellum and Brenna Moore



Mike Wismer

Many Americans have watched the process of the creation of a new government in Iraq from the comfort of their homes on television, in newspaper reports or on the Internet. Laboratory employee Mike Wismer of Security Integration (S-2) watched it unfold in person as part of a team helping the country's leaders improve Iraq's newly formed parliamentary government.

The Iraq National Assembly opened its session in mid-March 2005, and has since elected leadership and appointed its government. For a period of two months (May to July) Wismer joined an international contingent sponsored by the State University of New York's Center for International Development and funded by the United States Agency for International Development to strengthen the capacity of the staff supporting the INA. As the primary human resources adviser with governance experience, Wismer built on the work of other functional experts and provided the INA with significant tools to use in its institutional development process: (1) a proposed minimum staffing matrix, per department; (2) an analysis of parliamentary structural options and impacts on decision making and political powers; (3) a draft organizational structure with options that offered INA leadership a variety of decision-making and execution patterns; and (4) a draft human resources manual for personnel policies and procedures that were analyzed for compliance with Iraqi civil service law.

To complete this demanding set of objectives in a two-month time frame, Wismer worked through the Secretary General and the Chief of Staff to the Speaker of the INA to assess the needs of the Iraqi government. He also worked closely with department heads and managers to design an organizational structure, craft job descriptions for newly created positions like legal research and analysis and public information /media relations, and create personnel policies for parliamentary service. One of the significant challenges Wismer and his team had to overcome was assisting the Iraqis in their efforts to decentralize authority and move away from the authoritarian, centralized structure of the previous Iraqi government, Wismer said. Wismer and his team developed series of options for the Iraqis to consider as they formed the new staff.

Wismer, who also is a Los Alamos County Councilor, took a leave of absence from the Laboratory to go to Iraq. He was in the Middle East under the auspices of the State University of New York (Albany) Center for International Development.

Some of the other challenges to the team accomplishing its goals were the obstacles put forth by cultural differences and language barriers, said Wismer. The experience was made even more demanding with sometimes harsh living conditions. Raging sand storms, temperatures that approached 120 degrees, electricity for only two hours a day and a shortage of water made achieving their goals difficult, Wismer said.

Yet the majority of the Iraqi people, Wismer said, do not seem opposed to the changes being proposed. With a great sense of hope, patience and resilience and a willingness to listen, learn and act, the Iraqi people are ready to move forward, said Wismer. They are eager to make their government work, he added.

And work it has. On Aug. 16, the Iraqi National Assembly approved the Organizational Structure for the Parliamentary Service Staff that supports the 275-person INA, as well as the job descriptions Wismer's team developed and submitted for consideration to the speaker of the Iraqi National Assembly. "Working with the SUNY/CID team to build the capacity for the Iraqi government to establish its first democratic institutions proved to be one of the most significant and positive professional experiences of my life. I sincerely hope the Iraqis are successful in their efforts to draft and approve a new constitution, and I applaud their efforts," Wismer said.



Above is an aerial view of the Green Zone as it borders the Tigris River through Baghdad, Iraq. The entire five-mile area is heavily fortified and protected by the U.S. military. Wismer lived and worked inside the Green Zone. At right is the Iraq Government Building that housed the staff that supported the Iraqi National Assembly. Photos courtesy of Wismer

