

LOS ALAMOS NATIONAL LABORATORY
CURRENTS



June 2008

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Rising to the challenge

Talk to the hands

Scanning the sky robotically

Safety Web page tells your story

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NATIONAL LABORATORY
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Workers are key to safety programs

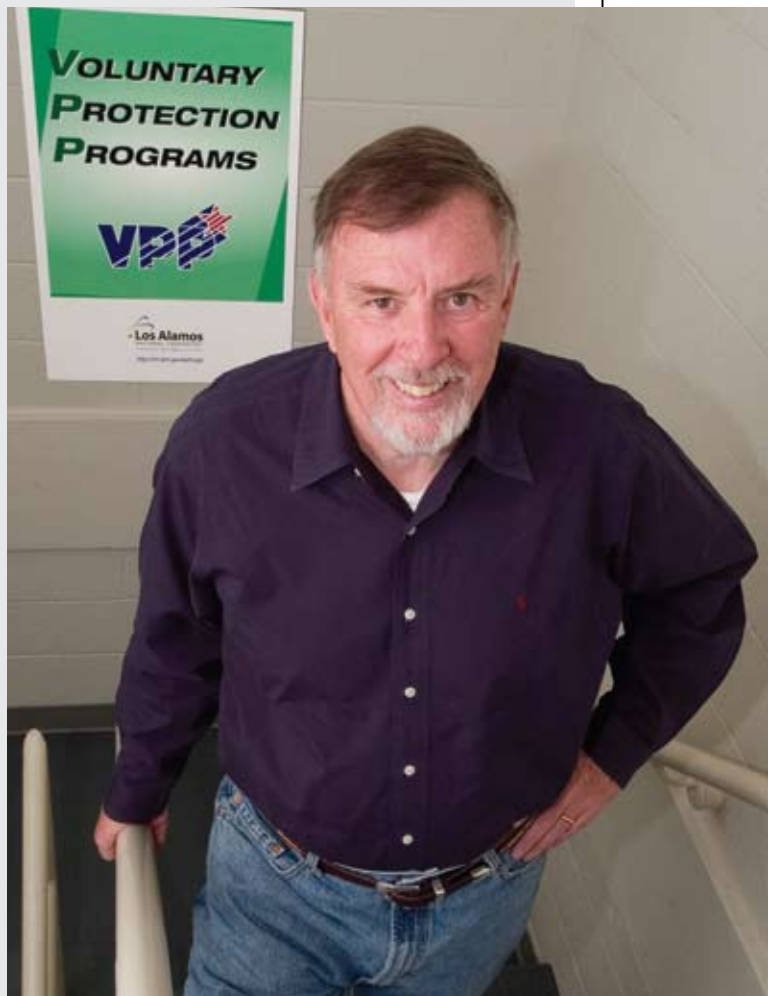
One of the things I always have been passionate about is my strong belief that people can accomplish almost anything, anywhere, and do it safely. This has been true throughout my 48-year career, which includes working at four Department of Energy sites over the last 17 years. People are the key, and management and workers together can create an open, productive environment that ensures the mission is accomplished in a safe and efficient manner.

It has been my experience that one of the best processes for bringing organizations together is the Voluntary Protection Program (VPP). The Laboratory's VPP efforts have really only one goal, and that is to support safe and secure mission accomplishments through worker involvement. I sincerely believe the workers should drive the safety programs. A critical part of our VPP efforts centers on the Worker Safety and Security Teams (WSSTs). These teams are comprised of workers and management and provide a means for us to engage all Laboratory employees in an effort to prevent safety incidents and injuries. I am pleased to say that WSSTs exist at the institutional and all directorate and division levels, with 73 percent of all groups also having WSST representatives. As one of its Laboratory-wide initiatives, the institutional-level WSST recommended that the Laboratory focus on preventing accidents and injuries and set a goal of a 30-percent reduction from last year.

To date, based mainly on the efforts of Laboratory employees, the Laboratory has achieved a 17-percent reduction. But these are just numbers; it really means we have prevented another 84 injuries compared with the same time last year. For me, one injury is too many, but this is a great start.

If you are a member of one of the WSST teams, I applaud and support your efforts. If you are not aware of who the WSST members are in your area, I encourage you to get to know them and to get involved. Los Alamos National Laboratory is a great place to be, and I firmly believe that with everyone's help we can make this the place where all in the complex want to be.

—Dick Watkins, associate director of the Environment, Safety, Health, and Quality Directorate



Dick Watkins

Dixon Wolf

About the cover: Linda Deck, Bradbury Science Museum director, welcomes employees and the public to the Laboratory's museum in downtown Los Alamos. See Page 4 for story. Photo by Dixon Wolf

Picraux named Materials Research Society Fellow

Tom Picraux of the Center for Integrated Nanotechnologies is an inaugural Materials Research Society Fellow. He was honored for his leadership in applying ion channeling and ion beam materials modification to materials research and for his contributions to advancing materials science through research management and professional society service.

The title of MRS Fellow is bestowed on members who are notable for their distinguished research accomplishments and their outstanding contributions to the advancement of materials research worldwide. The number of Fellows who may be newly appointed each year is approximately 0.2 percent of the current MRS membership of more than 14,000 members.

Picraux also is a fellow of the American Physical Society and the American Association for the Advancement of Science.



Michael Anastasio

Director addresses NNMC grads

Laboratory Director Michael Anastasio encouraged more than 200 Northern New Mexico College graduates to continue their pursuit

of knowledge and take on challenges as they begin the next stage of their lives. Anastasio delivered the keynote address at Northern's commencement ceremony last month in Eagle Memorial Gymnasium on the college's campus in Española.

Jarvinen garners Glenn T. Seaborg Actinide Separations Award

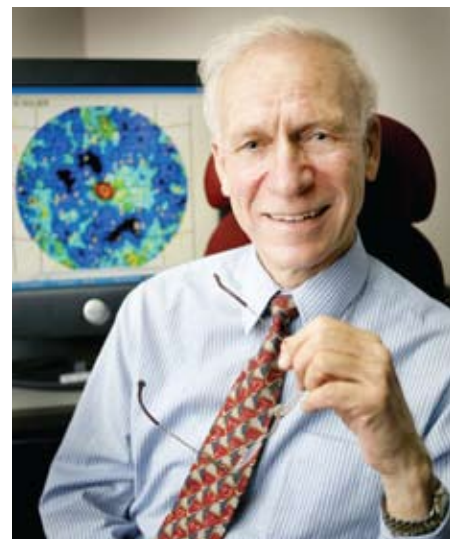
Gordon Jarvinen of Stockpile Manufacturing and Support is the latest winner of the Glenn T. Seaborg Actinide Separations Award.

The award recognizes U.S. (nationality) scientists and engineers who have made outstanding and lasting contributions to the development and application of actinide separations processes and methodology.

Jarvinen received the award last month at the 32nd Annual Actinide Separations Conference.

Steinhaus recognized for outstanding contributions to education

Community Programs Office Director Kurt Steinhaus recently was awarded the New Mexico Leadership Award. In an address to the New Mexico STEM (science, technology, engineering, and math) conference, U.S. Senator Jeff Bingaman recognized Steinhaus for being an education leader in New Mexico. Bingaman also recognized Steinhaus for his contributions to New Mexico education while serving as the governor's senior education policy advisor.



Phil Kronberg

Kronberg receives Alexander von Humboldt Award

Phil Kronberg of the Lab's Engineering Institute and Theoretical Division recently received the 2008 Alexander von Humboldt Foundation Award for his impact on astrophysics and radio astronomy. The award will involve Kronberg staying in Germany for three months, starting June 1. An awards ceremony will take place June 24 in Berlin.

Kronberg joined the Lab in 2002 as the Anderson Scholar at Los Alamos's Institute of Geophysics and Planetary Physics. This 2008 award is an extension of Kronberg's 1990 original Humboldt Award.

Each year, the Alexander von Humboldt Foundation grants up to 100 Humboldt Research Awards worldwide. The Award is not discipline specific, and includes researchers in physical and life sciences, engineering, economics, humanities, medicine, and law.

The Humboldt Award recognizes the outstanding impact that internationally recognized scientists and scholars have had on their area of study over their career. The Foundation was established in Berlin in 1860.

Everything old is new again

museum director keeps things fresh

Linda Deck knows the importance of telling a story. For 20 years as a senior exhibit developer, she helped the Smithsonian's National Museum of Natural History tell its story.

Today, Deck leads the Bradbury Science Museum and its team, whose mission is to describe in words, pictures, displays, and exhibits and with hands-on activities the Laboratory's 65-year history. It's no small task for a Laboratory whose origin dates back to the Manhattan Project and the race to create the first atomic device.

When Deck became museum director in August 2007, she had a long, rewarding career in the museum field, including time spent at the Smithsonian and five years as director of the Idaho Museum of Natural History.

"I started my career while I was still in graduate school, when I got the opportunity to participate in the visiting-student program at the Smithsonian," said Deck. "The work there was really exciting, involving paleontology research and collections. I did a little bit of everything that goes into running a museum."

Deck eventually joined Natural History's Department of Public Programs, developing and managing new exhibit projects for the museum's millions of yearly visitors.

"My real interest was engaging the general public with science. Being able to do that visually, in writing, and with interactives interpreting the 'real thing' in museum exhibits is the ultimate," said Deck.

With completion of the Smithsonian's *Geology, Gems, and Minerals* exhibition, Deck began to wind down her career at the museum. "I sort of worked my way out of a job. We had completed our geology and paleontology exhibit projects, and it was time to look for something new," she said.



Sandra Valdez

Bradbury Science Museum Director Linda Deck plays with some magnetic pieces used to model water molecules. The pieces and other items are part of a hands-on experience for visitors to the museums' TechLab.

Deck and her husband, Ralph, whom she married while working at the Smithsonian, relocated to Pocatello, Idaho, and the Idaho Museum of Natural History.

"I very much enjoyed my time in Idaho and accomplished a lot for the museum, including raising a lot of money and helping the museum grow," said Deck.

Her search for another opportunity to continue her career and add to her cultural experiences led Deck to Los Alamos and its proximity to cultural activities in Santa Fe and Albuquerque.

“When I came here, I realized I wanted to learn as much as I could about Los Alamos, both the Laboratory and the community,” said Deck. To that end, Deck participated in Leadership Los Alamos and became a member of the County’s Lodgers Tax Advisory Board, learning more about the needs and issues of the community and area.

As director of the Bradbury Science Museum, Deck’s goal is to continue telling the public about the Lab’s history, technology, and path forward doing cutting-edge science.

“The museum’s galleries are one of the ways that we reach out to the public with Lab information,” said Deck. “But we also have this phenomenal informal education component.”

Educational programs developed and supported by staff at the Bradbury include Science on Wheels, a program for schools across Northern New Mexico that brings science education and a bit of the museum to students; the TechLab hands-on learning experience at the museum; public talks on science, archeology, and health issues; and science demos for museum visitors and at local events.

Having been at the Lab for almost a year, what does Deck think of her experience? “It has been great. I think the staff at the Bradbury is dedicated, creative, and talented,” said Deck. “I am very lucky. I got a box of premium chocolates [referring to her staff] when I came here and not the dime-store kind, but the really, really good ones. I really do love our team and what we do for the Lab and the public.”

—Ed Vigil



Two young visitors to the Bradbury Science Museum participate in the museum’s Inventor’s Workshop.

Special programs at the Bradbury Science Museum

- **Science in Motion:** Drop in any time during museum hours. Experiment with gears, pulleys, levers, and pendulums in the TechLab.
- **Demo Stage:** Begins daily at 11 a.m., 2 p.m., and 4 p.m. See a new science demonstration each week.
- **Catch a Zephyr!:** “An Inventor’s Challenge to Harness the Wind.” Individuals and teams are challenged to create mobiles, whirligigs, or wind energy machines to display at Los Alamos County’s “The Next Big Idea” event July 19. Go to <http://www.lanl.gov/museum/docs/catchazephyr.pdf> for details.
- **Inventor’s Workshop:** June 16-20 and July 14-17. Classes at 1 and 3 p.m. Mondays; or 10 a.m., 1 p.m., and 3 p.m. Tuesday through Friday (first-come, first-served).
- **Astronomy Days:** July 8 and 10, 11 a.m., 2 p.m., and 4 p.m. See the new portable planetarium and learn about the night sky.

The Bradbury Science Museum is located at 15th and Central Avenue in downtown Los Alamos. Hours are Tuesday through Saturday, 10 a.m. to 5 p.m. and Sunday and Monday, 1 to 5 p.m. The museum is open on federal holidays and closed Thanksgiving, Christmas, and New Year’s Day. Admission to the museum is free. For more information, call 667-4444.

‘When I came here, I realized I wanted to learn as much as I could about Los Alamos, both the Laboratory and the community.’

Rising to the challenge

a star amongst many

Whether studying the properties of nuclear nano-particles, serving as chair for the Worker Safety and Security Team, skiing, or scaling rock formations, Felicia Taw of Inorganic, Isotope, and Actinide Chemistry isn't afraid of a challenge.

Recognized for her work as chair of the WSST, Taw was chosen as one of this year's LANL Stars by the Women's Diversity Working Group.

"It was an honor, and it was totally unexpected," said Taw. "I didn't even know I had been nominated.

"I think that it is a great program, and I am thinking about nominating someone for next year's award," said Taw.

Taw came to the Lab as a postdoc in November 2002. These days, she's working on small-scale detectors for sensing gamma and neutron radiation, but her interests go well beyond the work she does in the chemistry lab.

"I'm also interested in exploring research in the energy arena, a direction the Lab should take in light of today's energy concerns," said Taw.

"One thing that the Lab does really well is allow for the opportunity to work with other staff in diverse fields," she noted. "In fact, it is nothing to pick up the phone and talk to someone about collaborating on a project."

Taw, whose research efforts have earned her high kudos at the Laboratory, also believes being able to interact with scientists of different backgrounds is the key to developing novel solutions to current problems.

In addition to her LANL Star award, Taw has been honored and recognized at the Lab

with an LAAP Award in 2008, a Laboratory Postdoctoral Publication Prize in Experimental Sciences in 2005, a Laboratory Director's Achievement Award in 2005, and the Laboratory Director's Postdoctoral Fellow award for four years, from 2003 to 2006.

—Ed Vigil

Felicia Taw of Inorganic, Isotope, and Actinide Chemistry is an avid rock climber.



Donna Leshne of the Office of Equal Opportunity and Diversity demonstrates equipment that allows a deaf person to communicate using a computer monitor.



LeRoy N. Sanchez

Talk to the hands

Lab's sign language interpreter facilitates communication

"These hands have taken me places that I could not imagine I would ever be," said Donna Leshne as she gestures with just a hint of amazement.

Her hands also have helped deaf employees across the Laboratory feel they're part of the larger Laboratory community. Leshne, the program manager for diversity in the Office of Equal Opportunity and Diversity, provides sign language interpreting for deaf employees on an as-needed basis.

Leshne emphasizes that she interprets and does not translate word for word. Rather, she provides meaning, context, and intent so that a deaf person can communicate with a hearing person.

When Laboratory employees need sign language interpreting, they contact Leshne using e-mail or a TTY machine. In some offices, video relay capability allows Leshne to provide sign language interpreting services via a Web cam.

When she signed on with the Laboratory, Leshne knew that her learning curve would be steep. "I really had not functioned in the scientific or engineering community," she said. "But I could apply my 25 years of sign language interpreting experience to this new environment."

Leshne, who grew up communicating with extended family members who are deaf, emphasized that eye contact is key in sign language interpreting.

"Deaf people grow up in a hearing world. They know how to work with hearing people to be understood. But it's very likely that a hearing person is meeting a deaf person for the first time as an adult with no prior experience and no tools. Nothing has been provided to help them communicate with a deaf person," she said, adding that she wants hearing people to become more aware of the communication challenges that deaf people face.

"To think that almost 30 years ago I was interpreting high school biology, and now I've had an opportunity to interpret some of the most cutting-edge research. It's just stunning to me," said Leshne.

"It's been an incredible learning experience. It's invited me into the ranks of sign language interpreters who work in national laboratories and provide support services in these specialized areas."

— Steve Sandoval

Tom Vestrand poses with RAPTOR-T, four co-aligned telescopes with insertable color filters. Part of the Lab's robotic telescope system, RAPTOR-T will be the first to observe gamma-ray bursts in four different color bands while the gamma rays are being emitted.



LeRoy N. Sanchez

Scanning the sky robotically

Lab's 'robodoc' adds an exciting twist to astronomy research

He's been tinkering with gadgets for as long as he can remember, from hot-rodding the lawn mower to rebuilding a Ford 8 N tractor engine in an upstairs bedroom. Now, Tom Vestrand of Space Science and Applications has taken on a higher calling with a decade's worth of robotized telescopes up on Fenton Hill, scanning the heavens with a methodical efficiency no human can match.

"In the second grade, my grandparents bought a telescope and a microscope for me, and I just did stuff. I've always been interested in science," Vestrand said. Growing up in the rust-belt suburbs of Detroit, Michigan, he found plenty of things to take apart, and it blended with a family tradition of fiddling with things. His father, grandfather, and great grandfather worked for Burroughs, the long-time adding-machine company, and his father also worked for a computer company. He spent a little time in the Burroughs facility himself, working on the janitorial crew during summer breaks, giving him a solid motivation to continue his studies.

Heading to the University of Michigan for a bachelor of science in physics, and then completing a doctorate in astronomy at the University of Maryland, Vestrand moved on to a postdoctoral position at the National Radio Astronomy Observatory and then to work on satellite instrumentation for some years at the University of New Hampshire. Coming to Los Alamos 10 years ago, he was ready to do things no one else had yet accomplished, combining robots with telescopes to give the skies a really thorough going over.

The best part of his science, he says, is "that feeling of excitement you get when you put together something no one else has put together before. It's that 'Aha!' moment. 'That's how it works.'"

The Fenton Hill telescopes, which Vestrand says represent "a really different way of doing optical astronomy," are part of the Thinking Telescope project (see the article in the January issue of *1663*, available online at <http://int.lanl.gov/news/index.php/fuseaction/1663/d/20081/>).

"The thing we did differently on thinking telescopes was to see that the next step was to go for triggers in the optical, that there could be these really spectacular explosions that are not gamma-ray-burst generated, and that you need robots to really scan the skies."

—Nancy Ambrosiano

*The best part of science is
"that feeling of excitement
you get when you put
together something no one
else has put together before.
It's that 'Aha!' moment."*

Revised Procurement Help Desk hours of operation

The Procurement Help Desk is available Monday through Friday from 7:30 a.m. to noon and from 1 to 5 p.m. Submit questions to the Help Desk by e-mail at phdhelp@lanl.gov or leave a voice mail message, which automatically will create a ticket.

Ethics training for LANS employees

Web-based ethics training is now available to Laboratory employees, including students, postdocs, and affiliates. The approximately one-hour course is required and must be completed by June 30. To take the training, go to <http://int.lanl.gov/training/w-courses/44486/splash-in.asp> online.



Handling spam

Do not reply to (or “unsubscribe” from) any spam e-mail messages. Don’t forward spam e-mail to others or open attachments to spam e-mail. Send the attachment to trash and empty the trash. Don’t attempt to “spam the spammer,” as you will lose that game. For more information, go to <http://int.lanl.gov/security/cyber/incident/> online.



New process for science education community service leave

Employees now can request science education community service leave time faster and more efficiently, thanks to a new online system. The new online system replaces hard copy Form 704 Part B Request for Community Service Time. Employees can submit a request by selecting the link from the Community Programs Office’s (CPO) Web page at <http://community.lanl.gov/>.

For more information, contact CPO at 5-4400.

Lightning safety

On average, 62 people are killed each year by lightning in the United States, and many more are seriously injured. At the Laboratory, employees have been struck by lightning while at work, including a lightning-induced shock last year. Go to http://int.lanl.gov/safety/esc/docs/tidbit_8.pdf for some useful tips for protecting yourself and others from lightning hazards.

June service anniversaries

Find the June service anniversaries online at <http://www.lanl.gov/news/newsbulletin/anniversaries>.

New dosimetry enrollment process

The Radiation Protection Division has implemented a Web-based system for employees to determine their dosimetry needs. This system replaces the paper-based Health Physics Checklist, and new enrollments or changes to dosimetry will use this new system. For more information and to access the Dosimetry Evaluation System, go to <http://dosimetry.lanl.gov/>.

Report badge loss or theft immediately

The magnetic strips on the current and new federal security badges contain the badge holder’s Social Security number. A badge’s loss or theft must be reported immediately to the Badge Office. Go to <http://int.lanl.gov/security/newbadge/newbadgeFAQs.shtml> for more information on the new federal badge.

Lean Six Sigma Office joins Business Services

The Lean Six Sigma (LSS) Office is now part of the Business Services Directorate. Lean Six Sigma’s two major areas of focus are process management and process improvement. Go to <http://int.lanl.gov/orgs/adbs/> for a brief overview on LSS, office contact information, and LSS course information.

In Memoriam

- Walter (Vern) Rogers, 82, died April 25
- Neel W. Glass, 83, died April 27
- Richard “Birdie” Branch, 79, died May 4

 *Make safety and security integral to every activity we do*

Safety Web page tells your story

communicating the importance of safety

Like many Laboratory employees, Laura Wolfsberg juggles family and work while striving to meet deadlines and uphold myriad responsibilities. Employees can catch a glimpse of Wolfsberg's day and how safety plays a vital role in everything she does on the Laboratory's new Safety Web page at http://int.lanl.gov/worker_safety/.

Employees can reach the new interactive page from the Laboratory's internal home page. One of its features invites employees to share their own stories, concerns, and ideas.

"The goal of this interactive and media-rich page is to focus safety communications, messages, and tools to those affected most—employees," according to Howard Nekimken, Institutional Worker Safety and Security Team (WSST) chair. The WSST hopes to use it to communicate the team's focus areas and accomplishments.

This page also provides a toolkit for managers to help in communicating the importance and relevance of safety in everything we do. Among the page's features are interviews with employees and managers depicting their involvement in making safety improvements, home safety tips, and a warehouse of metrics and archives available for use as "safety minutes."

With a clear focus on Laboratory employees taking care of one another, the new Safety Web page stresses the importance of our continued awareness and involvement.

As for Wolfsberg's busy day, it ends with her shown cuddling her two children and reading a book. This image resonates with Alex Romero, Institutional WSST member representing the Director's Office and the Contractor Assurance Office. "It brings safety to a personal level," he said.

—Mig Owens

Laura Wolfsberg of the Chemistry Division starts the day by taking care of her family, making sure Sammy and Leah are buckled safely into their seats. Wolfsberg is featured in the Laboratory's new Safety Web page.



Richard Robinson



Ben Uphoff, Packet Analytics' vice president of research

Digging deep into network alerts

When Los Alamos National Bank sought to consolidate the entirety of its network security information in one place and efficiently analyze so-called "network events," it turned to Packet Analytics Corporation.

According to Ben Uphoff, Packet Analytics' vice president of research, "If a computer on the network is compromised, a security analyst can use our software to determine the scope and extent of the incident, possibly going back through years of data."

Uphoff created the software at the Laboratory initially for network forensics and incident response. Now on entrepreneurial

leave, he serves as the Santa Fe-based company's lead software architect.

After completing his master's degree in computer science at the University of Wisconsin-Madison in 2001, Uphoff joined the Laboratory as a technical staff member in the Network Engineering group. While working as a network security analyst and software developer, he earned his doctorate in computer science from Iowa State University in 2006.

"Since writing this software for the Lab, I have had a strong desire to get it to market," he said. "It's really rewarding to speak with potential customers who see our software as a solution to their problems."

According to Belinda Padilla of the Technology Transfer Division, Packet Analytics recently completed its Venture Acceleration Fund milestones. Sponsored by Los Alamos National Security, LLC, the fund provides investments of up to \$100,000 in Northern New Mexico startups to create jobs, attract additional investment, and enable startups to reach large markets faster.

Once off the ground, Uphoff said the company hopes to relocate from Santa Fe, possibly to Albuquerque where a larger pool of software developers exists. Uphoff said he would like to see Packet Analytics be a success and then have a hand in seeing more Laboratory technology move into the commercial market place.

"Just in our group alone, there were numerous amazing technologies that my colleagues have developed," he said. "I would love to see some of that technology follow the same path that we have."

—Mig Owens

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