Fiery research: Computer models for propellant fires

Walt Gill of Sandia’s Fire & Aerosol Sciences Dept. 1532 calls it a pancake—a disk more than a foot in diameter covered with what looks like the debris you’d scrape off a particularly messy barbecue grill. It’s actually a chunky, baked-on mixture of aluminum, aluminum oxide, carbon, and other chemicals that coats everything after a rocket propellant fire.

The gritty material is part of a study Sandia is doing under a three-year contract signed with the Jet Propulsion Laboratory (JPL), California Institute of Technology, with funding from NASA. The propellant fire modeling project began in February and expands beyond the risk analyses the Labs already does for DOE. A presidential directive requires DOE to assess the risk to the public of launching NASA space missions that carry radioactive material for power sources. It contracts with Sandia for those assessments.

A propellant fire is one of the major risks in launch-
Congratulations to the folks in Sandia’s Safety organization. A couple of weeks ago, I spoke at a summit for employees of NNSA and Sandia. I’ve been involved in some of the most memorable and effective safety talk I’ve ever heard. In a measured and matter-of-fact voice, the speaker described a 2012 trench collapse that left a worker seven feet dead in a pipeline trench that collapsed on top of him, burying him under tons of dirt. He survived. A lot of construction workers don’t. I can’t recommend the video strongly enough. You can watch it on Sandia’s internal website at http://tiny.sandia.gov/thehills. We would be stunned if you aren’t moved and inspired by it, just as many Sandians who have already viewed it have been. We all know the importance of using equipment like those in bringing Giguere to Sandia, says several Sandians have told him directly that the presentation has fundamentally changed the way they think about safety. It certainly reinforced my own perspective, about which I’ll go into more detail below.

Giguere, a 30-something working stiff who has found a new mission in life talking about his accident, recounted the events and the decisions of that day, decisions that would haunt him for years. The pipeline team had been making good progress on a big job and didn’t want to be delayed by safety procedures. On the morning of the accident, the six-foot trench Giguere was in should have incorporated several OSHA-mandated safety measures. But, the team in effect said, safety, shadafy, yeah, yeah, Everything was going well; they’d already opened up the trench over the past few weeks and the ground was stable. Just plugging ahead would save them the extra five minutes it would have taken to do things the right way, the safe way. Boy, Giguere thought, the bad stuff always happens to some other guy, right? Except this time, it happened to him. Just like that — he snags a finger — the trench collapsed on him. He was buried, unable to move, cut off from all light and sound, in the blackest, deadest space you could ever imagine. He lay there, thinking about his bride of six days— six days! — and realized he would never see her again. In replaying the last few moments, he realized that no one actually saw the collapse and would therefore have no idea he was in trouble. He struggled for life, fought for life, but the weight of the wall, the sticky slurry had crushed his lungs, had filled his mouth and nose. Whatever that force is that makes us alive, this dirt was squeezing it out of him. He estimates that after the wall had fallen on him and a half — the longest and minute and a half of his life he died. Luckily, his fellow workers, who hadn’t seen the actual collapse, quickly figured out what had happened. Turning to the last resort, dangerous, least-worst option at hand, they did what they could to keep him warm. On the way to the hospital, he couldn’t stand to be covered by blankets. He had nightmares. Nightmares so bad he was scared to even try to go to sleep. He was burdened by depression and profound sadness. His young wife stood by him for several years but finally, she couldn’t take it any more. The two divorced a couple of years ago. Giguere holds no grudges, doesn’t really blame her. He understands that that’s just how men and women 10 years his age never came out. His theme, ultimately, is that the decisions you make about your safety don’t just affect you; they affect everyone who cares about you. Everyone. Says Giguere, “I don’t want anyone to ever have to pay the price I paid.”

On a personal note, Giguere’s comments really struck a special chord with me. It was at the bottom of a ditch when I was 27 years old that I decided to go back to school. I was a working stiff, and the thought of it, the idea of it, led me to Sandia. My trench story had a happier ending than Giguere’s. I was 10 feet down, and back in those days there was no such thing as OSHA guidelines on trench safety. No shoring. No hardhats. Nothing like that. Anyhow, there I was, deep in a cool, moist space, a slice of sky directly overhead and a big machine rumbling away almost right on top of me. Shovels in hands, I was working gravel under a new water main pipe. A few yards up the line from me, the trench walls, which had been holding fine for days — the surface trench of an — clay-rich soil tended to hold things in place — gave way with a suddenness that was, if anything, faster than the snap of a tripod. The ditch literally slammed shut. I could hear the air being forced out like a clap. I climbed that last straw for me. I climbed out of the trench and never looked back. Ahead of me were all the good things that my life has enjoyed: Marriage to a remarkable woman, a daughter. A son. Behind me was an accident I had almost lost a life that might not have been.

See you next time.

— Bill Murphy (505-845-0483, BWR, billm@lsandia.gov)

Attention Sandia Retirees: Annual Retirement Social scheduled for September 5

In 2011 more than 1,500 Sandia retirees and their guests attended the annual Retirement Social. The 2012 event is expected to host even more attendees, as Sandia experienced a record number of retirements in 2010 and then again in 2011. More than 650 retirements were processed last year. Due to our increasing retiree population and the increased attendance at the Retirement Social, Sandia purchased several new spaces for securing a venue for this year’s event. The Albuquerque Convention Center was selected as this year’s venue, as this location has adequate indoor space to allow for gathering of friends, good food, reminiscing, and catching up, all within the same banquet room.

This year’s event will include a presentation from senior leadership and presentations from Sandia’s Corporate Archives and History Program. When: Sept. 5 11:30 a.m.–2:30 p.m.
Where: Albuquerque Convention Center
Note: Sandia will also provide a park-and-ride service from Hoffmann Town Church.

An invitation with event details will be sent to Sandia retirees via email in early August. Information on the California Retiree Social will be announced in a future edition of Lab News.

(Photos from 2011 Retirement Social. Photos by Lloyd Wilson)

19 children of Sandians win Lockheed Martin scholarships

Nineteen high school students who are children of Sandians have won awards this year in the National Merit scholarships and Lockheed Martin academic scholarships. Across the Lockheed Martin Corp. 100 students won scholarships in 2012. The Sandia-connected students and their parents are listed here:

National Merit Scholarship
Academic Scholarship

Katherine Dai — [email] steve dai (1832)
Andres Eras — kenneth eras (2624) and berlinda baca eras (5961)
Christopher Harrms — [email] christopher harms (1384)
Katherine Herrmann — [email] mark herrmann (1640)
Kenza Hanne Hietala — vincent hietala (5616)
Clarissa Jordan — jay jordan (5338) & sabina jordan (6612)
Sarah Otts — brandy otts (5564)
Katherine Price — [email] laura price (6624)
Peter Sinclair — michael sinclair (1816)
Patrick Skelly — [email] michael skelly (6624)
Sophie Tran — [email] hy d. tran (2541)
Brian Wyss — [email] gregory wyss (6612)

Lockheed Martin Academic Scholarship

Nina Guzde — john gruzer (103)
Joseph Jacobus — mark jacobs (5954)
Britney Lai — ming lai (8280)
Madeline Quinn — vincent quinn (3555)
Megan C. Shyr — [email] jen shyr (6624)
Nicholas Wallther — [email] howard wallther (2991)
Jonathan Yocky — [email] david yocky (5962)
Slow and steady loses the weight

By Patti Koning

In the fall of 2011, Simon Scheffel (8226) was turned down for an increase in his life insurance policy because of his weight. “It wasn’t a complete surprise, but I felt pretty insulted,” he says. “I decided it was time to get healthy.”

This wasn’t the first time Simon had tried to lose weight. He’d participated in several wellness programs in the past, like the Healthy Heart class, but even with those tools he didn’t have the motivation to stick with a weight loss program.

This time was different. In about a year, Simon lost 50 pounds, weight he’d been carrying since college. A big difference this time around, he says, was technology — specifically, using the My Fitness Pal iPhone app to track eating.

“These apps give you access to a huge catalog of food and make it so easy to track what you eat,” says Simon. “Nothing is in there. I’ve never had a problem finding menu items from restaurants. They even have Sodexo sandwiches.”

Making changes

Simon made small changes to his eating habits. The biggest was simply being aware of everything he was eating. “His eating habits weren’t bad,” says his wife, Karen Scheffel (8226). “But he wasn’t very mindful of portion size or caloric tradeoffs between different foods.”

He’s also eating more frequently and making sure he has access to healthy and filling snacks like Greek yogurt, Kashi bars, fruits, and vegetables. “I still eat the foods I really like but just less often and less of it. It’s easier for me to feel full,” Simon adds. “We still eat our frozen yogurt, but only once a week.”

Simon increased his physical activity as well. He lifts weights, jogs, and plays ultimate frisbee. He’s also, as he put it, gotten “mildly obsessed” with his pedometer. His goal is 12,000 steps a day.

Those gradual changes, says health educator Morgan Edwinson (8527), are the keys to Simon’s success. Most people who diet return to their old ways within a year.

“Simon’s first health assessment, he was surprised with the risks he was facing, for heart disease and diabetes,” she explains. “But he took his time and adapted his lifestyle very slowly. He has a really good chance of making this weight loss permanent. His wife, Karen, also fully supports him.”

Morgan describes the “pink cloud” of making healthy lifestyle changes that typically lasts two to four weeks. “After that initial period, dieting becomes a grind and that’s when you start making exceptions and cheating,” she explains. “You have to find a way to motivate yourself through that grind. Simon found that through concerns about his health and the embarrassment of being denied life insurance.”

Simon has continued to avail himself of Sandia’s wellness resources. He’s worked with site dietician Rachel Connors and trainer Emily Thompson (both 8527), and taken the resting metabolic rate (RMR) test several times.

The RMR is the number of calories one burns while at rest. Several factors play a role in determining a person’s RMR: body size, muscle mass, gender, age, genetics, and level of exercise. Larger people typically have a higher RMR than smaller people, and muscle mass can also elevate RMR. Youth also plays a factor — as you age, your RMR tends to drop.

“It’s a simple test that basically measures how much energy your body needs to maintain basic metabolism,” explains Morgan. “This is a bar you don’t want to go below because that could cause your body to respond by becoming more efficient and your RMR will go even lower. This is why restrictive diets typically don’t work.

The key is to combine a healthy diet with exercise.”

Exercise can raise your RMR, but only if you add significant muscle mass. Regular exercise can temporarily elevate your RMR for up to an hour after completing a workout. Exercise, of course, aids weight loss by increasing your overall energy expenditure.

The RMR test is offered at the California site for a $20 fee. To schedule a test, contact Rachel at 294-3783 or email saludca@sandia.gov. Several metabolic processes can alter the results, so there are some guidelines to prepare for the test, such as avoiding meals, significant water intake, and particularly strenuous exercise prior to the test. Complete instructions are provided when scheduling the RMR.

Simon was pleased to find that even as he lost weight, his RMR went up slightly. “It means my muscle mass increased and I’m burning more calories than I did when I was heavier,” says Simon. “Usually one’s RMR goes down as you lose weight.”

He would like to lose another 10 to 15 pounds, but he’s also in no hurry. “I’m okay with the plateaus every once in a while because I don’t want this to feel like a job,” he says.

Medically managed weight loss

The California site recently initiated a medically managed weight loss program. In designing the program, the California team drew on the experience of Dr. Linda Macdonald and nurse Johanna Grassham (both 3334) of New Mexico’s health services department.

The California program is intended for obese people who have failed repeatedly to lose weight, are considering an invasive procedure such as gastric bypass surgery, or both. Participants first go on a liquid diet, and then gradually make the transition back to regular meals while working with counselors to address food-related issues. Exercise is also a key component of the program.

She cites national statistics showing that obesity rates are continuing to rise. “We need to look at different strategies. This is a last-ditch effort to help participants lose weight and keep it off after everything else has failed,” says Morgan. “If it doesn’t work, participants will be better prepared for surgery gastric procedure, if they choose to go that route.”

Physician Stephanie Ball, dietician Rachel Connors, nurse Maureen Morelli and Michelle Valencia (all 8527), and Morgan work as a team to support participants. Only three people have participated in the pilot program, which has been a success so far. “We have moved those individuals from being obese to over-weight. That’s huge from a health perspective,” she explains.

But the pilot is far from over. Participants need to make at least a one-year commitment and Morgan expects they will stay in the program in some form of support and follow-up for years. “We can’t say someone is done when they lose the weight,” she says. “It takes years to make this kind of change.”
Mission Support Functional Alignment announced

(Continued from page 1)

crucial customer relationship, the employees’ job, and their work schedule should not change.

Functional alignment is designed to improve Sandia’s ability to provide more customer-focused service, leverage expertise, reduce bureaucracy, foster greater consistency in implementing policies, and make operations more cost-effective. It also will help ensure that members of the workforce who have similar skills get the support and training they need to do their jobs and develop their careers.

Benefits of a peer population

Kim told the employees they will benefit from being part of a peer group that can help identify needs and techniques to help them do their jobs and from being able to bounce ideas off people with similar back- grounds. “You have the benefit of having a peer popu-
lation that can speak the same language,” which will foster collaboration, she says. “You’ll be able to iden-
tify what new things you could potentially do or what innovations you could introduce to the work that you’re doing to do it more effectively.”

The plan involves about 5 percent of the 2,750 Mis-
sion Support members in job families such as commu-
nications and marketing, human resources, facilities, security, ES&H, information technology, general busi-
ness management, project management, and quality. If at least 70 percent of a person’s job is within one of those job families, he or she will be aligned with the Mission Support division or center that is structured to provide the direction and oversight for the function. Functional alignment applies to regular full- or part-
time employees and non-Sandia employees such as staff augmentation contractors.

The restructuring takes effect Sept. 21 with the start of the new fiscal year and performance management cycle. There are no staff reductions or increases planned as part of this initiative.

Sandia successfully carried out functional alignment in 2008, when Business Operations and Human Resource Business Partners were aligned. Bonnie Apodaca, VP of Business Operations and CFO, told the town hall that experience taught three lessons: Plenty of communication needs to flow in both directions so people remain part of an integrated team; managers need to be sensitive to hot spots such as performance evaluation; and organizations must have a plan to make sure the alignment improves both the talent and the work done.

Functional and matrixed managers will meet with each other over the next two weeks. Newly aligned employees will meet with their functional and matrixed managers in August. Kim says that will let them work out employee concerns and hear ideas.

A Mission Support all-hands meeting is also set for Aug. 29.

This year’s performance and compensation review won’t be affected by the change, but Kim says managers with aligned employees will team up on the review in the future. Next year, the functional manager will work with the manager where the employee is assigned to set performance objectives and expectations for both organiza-
tions and to do a performance review.

Additional information is available at http://info.sandia.gov/functional-alignment/

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Recruiting with pride at Albuquerque PrideFest

PROUD TO SERVE — Volunteers from Sandia and NNSA staff an official Sandia recruiting booth at Albuquerque’s annual Pride Parade and PrideFest in late June. Pictured are, from left, Kasimir Gabert, Kevin Eugene Tracey, Adam Spriggs (NNSA), Aseneth Lopez (Front), Matthew Allen (back), Nicholas “Nick” Hauda, Andres Sanchez, and Joe Justice.
Retired California VP Mim John kept her hand in the air on a stellar Sandia leadership journey

By Nancy Salem

Making your own opportunities

“Making your own opportunities” is what Mim John talked about her leadership journey and what she wanted. She hosted a talk on her leadership journey by the Sandia Women’s Action Network. She said she would have expected what would happen after 28 years. She said that job and family with support put in 24 days of vacation, and she was not hesitant to take them. She said she sought out mentors, some long-term and others for specific issues. She was promoted early and made many mistakes, but she always had people she could talk to, and they always helped.

“Women have different styles by nature. If you are playing this Saturday in football? But they are very nurturing and only demand on me was that I do my best. Wherever it took me was OK with them.”

Mim earned a bachelor’s degree in chemistry from Rice, a master’s in chemical engineering from Tulane University, and a doctorate in chemical engineering from Princeton University. After a post-doc in Mexico, Mim had to look for “real work and a real job.”

“Then there was this fabulous place called Sandia that had 24 days of vacation,” Mim laughed. “I was in a crisis, said Mim. “My mom said she knew just the person to help. One of her old professors gave me a battery of tests. He came back and said he’d never seen a profile like mine. It was flat. She was hardly mediocre. In 28 years at Sandia/California, Mim rose from technical staff to VP of the site, a position she held for seven years until her retirement in 2006. She went on to serve on countless national boards and committees, including DoD’s Defense Science Board, the National Research Council’s Naval Studies Board, and the California Council of Science and Technology. She’s also a sought-after consultant.

Making your own opportunities

“When I left Sandia, people asked me what I was going to do. I said sleep,” Mim said. “But then the phone started ringing.” Mim was the guest speaker July 12 at an event hosted by the Sandia Women’s Action Network. She talked about her leadership journey and what she learned along the way.

“I would say I’ve enjoyed an enormous amount of luck,” Mim said. “But I also believe you have to make your own opportunities.”

Mim was raised by a guidance counselor mom and football coach dad. “They were not techies,” she said. “When I told my dad I was elected to Phi Beta Kappa at Rice, he said, ‘That’s great, baby, now who are you playing this Sunday in football?’ But they were very nurturing and their only demand on me was that I do my best. Wherever it took me was OK with them.”

“A lesson she learned was to trust her intuition. “Very few decisions are black or white. You can have expected what would happen over the next 28 years.”

“By some criteria I might not have ever been completely successful, but if I’m not happy in the total package — family, location, opportunities — then I’m not going to do anything but. Anything, that is, except move to New Mexico.”

“Women are part of Earth’s system, maybe the most important part now.”

“The women’s network in California was a match made in heaven. True to the forecast of that long-term test, Mim started in energy and national security, missile defense, and solar energy. But she was hardly mediocre. In 28 years at Sandia/California, Mim rose from technical staff to VP of the site, a position she held for seven years until her retirement in 2006. She went on to serve on countless national boards and committees, including DoD’s Defense Science Board, the National Research Council’s Naval Studies Board, and the California Council of Science and Technology. She’s also a sought-after consultant.

‘Toxic’ political discussions limit climate response, says invited speaker at Sandia

By Neal Singer

The inability of natural and social scientists to devote their full energies to win on “the roulette wheel we’re spinning over climate change” puts humanity at “extreme risk,” said MIT management professor Henry Jacoby, co-director of the MIT Joint Program on the Science and Policy of Global Change. He spoke in late May as the eighth invited speaker for Sandia’s Climate Security Program.

While New York City’s Mayor Michael Bloomberg has a team of 20 people working out adaptations that would counter “a severe possible [ocean] surge in the Bowery [the lowest part of Manhattan],” he said, there’s not enough planning that could be adopted nationally, “though such work intersects with Sandia’s interest in infrastructure security.”

The difficulties in using science to push for mitigation strategies, he said, are more political than scientific, a fitting view perhaps for the director of the social sciences component of the Joint Program’s Integrated Global System Model. He mentioned examples that stretched from the dead end reached by the Kyoto protocol, signed by President George H. W. Bush but not ratified by Congress, to the Heartland Institute’s starting Chicago billboard featuring the face of Unabomber Ted Kaczynski accompanied by the words, “I believe in climate change. Do you?”

While Jacoby said he thinks climate discussion “has become toxic in US political discourse,” he is part of a comprehensive effort to gain a wider perspective on “humans are part of Earth’s system, maybe the most important part now.”

More quickly handle problems appearing in the rapidly proliferating data, he looks to develop “an apparatus that can do uncertainty analysis in 30 hours, not 30 days,” he said.

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More quickly handle problems appearing in the rapidly proliferating data, he looks to develop “an apparatus that can do uncertainty analysis in 30 hours, not 30 days,” he said.

“We’re facing larger and larger risks: We can mitigate, adapt, or suffer,” he told his audience.

But the real questions and solutions lie in “the complexity of cross-cultural dialogue between science and politics,” he said.

Jacoby told one questioner that “a lot of the opposition to climate change is not about science at all, but the role of government in society.”

“The alternative is the [precipital] way we’re going,” he said. “We can’t handle the issue nationally so we do it individually: cash for clunkers, restrictions on utilities. It all adds up but [is] more expensive and less effective than a national program.”

“We’re just digging our own grave.”

The Climate Security lecture series is funded by Sandia’s Energy, Climate and Infrastructure Security Strategic Management Unit and hosted by Rob Leland, director of Computing Research and of Sandia’s Climate Security Program.
Propellant fire

(Continued from page 1)

Long-term relationship finds 2 Sandians working together again

Sandian Walt Gill (15.32) and retired Sandian Burl Donaldson first worked together at the Labs in the mid-1970s, when Burl was doing propellant work and Walt was at NMSU. It’s a connection that survived changes in jobs and locations, and now, later in their careers, they are working again on a Sandia propellant fire study for DOE and NASA.

The relationship predates their Sandia careers. “It goes way, way back to the ’60s,” Walt says.

Back then, Burl was a graduate student at New Mexico State University and Walt was an undergraduate. Walt says he didn’t know Burl then but knew who he was because Burl also was a teaching assistant. That was a big deal — “we didn’t even talk to those guys,” Walt jokes.

Burl says he and Walt shared a professor who headed their respective NMSU dissertation committees, Ahmad Shohum. Eventually, they started cooperating on projects. After Burl joined Sandia in 1969, he says, he presented a paper on explosive theory with Shohum, who also got Walt involved. Burl ended up on Walt’s dissertation committee.

When Walt joined Sandia as a student intern, receiving a stipend from DOE’s predecessor, the Energy Research and Development Administration, through the Associated Western Universities. As he remembers it, “I ran around here living on $300 a month while I worked for Burl and wrote my dissertation.”

Burl became Walt’s mentor at Sandia while the two worked in the area of propellants and explosives. Walt was hired as a full-time staff member in 1979, working in Tech Area 3. Burl by that time was in Tech Area 1, but they remained in touch.

Burl, who worked for three different groups during his career at Sandia, retired. Burl left Sandia for Brazil in 1984 to work for the Brazilian Space Agency, Instituto Nacional de Pesquisas Espaciais (INPE), as division supervisor of its combustion laboratory and professor in its graduate program.

He returned to Sandia in 1989, and a while later, Burl joined the faculty of New Mexico Highlands University. The two men reconnected, and graduate students studying with Burl started working with Walt as Sandia interns.

That arrangement continued when Burl joined NMSU’s faculty. “The whole idea is to engage them in the work,” Burl says. “We have provided over the last 15 or so years, I’d say, half dozen MS students through this arrangement while the projects at Sandia get the benefit of their experience.”

The relationship is further strengthened through Sandia’s visiting faculty program, where Burl contributes on a part-time basis to propellant fire research performed on-site at Sandia’s Thermal Test Complex.

“His positions are to work on things, and we get along,” Walt says.
Stan was nominated for the PECASE award by DOE’s Office of Electricity Delivery and Energy Reliability “for advances in power electronics for the electric grid, including the development of a high-temperature silicon carbide power module and an ultra-high-voltage silicon carbide thyristor, for research on grid integration of energy storage, and for mentorship in the Native American community.”

Stan’s work on the high-temperature silicon carbide power module and on the high-voltage silicon carbide thyristor were honored with prestigious R&D 100 awards in 2009 and 2011 respectively. The semiconductor device allows next-generation “smart grid” power electronics system to be built up to 10 times smaller and lighter than current silicon-based technologies.

Dan was nominated by DOE’s Office of Science “for developing innovative techniques to study the properties of instabilities in magnetized-high-energy-density plasma, enabling quantifiable comparison between experiment and simulation needed for validating cutting-edge radiation-hydrodynamics codes, and for demonstrating substantial leadership qualities in high-energy-density-laboratory-plasma physics.”

In 2011, Dan was awarded a DOE Office of Science Early Career Research Program award of $2.5 million over a five-year period for measuring fundamental instabilities in magnetically driven Z-pinch explosions.

Dan’s team was the first to capture, in a series of 3-D images separated by nanoseconds, the undesirable but apparently unavoidable appearance of a damaging instability (called Magneto-Rayleigh-Taylor, or MRT) in Z-pinch magnetic fields otherwise known to create conditions that fuse atoms for possible electrical energy generation.

Sandia President and Labs Director Paul Hommert said, “I congratulate Stan Atcitty and Dan Sinars for this prestigious award. I’m sure everyone at Sandia shares my pride in their accomplishments. Those of us at Sandia who have watched their careers develop over the past few years are hardly surprised by this high-level recognition from President Obama, but we are very gratified. Their recognition, along with that of colleagues from throughout the DOE enterprise, is testimony to the quality of research in DOE’s national laboratories.”

The PECASE awards were established in 1996, and are administered by 11 federal agencies. Besides DOE’s Office of Science and NNSA, the other nominating agencies are the National Science Foundation, NASA, Department of Veterans Affairs, Department of Health and Human Services, Department of Defense, Department of Agriculture, Department of Education, Department of Commerce, and the Smithsonian Institution.

The awards will be presented at a White House ceremony on July 31.

—— Dan Sinars (1648)
M.ores than 300 Sandians—individuals, team representatives, and their guests—will gather Saturday, Aug. 18, at the Tamaya Resort for the 2012 Employee Recognition Night, Sandia’s annual celebration of exceptional service, technical accomplishment, and teamwork. This year, the awards honor 49 individuals and 74 teams for their contributions to Sandia’s mission success.

Labs Director Paul Hommert wrote in the awards program, “I congratulate you on your achievements, both as individual contributors and as members of outstanding teams. . . . It is especially important that we celebrate with family members of our outstanding contributors, who are part of our larger Sandia family, and I welcome and thank them for their support.”

As we celebrate, I know that you will remember that your achievements are part of the laboratory-wide effort contributed by every member of our workforce to provide exceptional service to the nation. We are proud of you and grateful for your excellent work.”

The individual recipients are pictured here and on the next two pages. A complete listing of team winners and team citations and the names of individual team members begins on the Laboratory-wide effort contributed by every member of our workforce to provide exceptional service to the nation. We are proud of you and grateful for your excellent work. The individual recipients are pictured here and on the next two pages. A complete listing of team winners and team citations and the names of individual team members begins on the right. Individual citations are on TechWeb.

Not pictured among individual winners: Amy Wooley

Executive Support Division

AIS Relocation Development Team

For technical excellence and exemplary teamwork in developing and deploying the Assurance Information System RelocTable and Assurance Reporting Site.

Team members: Cecilia Brown, Ana Lopez, Jane Zingelman, Roberta Jarzabek, Phong Tran, Keith Vigil, Alford Oberle, Dahlia Thabold, John Muller, Denice Triumph, Sherri Bayly, Earl Bruemmer, Crista Connelly, James Fernandez, Jeanette LeBlanc, Todd Scharf, Kevin Stoline, Linda Keating, George Kauppi, Lisa Milhorne, Daniel Nau, Mary Nation, Regina Trefz, Jennifer Trefz

Hispanic Outreach Committee Core Team

For providing exceptional service beyond job responsibilities to assist fellow employees in performing their job, mentor new talent, and contribute to the communities.


Division 1000

Alterations-Corrected Scanning Transmission Electron Microscope (AC-STEM) Realization Team

Realization of state-of-the-art materials characterization capability with the AC-STEM from prototyping through purchasing, lab modification, instrument installation and acceptance, all on schedule and within budget.

Team members: Robert Newberg, Preu Cadle Turner, Jeffrey G. Clark, Paul Konela, M. Anthony Chance, Charles Turkot, John Britt, Carolyn A. Williams, Joseph T. Sichler, Michael M. Flaherty, Douglas L. Muller, Joseph R. Michael, Michael J. Sanchez, Joshua D. Sugar

Aerial Cable Facility Restart Team

For exceptional service in successfully completing restoration of essential operations at the Aerial Cable Facility.


Cavity GEMPS ASC VXV L12 Milestone Team

For significantly advancing both computational and physical simulation tools needed for a validated predictive capability for cavity GEMPS.

Team members: Thomas A. Cala, Brent James, Keith L. Cartwright, C. David Turner, Tim Flanagan, Timothy D. Pointon, Ellis Dunn, David Ampleman, Staus Pasta, Bill Cangelosi, Roderick H. C. Fan, William J. Bahlin, Gary Chanter, William Cerns, Randall Romeno

Cryogenic Gas Experiments on Z

For advancement and conduct of cryogenic systems and conducted experiments to provide definitive data on shock response of Ar, CO2, Kr, ethane, and an ethane/Xe mixture.

Team members: Anthony J. Coley, Ted Winrow, Nate Zameroski, Mike L. Martin, Jeff Martin, Michelle R. Mearns, Cody L. McPhee, Kyle T. Sogores, R. E. White, Lee N. Winter, Sherry A. Winter, David M. Zinn, Thomas J. Singleton, William J. Tierney

DOE Laser Development Team

For achieving a high-quality laser system that satisfied demonstration 3-TW readiness of the JSI focal concept.


Game-Changing Innovations in Renewable Energy and Energy Efficiency Technology Development

Innovations in design, game-changing innovations in energy efficiency and renewable energy systems—photovoltaics, solar thermal, solid-state lighting, fuel transport, electric, motors, and motors.

Team members: Mark Grubich, Gregory Norton, Tony Leonetti, Jeff Lowe, Luis Can, Gary Carter, Mark Eckler, Cory Fuji, Jeffry P. Rejtope, William C. Sovati

MESA Fab Facilities (MFC/741) Natural Gas Outage Team

MESA Fab Fab facilities and cold for the fall through the primary outage crisis in Fall 2011.

Team members: Christopher Gross, John Klem, Kevin C. Bauscom, John Nomack, Ken Collier, Larry James, Tommery Jovan, Jared Jan, Pat Archer, Dale Hovington, David Garcia, Jason Rendnera, Russ Randahl, Tim Brown, Bruce Pentred, Jason Chang, Kaye Metcalf, Clark Dean, Eric Rad, Jerry Seng, Ken Szuma, Dan LaRaja, Marie Ganske, William J. Tierney

New Railgun Design Ring

For excellence in research computational simulation and materials expertise to develop a unique rail design for the Navy Electromagnetic Railgun Program.

Team members: Scott Roberts, Giselimova Sciamm, Scott M. Davison, Chris Siefert, David T. Magruder, Randy Shiers, Christo I. Garei, Pavel B. Reboch, Derek M. Henggir, Alan C. Robinson

Postdoc Development Program (PDPID)

The PDPID team created and evaluated technical and professional development opportunities to improve research capabilities and career prospects for Sandia postdocs.

Team members: Maris L. Garcia, Laura Beddernam, Dorris Sava, Summer R. Ferreira, Amanda Miller, Jose Luis Cruz-Carpo, Lisa Roll, Pratik Bose, Lisa Anne Gray Corcoran, Isaac Elston, Heather F. Jackson, Xiaohan Liu, Yani Liu, Stephen Tech-McGill

TRU Waste Recycling and Characterization

For research and development on advanced recycling and characterization for TRU Waste at the Auxiliary Hot Cell Facility for shipment and disposal at WIPP.


Tinber Ford Team

The Tinber Ford Team achieved an important engineering accomplishment.

Team members: Kelly Ann Wiegers, Amy D. Brown

Z Uranium Team

For engineering and operational excellence in restoring the capability to perform experiments with uranium samples on Sandia’s Z Plutonium Facility.

Team members: Kate Moser, Jeffy W. Gull, Amy Lape, Matt Christon, Matthew Martin, Todd Culpe, Tilek Wayne Briddle, Joshua Bernard Cordova, Lisa Cordova, Devon Dalton, Jean-Paul Davis, Aaron Edens, David E. Ficker, Shalit J. Hambly, Stephen Hellerman, Peter Andrew Jones, David John, Raymond W. Lamer, Elaine T. Shatell, Thomas D. Sublette, Seth Butty, Kelly Coles, Brian Smith, Michael Alick Talabon, Peter Eric Wykarte

Division 2000

Advanced Hypersonic Weapon System Testbed

For development, implementation, and successful flight of the hypersonic system for the Advanced Hypersonic Weapon.

Team members: Daniel Giroux, Jeff Bailey, Joseph Bautista, Thomas Schwartz, Clémence Lazard, David Jackson Peacock, Roderick Starcher

Opt 643 System Design Team

This team created a new sensor system design during the 2012 LEAP Phase 4 that meets critical customer requirements on a time of three weeks.


B-LEP Product Definition Team

This team represents the integration of the VITA, ITA, and (Continued on next page)
Productive and effectiveness at the administrative staff level so our organization can be more operation was successful. The classified magnetic media to an out-of-state public facility for incineration. The team actively responded to the nuclear reactor failures directly related to the situation in Japan while maintaining operations of the Laboratories.

The team planned and executed a highly successful field test at Eglin AFB resulting in provision of a world-class set of multi-mode, Ka-band data.
Partnership Enrichment Program

- Commitment and collaboration in planning and implementing the Partnership Enrichment Program at Sandia Laboratories.

- Empowering young women for excellence in mathematics and science.

- Social and networking events.

- Scholarships and grants.

- Mentoring programs.

- Diversity and inclusion initiatives.

- Professional development opportunities.

- Community outreach and service projects.

- Collaboration and networking.

- Educational and career development.

- Professional and personal growth.

- Leadership and mentorship.
MISCELLANEOUS

WEDDING DRESS, strapless, cost-syle, w/embroidered flowers, 14-16, $300. 505-386-4580

ROCKER CHAIR, Cracker Barrel, oak, natural finish, very good condition, retail $140, asking $50 ea. Kazmierczak, 332-6440

TWI BED, mattress box spring, frame, $35, lazerformed, electric start, 7.5-drawer, stainless steel cabinet w/lock, $25 OBO; deeper, $100, natural oak, 8851 15, Newman, 296-5640

COFFEE TABLE, oval, maple, 24" x 4", beautiful wood, very old, $400. Gray, 263-6251

COLOR PRINTS, 2, Maimon, 24" x 36", $250. Spray, deadline Aug. 1, $854. Drebing, 505-269-3957

PINE TABLE, pine w/iron handles, 78" x 50" x 30", Garcia, 238-0169.

BRAM FIVEFingers KSO, hardly used, $200; edge sander, $400; boradrill issues, free. Dye, 897-0304.

COLOR PRINTS, 50, available, excellent condition. Bell, 505-269-3957.

32" TV, 5.1, Onyko, front, rear center black, $90; all good condition.

FABRIC, tan, $200; twin bed, metal, adjustable top, cast iron hardware, $175. Gray, 265-6211.

SILVERWARE, cutlery, $200; edge sander, $400; boardrill issues, free. Dye, 897-0304.

DELIVERY TRUCK, Freightliner, automatic, under 65K miles, $15,000. Reardon, 925-0358.

64" FLATSCREEN TV, Vizio, 3D, $5,500, $190/mo. includes flight insurance. Akers, 770-0909.

WANTED

505-306-8815.

Henry's, brown/gold pattern, 8 ft. pool table, $175. Gray, 265-6211.

BEERWINKLE, 405-929-0400.

BEERWINKLE, 405-929-0400.

SKIS, $400 ea; girl's desk, drop-leaf, pine spindle, w/mattress, 2 night stands, $75. Woods, 720-8492, 1000, w/all accessories, excellent condition, 2nd owner, $8,400. Kendall, 377-3121, ask for Doug.

BOATS

115 ELK ARCHERY PERMITS, unit 4 ranch area, $125 each.

650 C TEQUE TRAIL BLK, Litespeed Saver, titanium, 55 cm, full Dura Ace drivetrain, plus extra gears, $1,200. La Grassa, 505-228-049.

350 OUTBOARD MOTOR, Sears Gamefisher, retial $140, asking $50 ea. Kazmierczak, 332-4640.

377-3121, ask for Doug.

CONQUEST BY GULFSTREAM, Lite model, 21 ft., $13,000, 2nd owner, $2,800 OBO. Vigil, 505-408-2324.


4.5, Onyko, front, rear center black, $90; all good condition.

MOUNTAIN BIKE, women's Trek 830, like new, $500. Stapp, 212-4321.

LAKE HOUSE, 10 min. to KAFB, newer part, comes w/extras, $2,800 OBO. Montoya, 505-515-9266, call after 5 p.m. M-F, anytime Sat. & Sun.

FOOTBED, 2.8K miles, like new, $8,400. Kendall, 377-3121, ask for Doug.

BEERWINKLE, 405-929-0400.

BEERWINKLE, 405-929-0400.

505-358-6450.

291-9681.

DIESEL, $250. Spray, deadline Aug. 1, $854. Drebing, 505-269-3957


'10 HONDA FIT SPORT, Automatic, Silver, 33K miles, excellent condition, single owner, $4,900. Rajan, 505-231-6663 or 714-516-4760, ask for Nisha.


LAKE HOUSE, 10 min. to KAFB, newer part, comes w/extras, $2,800 OBO. Montoya, 505-515-9266, call after 5 p.m. M-F, anytime Sat. & Sun.

CONQUEST BY GULFSTREAM, Lite model, 21 ft., $13,000, 2nd owner, $2,800 OBO. Vigil, 505-408-2324.


LAKE HOUSE, 10 min. to KAFB, newer part, comes w/extras, $2,800 OBO. Vigil, 505-408-2324.


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LAKE HOUSE, 10 min. to KAFB, newer part, comes w/extras, $2,800 OBO. Vigil, 505-408-2324.

CONQUEST BY GULFSTREAM, Lite model, 21 ft., $13,000, 2nd owner, $2,800 OBO. Vigil, 505-408-2324.
Business Community grooms a new flock of leaders

Jac Perez was enthusiastic when he heard he was part of a leadership training program last 10 days over four months. Then he frowned on hearing: 10 days. 

"It was great," he says. "We covered so much about the Labs, about leadership. They brought in VPs and directors. We did awesome tours. And a huge thing was meeting people and networking. As a new manager, that's really important."

Perez was one of about 100 people in the Business Leadership Program (BLP) for new managers and senior managers in Business Operations Div. 10000 and Independent Audit, Ethics and Business Conduct Center 800.

"With retirements and so many new managers coming into the ranks we needed a thoughtful approach to helping them develop leadership skills and network with others," says Josh Parsons, manager of Performance Excellence & Assurance Management Dept. 10223, who was project lead of two of the four BLP classes along with Terry Owens, manager of Contract Audit Dept. 851.

"We wanted to develop stronger leaders earlier on and create networks that could be leveraged to contribute to the success of the Laboratories."

Each class consisted of four modules presented over four months. Each module ran two to three days. The program ran from January 2011 to June 2012, when the fourth class held its graduation ceremony.

Building networks

Bonnie Apodaca, VP of Business Operations and CFO Div. 10000, was the program’s team champion, and included it in her division’s strategic planning.

"We felt it was critical to build the talent of the people in our organizations," Bonnie says. "And we wanted to start with our managers."

As a new director nearly a decade ago, Bonnie had participated in a similar program, the Leadership Academy. She came away with an appreciation of the importance of developing a leadership style and of making connections at the Labs.

"It was very impactful for me and for a lot of the people who attended it," she says. "I saw people in that program keep their networks intact. It was a connection point for different parts of Sandia keeping in contact with each other and relying on those relationships to get things done."

The Leadership Academy faded away but the idea didn’t, and work began in 2010 to develop materials and a schedule for the new Business Leadership Program. The core teaching is based on the book The Leadership Challenge by Jim Kouzes and Barry Posner, which offers training based on the Kouzes and Posner book, customized the program to Sandia and Lockheed Martin’s 360 leadership approach. Steve Caster of ILA helped develop the Sandia-specific curriculum and presented the first module, teaching core concepts around relationships and team-building, and setting the tone for later modules led by Sandians.

The internally led modules focused on Strategic Management Units and mission in addition to leadership. Two SMUs were studied in each module. "We did a tour and brought in a panel of directors, the VP, and the VP’s deputy," Josh says. "We met the senior leaders.

"The curriculum also covered Full Spectrum Leadership, Speed of Trust, and Servant Leadership. And presenters and participants gave their leadership stories, offering different approaches to leadership.

"It was a connection point for different parts of Sandia keeping in contact with each other and relying on those relationships to get things done."

"What were the things the great boss did that motivated you? Do those things. What were the things the bad boss did to de-motivate you? Don’t do those," he said. The No. 1 leadership trait is loyalty. "In the leadership business, loyalty beats loyalty," he said.

Leadership for all

"What is unique about this material is it is envisioned leadership that happens at any level," says Greg Deneen (10629), project manager of the third and fourth classes. "It’s not just about leadership by managers or people in positions of authority. It’s about leadership from wherever you are, from a passion and enthusiasm for getting something done that you feel is important."

"Sometimes as a new manager you don’t even know your own name," Jac says. "It’s a big time commitment on top of everything I was learning."

But Jac says the program was well worth the effort. "What is unique about this material is it is envisioned leadership that happens at any level," says Greg Deneen (10629), project manager of the third and fourth classes. "It’s not just about leadership by managers or people in positions of authority. It’s about leadership from wherever you are, from a passion and enthusiasm for getting something done that you feel is important."

Jane Farris, senior manager of Pension Fund & Savings Plan Management Dept. 10520, says the program inspired her. "There were two really wonderful things about it," she says. "One was the opportunity to hear from Laboratory directors and VPs about the leadership experiences and about their organizations. The second was getting to network with other people at the management and senior manager level."}

Open house spotlights SS&TP companies

The Sandia Science & Technology Park (SS&TP) will hold an open house where people can meet representatives of the park’s companies and organizations and learn about their businesses, technologies, and opportunities for collaboration.

The event is Tuesday, July 31, from 11 a.m. to 2 p.m. at the Steve Schiff Auditorium. Participants include Air Products, Analytical Solutions, Applied Technology Associates, EMCORE, FASORtronics, GAUTS, Minda Computing, MCAD Technologies, MOOG Inc., MOOG-GSA Engineering, New Mexico School for the Blind and Visually Impaired, RED Inc. Communications, Raytheon Klaeb, and TEAM Technologies.

The open house is co-hosted by Sandia’s Small Business Utilization Department and the SS&TP Program Office, and will provide an opportunity to strengthen ongoing partnerships and initiate new ones. Contact Linda von Boetticher (1933) at 844-9462 or lvonboe@sandia.gov with questions.

Business Leadership Program graduate Jane Farris (10520) spoke on behalf of the class, saying "leadership is a journey, not a destination." She said the class learned foremost that people matter. “Put people first,” she said. “We have to empower, value, empathize with, and accept our people.”

"What is unique about this material is it is envisioned leadership that happens at any level."

Greg Deneen (10629)