Strategic Education Plan initiative to bring renewed commitment to continuous education at Labs

Employees urged to take up to 32 hours of classes with goal to restore 'culture of learning' at Sandia

By Chris Burroughs

A renewed commitment to continuous learning is part of a new Strategic Education Plan that will encourage all employees to take up to 32 hours of classes that primarily focus on Sandia's educational thrust areas. The plan paves the way for Sandia to reestablish a learning culture where education and career-long learning are valued parts of everyone's job.

"Continuing education is critical to sustaining the technical and professional competency of both Sandia and its workforce," says VP 2000 John Stichman, who heads up the Strategic Education Committee that developed the Strategic Education Plan.

"At one time Sandia lived and breathed a culture of learning," John says. "Opportunities to learn and teach were abundant, and managers encouraged and expected their staff to participate. 'Educational attainment' was the standard for initial employment consideration and for reclassification consideration after a person was on board."

During the late 1980s and early 1990s focus on education as a critical element of Sandia's success shifted, and an "ad hoc, marginal approach to education and training took the place of a strategically driven approach," John says. Also, Sandia developed a broader set of sponsors, each with specific needs. This, along with a move to reduce indirect costs across the Labs, resulted in a reduced emphasis on continuous learning.

Tom Blejwas, Director of Center 2500 and committee member, says the idea for a rebirth of an emphasis on education dates back several years when a team of directors self-organized to address how to recapture the culture of learning that once prevailed at Sandia.

Last year Executive VP Joan Woodard, acting on recommendations of that team, formed the Strategic Education Committee to bring education, as it supports the Labs' mission, back into the spotlight. The committee members developed the education plan and Mission Council endorsed it

(Continued on page 5)

More education

For additional details on Sandia's new education initiative, see sidebar stories on **page 5.**

- Course categories
- Samples of engineering curriculum
- Energy surety
- Benjamin Spencer, others, talk about classes

Sandia LabNews

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Sandia National Laboratories

Weapons program honored

John Stichman, Steve Rottler, and Doug Henson earn USAF Exemplary Civilian Service award. Honor recognizes entire weapons program, John says. Story on **page 9.**

Sandia showcases technologies, capabilities to National Guard

Existing, emerging capabilities could help Guard with warfighting, civil support missions

By Michael Padilla

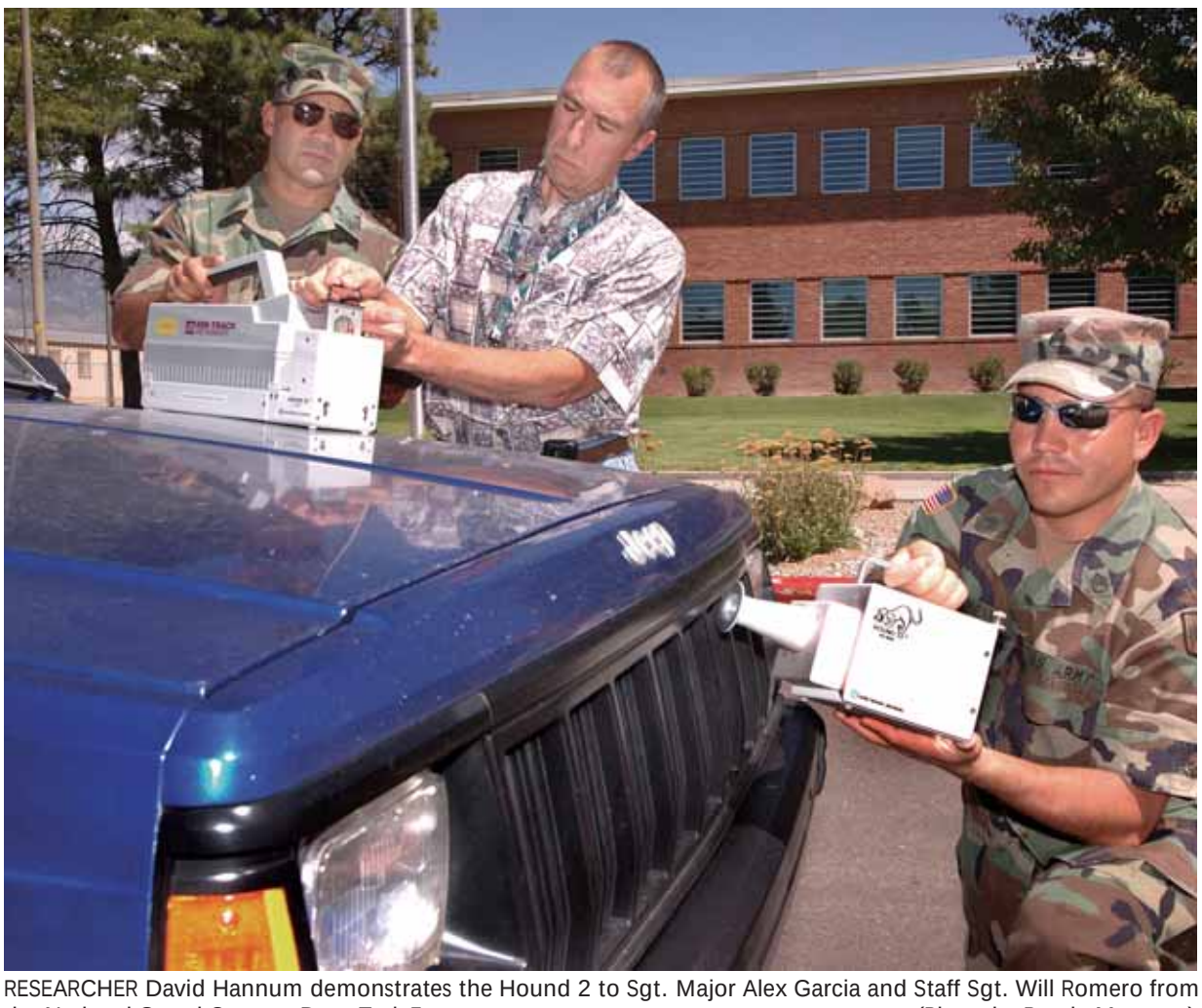
Members of the National Guard recently received an overview of Sandia's technologies related to the Guard's warfighting and civil support missions.

National Guard Adjutants General from 20 states, the Assistant Secretary of Defense for Reserve Affairs, Air Force and Defense Threat Reduction Agency (DTRA) personnel, and other National Guard members were among those who were briefed on Sandia's technologies. States represented included Hawaii, California, Arizona, New Mexico, Arkansas, Nebraska, and others.

"The National Guard has a growing role in fighting terrorism overseas, protecting critical infrastructure in the US, and providing consequence management support to civil authorities."

"Several of Sandia's existing technologies and capabilities could translate into high-tech equipment that many National Guard units could use in the continuing war on terrorism," says Phil Van Buren (9732), who helped organize the visit. "This was an excellent opportunity to showcase Sandia's DoD programs and other defense and

(Continued on page 4)



RESEARCHER David Hannum demonstrates the Hound 2 to Sgt. Major Alex Garcia and Staff Sgt. Will Romero from the National Guard Counter Drug Task Force. (Photo by Randy Montoya)

Coronado Club plans farewell open house

An open house to say good-bye to the Coronado Club is scheduled for Thursday, Sept. 23, from 3-6 p.m.

The "Bon Voyage" open house is open to all Sandians, retirees, and to all who want to bid farewell to the C-Club.

John Davis, site director for Sodexho and general manager for the Coronado Club, says the open house is an opportunity to say farewell to the facility.

The last family dinner event is sold out and will be held on Friday, Sept. 24.

The C-Club will close permanently on Oct. 1 (*Lab News*, May 28).

Inside . . .

What's what

A headline on the homepage of *The New Millennium* — the Division 1000 newsletter — drew at least a couple of double-takes. It read: "Bride Wins SIP Admin. Of the Year Award." Two happy occasions in a row, it seemed.

But things are not always what they seem. It was just a proofreading oversight — a "g" missing from "Bride." And in penance for poking a little fun, here's the real thing.

"Natasha Bridge, Graduate Student Intern in Department 1314, was awarded the Outstanding Administrative Student of the Year award at the Student Internship Program's Annual Symposium. Natasha was selected because of her exceptional initiative, understanding of Sandia's business processes, and high level of customer service. Congratulations, Natasha!"

* * *

Retiree Neal Botsford enjoyed the recent piece about people's names that fit their occupations, and he phoned to say his favorite in that category is Herbert C. Roters, author of *Electromagnetic Devices*.

Also responding to that piece, Susan Tucker (2338) wondered if Senior Scientist/Engineer A.C. (Al) Watts (15400) is an electrical engineer. He is.

Martha Haines (6320) wrote that she laughs every time she sees the office sign of Dr. Kenneth Hurt. He's an orthodontist who used to run a TV ad poking fun at his name that went something like, ". . . that's not what I do — it's just my name."

And I don't know if Dell Johnson (9615) actually knew about these guys or just used her training as a research librarian to good advantage, but she came up with the Austin, Texas, surgeon team of Drs. Curtis Hitt and Richard Chopp. They're urologists. Enough said about that.

On Menaul in Albuquerque, near Pennsylvania, there's a shingle announcing the medical practice of Dr. Jack Zipper. He's a chiropractor. Should have been a surgeon.

Al Reichmuth (8221) couldn't recall any Sandians with job-fitting names, but e-mailed that he's always been amused with the names of traffic reporters on the "oldies" radio stations in Kansas City and the Bay Area. Names like Major Miles, Misty Miles, and Elaine Change.

I think those folks might have been consulting with the Tappit Brothers.

* * *

In the realm of amusing *Lab News* classified ads, Bruce Fishel (2525) wondered about a house advertised as having a 1-1/2-car garage. What he actually wondered was where he could get half a car to put in the 1/2-car part of the garage.

He also wondered about "all the esoteric words associated with" a Honda motorcycle ad. But the most likely question from a Sandian, he scribbled (keyboard in cheek), was: "Will it still be very fast if I fix the cosmetic damage?"

— Howard Kercheval (844-7842, MS 0165, hckerch@sandia.gov)

Sandia LabNews

Sandia National Laboratories

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A-CREM activities restart after five-week security standdown

The DOE-mandated security standdown at Sandia that started July 26 is over. On Aug. 31 DOE approved the restart of Sandia activities that involve accountable classified removable electronic media (A-CREM), and on the afternoon of Sept. 1 Labs Director C. Paul Robinson and Deputy Director Joan Woodard sent the following message to all employees:

Message to all Sandians: Restart!

To say that the past five weeks (plus several days) have been difficult and demanding on Sandians would truly understate the work which all of you performed in the Security Standdown to deal with Accountable Classified Removable Electronic Media (A-CREM) operations. Many of you worked long, hard hours to bring us to the point where we are ready to restart.

Dealing effectively with such tough issues is never enjoyable, but you have proved again that you rise to meet such challenges as well as or better than anyone. We are immensely proud of your efforts and say a great big thank-you to each and every one who has brought us to this point.

So many contributed to this effort that it is difficult to single out particular groups of Sandians — but three must be mentioned. Our Integrated Security Division, who served as our teachers, helpers, and monitors throughout the standdown process, deserve our collective thanks. Another great example is that of the classified work-station custodians who demonstrated such commitment to security by faithfully following the standdown process that has been critical to building the foundation for restart. And thirdly, we owe a big thanks to our Technical Library staff at all sites. Many of them worked days, nights, and weekends with the support and cooperation of others to search through several hundred thousand documents. Their managers say that employees did this with a determination and zeal, because it was so important to Sandia to help restore the nation's confidence that we take these responsibilities very seriously.

We are convinced that the extra effort you spent in getting A-CREM control systems well installed and creating user-friendly means to carry out future inventories will save us time, and most importantly, will reduce the worry associated with accountability for these items. Thank you again, Sandians, for once again proving that "exceptional service in the national interest" is more than a motto.

* * *

Ron Detry, Chief Security Officer and VP for Integrated Security Div. 4000, told VPs to restart operations "in a deliberate, orderly manner" and added cautionary words: "It is very important that we demonstrate our ability to implement and sustain the new procedures and controls, and that we operate in strict accordance with the approved exceptions and mitigations. We must demonstrate sustained performance. . . .Your support and commitment have facilitated our successful completion of the most rigorous review and verification in the complex."

If you get this survey, please fill it out

About 2,400 Sandia employees will be invited, through an e-mail message on Sept. 20, to participate in a Lockheed Martin survey. The survey is designed to measure the company's progress toward building an inclusive work environment. Margaret Harvey (3553) and other Sandia officials ask that if you get one of the randomly chosen invitations to please participate. The sampling overall represents about a third of the corporate-wide population. Participation is confidential, and employees have until Oct. 1 to return the survey. The survey is one element — perhaps the most important one — of a new approach to measuring diversity. The new tool is called the Diversity Maturity Model, and it will measure the company's progress in this area.

Computer History Museum provides context to interns

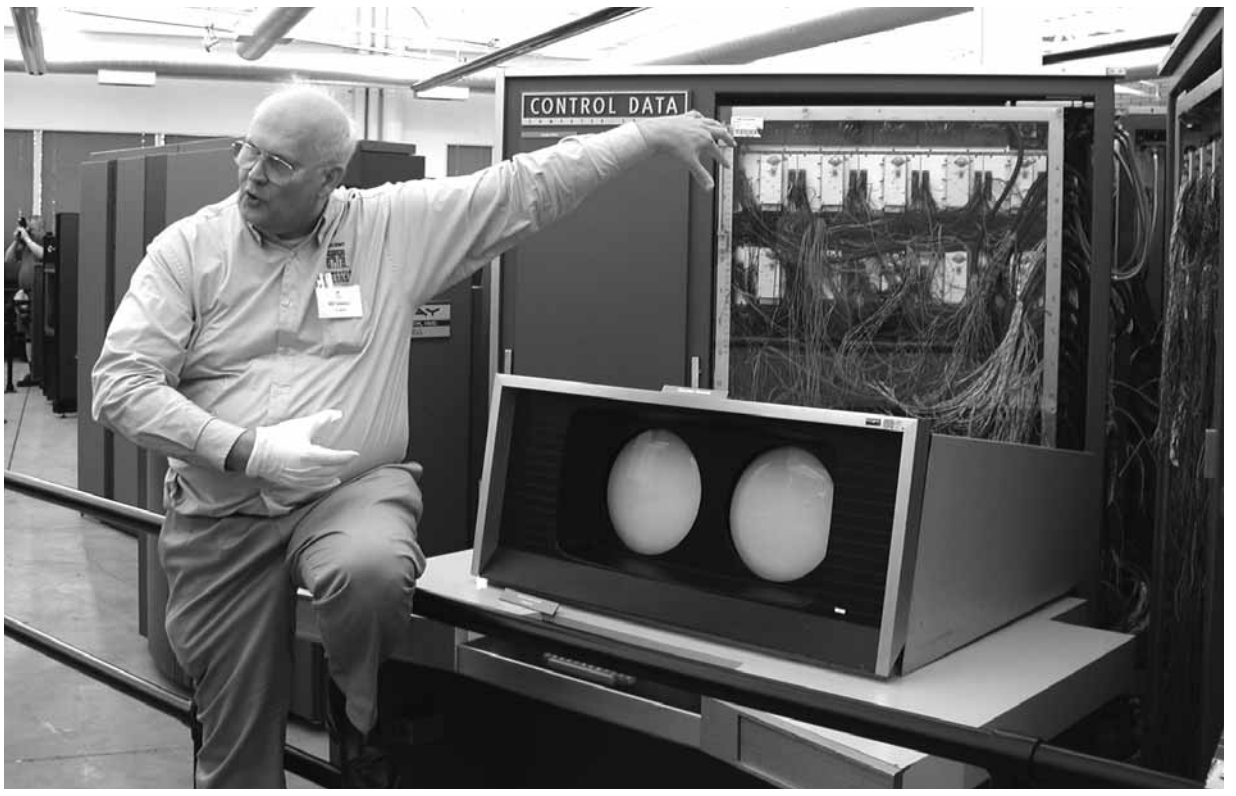
Preserving the artifacts and stories that created the computer industry

By Nancy Garcia

Students who grew up in the burgeoning era of computerized games and entertainment viewed the industry's roots in the military-industrial complex this summer in a somewhat nostalgic tour of the Silicon Valley-based Computer History Museum in Mountain View, Calif.

The students, from Sandia's National Security Mechanical Engineers Institute and Electrical Engineers Institute, ogled technology that was largely either older than they are or a remnant of their childhoods.

"Take a moment to think about how this technology impacts both electrical engineering design as well as mechanical design and system layout," mechanical engineering lead engineer Chrisma Jackson (8226) said. "As we look to the future, what design and practical limitations do you see in regards to Moore's law? What are the different ways you can enhance computing power?"



WHITE GLOVE TREATMENT — Seymour Cray designed Control Data's 6600, the world's fastest computer in 1964. The model shown being explained here by docent Bill Selmeier was donated to the Computer History Museum by Lawrence Livermore National Laboratory. (Photo by Nancy Garcia)

Sandia CaliforniaNews

She and Christy Woodcock (8226) and Lawrence Mayer (8232) brought the interns to provide context for their studies and summer research jobs.

Docent Bill Selmeier led half the approximately 20 students through the collection that got its genesis about 30 years ago in Boston and moved in 1996 to Mountain View.

"It was part of the science museum on the waterfront," he said. "Now it's about preserving the artifacts and stories that created the computer industry."

The collection starts with displays of earlier technologies, from a 1200 A.D. abacus from China to the first-known mechanical calculating machine dating from 1620. Early uses of technology that foreshadowed the computer industry included census-counting machines (information was stored on punched cards starting in 1890) and cards that allowed accurate mass production of patterned weaving.

Cards were still used to transmit information when, for instance, a 1964-era card sorter, donated by Lawrence Livermore National Laboratory, was state-of-the-art, and able to sort 1,000 cards a minute into either numeric or alphabetical order.

World War II became the true midwife of the modern computer. In 1943, the British-built Colossus, which was used to break the German High Command codes, was one of the first electronic digital machines. It was ordered destroyed into pieces no bigger than a person's fist, and the museum displays one of the largest remaining pieces of hardware along with a photo of an operator feeding paper tape (instead of cards) into the machine.

The following year, the root of all modern computers, the Electronic Numerical Integrator and Computer (ENIAC), was created at the University of Pennsylvania's Moore School of Electrical Engineering, driven by the need for a better way to calculate firing tables to target artillery. This computer was put to work for another 11 years developing the hydrogen bomb and in other classified operations.

Although it had been proposed that it would store memory, ENIAC was programmed using plug-board wiring. However, John von Neumann did adapt it in 1948 to be able to perform serial applications.

War reserve parts formed the core of the first prototype supercomputer, hand-built as a demonstration by Seymour Cray in 1958. His brainchild was commercially produced by Control Data, whose model 6600 was freon-cooled and subject to more thermal than electrical patents.

The University of Illinois tried to create the world's fastest supercomputer in the 1960s, the Illiac, which was moved to Moffett Field, the home of NASA-Ames Research Center in Mountain View, to protect against sabotage by war protestors. Although the machine failed to achieve its promise, it served as a model for the computer Hal in the movie *2001: A Space Odyssey*.

By 1973 DEC had successfully mass-produced the first mini-computer, the PDP-8. Four years later, Texas Instruments came out with the microchip-aided toy, Speak & Spell. Seeing a copy on a shelf in the museum near early versions of Atari's Pong and other games brought back memories for Christy, who chimed up that she had had one.

Museum volunteers, retired from IBM, are also indulging in their nostalgia, helping rebuild a 1965-era model 1401 computer that ran off of cards and takes up the better part of an air-conditioned room. Although some items in the collection (the Johnniac, the WISC) had the misfortune of being thrown on the scrapheap of history — the first being salvaged from a dumpster and the latter bearing marks of basement pistol practice by a technician's son — this model was purchased from Germany for restoration to full working order.

"Basically what it is, is a bunch of old men having a helluva good time remembering what they were like 35 years ago," said volunteer Allen Palmer. "Just think about where the industry's come in 40 years, in terms of the technology and size reduction."

That progress included innovation within the future Silicon Valley's Homebrew Computer Club. In 1975, Steve Wozniak designed the Apple-1 as a way of showing off to fellow members. Some 220 models were sold for $666.66 from stores like The Byte Shop in Mountain View, essentially providing owners with a printed circuit board that then needed to be supplemented with peripherals, like a keyboard and screen. One museum display shows a rudimentary set-up. Despite its unimposing appearance, the early success of its sales helped Wozniak and Steve Jobs attract financing to start Apple Computer.

Sizing up the zest with which all the innovation represented had been conducted, summer intern Travis Deyle summed up his impressions as the group returned home. "I wish I'd been born 20 years earlier," he remarked.

Sandian Tamara Kolda wins Presidential Early Career Award for Scientists and Engineers

Researcher is one of 57 recipients from across the US to receive honor

By Nancy Garcia

Sandia/California researcher Tamara Kolda (8962) is one of 57 young scientists from the US to be selected for a Presidential Early Career Award for Scientists and Engineers (PECASE), the nation's highest honor for outstanding scientists and engineers embarking on an independent research career. The announcement was made Sept. 9 by the White House's Office of Science and Technology Policy in Washington, D.C.

Tamara was to receive her award from the President's Science Adviser John Marburger III at a White House ceremony in the Eisenhower Executive Office Building. She was nominated by DOE's Office of Science and was also honored by Energy Secretary Spencer Abraham in a special ceremony at DOE headquarters.

"The work of these young scientists and engineers is an excellent example of the kind of innovative and forward-looking research that our nation needs to meet the challenges of the twenty-first century," Abraham said of the award recipients. "Their work will help to contribute to our energy security and independence far into the future."

Says Sandia President and Laboratories Director C. Paul Robinson: "We are very proud. Tamara is an outstanding role model for other young researchers. I'm confident that she will continue to make significant contributions to the scientific community throughout her career and encourage others through her energetic leadership."

TAMARA KOLDA

Distributed Information Systems Center 8900 Director Ken Washington adds: "Dr. Kolda has already demonstrated that she is a top-notch scientist and innovator by developing sev-

(Continued on next page)

National Guard

(Continued from page 1)

homeland security related technologies."

The visit included four major areas: facility and force protection; chemical, biological, and explosive detection technologies; decontamination, disablement, and disposal; and border area surveillance. A robotics demonstration was also given.

John Hoffman (12345) presented a discussion of Sandia's WMD response activities, and Dan Rondeau (15301) gave an overview of Sandia's DoD programs.

"The National Guard has a growing role in fighting terrorism overseas, protecting critical infrastructure in the US, and providing consequence management support to civil authorities," Dan says. "Accordingly, the National Guard mission has changed considerably and has unique needs for technology."

Sandia has responded to those needs by directly increasing the awareness of how technology can help them with their new responsibilities, says Dan.

"Sandia receives useful feedback on the utility and future course of its related technology development," Dan says. "This awareness and feedback were important dimensions of the recent visit, and we expect it to continue through future conferences and direct interaction."

Sandia also showcased several other technologies in Santa Fe as part of the five-day conference. This included a demonstration of the Hound II explosive detector, along with a demonstration of Sandia's sticky foam for incapacitating hostile personnel.

John says it was important to showcase Sandia's work to ensure that the National Guard has a full understanding of the level of technology available to potentially support its "First Responder" WMD mission.

"In addition to the significant technology contributions being addressed by the national laboratories," says John, the National Guard adjutants were able to gain a good understanding of the national-level off-site emergency response activities that national laboratories like Sandia contribute towards via the National Nuclear Security Administration component of the Department of Energy."

Sandia has a formal memo of understanding with the National Guard Bureau, USNORTHCOM, DTRA, and DOE for a technology partnership. Other participants include the Department of Homeland Security and five other national laboratories, with Sandia serving as the lead lab.

The visit to Sandia was a special activity associated with the National Guard Family Support Conference held in Albuquerque.

Brig. Gen. Kenny Montoya, the adjutant general for the State of New Mexico says: "The adjutants from across the nation viewed this as the highlight of their trip. It's great to see national security taken seriously as demonstrated by the ingenuity of the people that work at Sandia National Labs."

Early career

(Continued from page 3)

eral new computational algorithms that are in widespread use today. We have no doubt there will be many more such accomplishments in the future."

Tamara, an applied mathematician and computational scientist at Sandia/California, was cited for bringing great energy and creativity to her significant contributions in diverse areas. Her research interests include optimization, nonlinear equations, tensor decompositions, graph algorithms, parallel computing, and the design of scientific software.

"I am incredibly honored and excited to receive this award," Tamara says, "and I am extremely grateful to Sandia and the DOE for nominating me. I enjoy working at Sandia in an environment where I am surrounded by wonderful colleagues and have a stimulating environment for excellence in research."

Using mathematical algorithms and software designed by Tamara and her collaborators, Sandia engineers have been able to solve complex design engineering problems on Sandia's large-scale parallel computers. Continuing to pursue her wide-ranging interests, she has recently started a new project to combine techniques from multilinear algebra and graph theory for data mining.

Prior to joining Sandia in 1999, Tamara held a two-year postdoctoral position at Oak Ridge National Laboratory. She received her PhD in applied mathematics from the University of Maryland in 1997.

Outside of her research for Sandia and DOE, Tamara is active in the larger mathematics community, from workshop organization and editorial board duties to holding elected office. She is particularly interested in encouraging younger researchers and serving as an example to other women who are considering pursuing a career in mathematics.

Tamara is one of four awardees nominated by the Office of Science. She is only the third Sandian ever to win the award.

Feedback

Can't we go green on Labs' computer monitor policies?

Q: *This is more a suggestion than a question but I'll finish with a question. On the National Public Radio this morning, there was a piece about how computers and computer monitors in the US are responsible for the unnecessary production of millions of tons of greenhouse gases every year according to the EPA. The EPA says emissions could be drastically reduced if companies and individual computer users would follow a few energy-saving guidelines.*

My question: Can Sandia adopt these energy-saving guidelines as our standard and implement them through the Common Operating Environment [COE]?

Here are some of the energy-saving tips suggested by the EPA that I took from the following site: http://www.npr.org/features/feature.php?wfld=1960428

1) Turn off your computer and monitor when not in use for more than an hour.

2) Screen savers do not save electricity. Free software provided by the EPA automatically puts monitors into energy-saving "sleep mode" when not in use.

3) When purchasing new or replacement computers, consider buying efficient flat screens and laptops bearing the "Energy Star" label.

A: While we've not "adopted" anything as standard, Sandia is doing a fair amount in the energy savings arena. Sandia does have the following programs to promote the purchase of environmentally sound computers:

• Energy Management Program http://www-irn.sandia.gov/facilities/energymgt/index.htm, and,

• Environmentally Preferable Purchasing program http://www-irn.sandia.gov/esh/p2/affprocurement.htm

The balance of course, is that we choose the products that we do for other reasons, such as compatibility and security, and follow the practices that we do for information protection. Sandia is also chartered to be good stewards of taxpayer dollars and provide an affordable system. So while we could adopt standards, we would want to evaluate them against the other factors.

In response to the EPA energy-saving tips you noted:

1) A few Sandians may do this now on their own initiative, but at this time it is not part of any operational policy established by the CSUs or through the COE.

2) It is correct that screen savers do not save electricity to the extent that sleep mode does. In addition, some frequently seen free downloadable screen savers are known to contain spyware capabilities.

Monitor power management is enabled as the default on current COE machines, which means that the computer monitors enter into low-power "sleep" mode during periods of inactivity. Although it's not an explicitly set parameter in the COE, and individuals can alter the values themselves if they choose to, for COE Windows machines the default value from Microsoft of 20 minutes (15 minutes for laptops) to enter into sleep mode is left unchanged. For Macintosh, the default value of 5 minutes (for both desktops and laptops) from Apple is left unchanged. Linux desktops are configured to defer to the value carried in the monitor hardware for when to enter into sleep mode. Linux laptops are also configured to follow default hardware time values, but are also loaded with a power management software suite that enables these values to be changed more easily.

3) All monitors (CRT's and LCD Flat Panels) SNL purchases through JIT are Energy Star compliant. Since laptops use the LCD panels, they are by default Energy Star compliant. With respect to computers themselves, all desktop and laptop computers appearing on the Sandia Preferred Systems list (see "COE for My Computer" under Infrastructure Utilities on the Sandia Home Page) are Energy Star compliant, which means they automatically switch to a low-power mode if left inactive. *— Julie Perich (9623)*

* * *

Q: *The answer given by Ed Williams to a previous feedback question concerning large vehicle parking in the old water tower lot creates more questions than answers in my mind.*

He states: "However, because of the limited number of parking spaces available we will not reserve the row for large vehicles or vehicles with trailers." Yet he then goes on to say, "The 887 North lot is the only lot at Sandia with provisions for larger vehicle parking." He also says "You risk being ticketed by our Security Police Officers if you park illegally," which I assume means in any and all other spaces not large enough to accommodate large vehicles and trailers as well as on the shoulder of any road or any non-designated parking lot.

So basically, since the only spaces at Sandia designated for large vehicles constantly get used up by small cars, there are no spaces for these large vehicles or vehicles with trailers to park in. Also, because there are not enough parking spaces/lots in general at Sandia, the large spaces will not be reserved exclusively for large vehicles or vehicles with trailers and instead an ignorable sign will be placed somewhere that suggests large vehicle use for the spaces.

The next logical question would be what exactly should drivers of large vehicles or vehicles with trailers do when they encounter a situation where they cannot park their rigs in the suggested spaces?

A: Sorry if there is confusion with the original answer. Sandia parking lots are "open parking," with a limited number of reserved space types including "handicapped," "carpool," "medical," "visitor," etc. We do not have a classification of "large vehicle" and, therefore, we do not restrict usage of the spaces in the Bldg. 887 parking lot. The decision to drive an oversize vehicle or a vehicle with a trailer attached to work is a personal decision with a risk of no convenient parking being available. We have provided oversized vehicle parking as a convenience, when open. I can understand the frustration of seeing the oversized vehicle parking spaces being used by small vehicles; but others would be frustrated by the number of spaces reserved but unused if we did restrict the spaces to oversized vehicles only. Oversized parking spaces for vehicles with trailers are not normally provided in public lots, such as shopping centers or grocery stores, and are not incorporated into typical parking lot designs. *— Ed Williams (10864)*

Education

(Continued from page 1)

"We envision that every Sandian will be passionate and excited to be part of this culture where continuing education is encouraged and rewarded."

earlier this year.

The plan begins with a vision in which Sandia is seen as a "national security learning environment — anticipating problems not yet imagined and answering questions not yet asked." John adds, "We envision that every Sandian will be passionate and excited to be part of this culture where continuing education is encouraged and rewarded."

One of the barriers noted by the Strategic Education Committee was a way for people to charge their time while participating in continuing education and taking career-broadening courses. The plan includes a provision for charging up to 32 hours of Continuous Learning and Sandia Instructor activities outside of current project needs.

Char Wells, Level II Manager of Corporate Education, Development, and Training (CEDT, Org. 3520), which works closely with the committee, says they have been working over the past three years to build up strong education and development programs and classes that meet employees' needs. Employees in organizations 1000, 2000, and 6000 were surveyed to determine their education and training needs. The programs and courses identified by these organizations provide an important foundation for the larger Labs effort targeting education needed in the future — such as in the bioscience and nanotechnology areas.

"The courses are designed to help people at Sandia be more engaged in these key areas so critical to our global future and to Sandia as a whole," she says. "But it's more than that. It's a way to help course attendees prepare for the future, giving them skills and knowledge that will help them to look at a situation or problem in many different ways."

Most of the courses, which range from four hours to multiple weeks, fall into three categories — technical education (microsystems, photonic sciences, materials and process sciences, computational and information sciences, engineering sciences, pulsed power, surety science, bioscience, nano-science, project management, and manufacturing), business administration, and leadership/management development.

An important aspect of the new education plan is that it stresses the importance of Sandians teaching Sandians. "Sandia has its own way of doing things, and the courses taught at Sandia by Sandians emphasize that difference," Char says. "They are different from how they are taught, for example, at UNM. The emphasis is back to 'continuous learning' — coaching with Sandia experience."

A wide selection of courses is available now, and a catalogue listing all the courses sponsored by Corporate, Education, Development, and Training is scheduled to be published next spring.

"I encourage employees and their managers not to wait," says John Stichman. "They should make a discussion of their planned learning experiences an important part of their objective-setting for the year."

KEN ECKELMEYER (1822) conducts a metallurgy class, part of Sandia's renewed emphasis on continuous learning. (Photo by Randy Montoya)

Course categories

Sandia continuing education courses, which range from four hours to a full week, fall into several categories.

• (Technical education) Computer Science/Software Engineering. The CS/SE SE Program offers courses and seminars on topics considered strategically or tactically important to Sandia. Topics are grouped by categories and are appropriate for people already in the computer science/software engineering field. Categories are in computer system architecture, engineering systems analysis, languages, software engineering, and databases computing security.

• (Technical education) Engineering Excellence Education Program. Corporate Education, Development, and Training supports engineering excellence by developing top-quality education and training programs that support the knowledge and skills instrumental to engineering excellence, including systems engineering, electrical, and mechanical engineering.

• (Technical education) Engineering Sciences Program. Two courses, digital signal processing and solid mechanics, will kick off this new educational initiative in October.

• Project Management Profession (PMP) Program. The purpose of this series of classes is to increase project management competency across the Labs by providing an economical on-site opportunity for gaining in-depth knowledge and skills that will enable application of consistent project management principles based upon professional project management methodologies and tools.

• (Technical education) Biosciences Program. This series of courses will help Sandians stay on the cutting edge in the biosciences area. Sandia's growing involvement in biotechnology applications for national security drove the need for continuing bioscience educational opportunities.

• (Technical education) Materials Science Program. This series of four courses provides educational opportunities to increase the knowledge of technical members of the workforce in the materials sciences.

• Energy Surety Program (curriculum being implemented this fall).

Samples of engineering curriculum

Samples of courses offered in the engineering curriculum are:

- Implementing SNL Weapons Project Reviews (already being offered)
- Good Measurement Practices: What Managers Need to Know (already being offered)
- Good Measurement Practices: Electrical Measurements (coming soon)
- Good Measurement Practices: Mechanical Measurements (coming soon)
- Nuclear Engineering Introduction (already being offered)

Energy surety

A new course being offered this fall is Energy Surety Introduction. The course is designed to increase the knowledge base, interest, and dialogue across Sandia about energy. Students will be offered an overview of energy including the changing energy infrastructure, in the US and globally, and background on where energy was 50 years ago, where it is today, and what the future holds, including how energy is ingrained in national security. This class is already filled, but it will be offered again early next year.

Continuous learning

Benjamin Spencer, others talk about classes

Benjamin Spencer (9142) had this to say about a nuclear engineering class he took earlier this year.

"I come from a structural engineering background and have been doing research on containment vessels and other structures on nuclear power plants in the two years that I have been at Sandia. I have picked up some of the nuclear engineering terminology in doing this work, but many of the issues were still unclear to me. This class has provided me with a good foundation to understand what nuclear engineering is about. While I will probably never directly work in this area, having a basic understanding of the subject area has already helped a great deal in my daily work."

BENJAMIN SPENCER

Here are some other comments from Sandians about courses:

• "I really learned a lot of 'little things' about most of the topics we covered, some of which are directly applicable to my lab work. I am glad this course was offered and that I was able to take it."

• "This course gave me a better understanding of polymers and their properties. This is applicable to my job, which is to analyze various polymer samples."

Homeland Security scholars work on key projects at Sandia

Work ranges from using tree sap to power sensors to using computer sims to study effects of terrorist event

By Michael Padilla

Sandia's Homeland Security Strategic Management Unit got a boost in its research programs this summer from various Department of Homeland Security (DHS) scholars and fellows from throughout the country.

At Sandia/New Mexico the projects ranged from fueling bio-micro sensors with tree sap, to a computer simulation to study the effects of a terrorist event in a major city, to assessing the performance of airport explosive detectors.

Sandia/California Homeland Security scholars focused on DNA-based forensic methods for early detection and characterization of bio-terrorist attacks.

"These scholars are some of the brightest and smartest in the country. Through the Homeland Security Scholar program, Sandia was fortunate to bring 10 scholars to both New Mexico and California. They were able to gain real-world experience while working in their research area."

T.J. Allard, Homeland Security director, says he is pleased with the outcome of the work each scholar brought and continues to bring to Sandia.

"These scholars are some of the brightest and smartest in the country," he says. "Through the Homeland Security Scholar program, Sandia was fortunate to bring 10 scholars to both New Mexico and California. They were able to gain real-world experience while working in their research area."

Three Homeland Security scholars were placed at Sandia/New Mexico and seven at Sandia/California.

The New Mexico fellows were Ed Matteo, Akinbayowa "Bayo" Falase, and Jonathan Brown.

Sandia/California DHS students were George Chamales, Allyson Fisher, Jason Franklin, Kimberly LeBlanc, Clinton Leysath, Brent Satterfield, and Tristan Weir.

SAP POWER — Ed Matteo checks a micro fuel cell powered with sugar glucose. (Photo by Randy Montoya)

Sugar power

Ed Matteo's research focuses on running a micro fuel cell with glucose, which could lead to fuel cells powered by a biological source like tree sap. This summer he was able to extend the life of a micro fuel cell to last up to 400 hours powered by glucose, a sugar chemically similar to the sucrose found in tree sap.

"There was no decay in performance," says Ed. "This was the longest we've been able to run one of our fuel cells using glucose as the fuel. Our previous attempts didn't even last a full 24 hours."

A fuel cell converts a fuel, typically hydrogen or methanol, into electricity. In this project, the fuel for the bio-micro fuel cell is glucose, which would be harvested from a living source like a tree. Micro fuel cells could be used to power portable electronics, sensors, and perhaps even small biomedical devices.

The overall goal is to create a fuel cell that can offer a viable alternative to batteries. A bio fuel cell could theoretically be preferable due to its ability to harvest fuel locally; a battery would need to be recharged.

The challenge has been to run the fuel cell using glucose as a fuel and to prevent decay in the fuel cell power caused by the byproducts of the glucose reaction. These byproducts build up in the fuel cell and literally poison it. Once enough poisons accumulate, the fuel cell can no longer produce useful power.

The team Ed is working with has come up with a novel technique to overcome this poisoning.

"We hold the fuel cell at zero voltage," says Ed, "which is the equivalent of short-circuiting the cell. This, in turn, burns off the products of the glucose reaction and allows the cell to continue to perform without decay."

Ed, an undergraduate chemical engineering student at UNM, is mentored by Chris Apblett (1763), principal investigator of the Bio-Micro Fuel Cell Project. Kent Schubert (1763) is Ed's manager.

Placements at other labs

Homeland Security scholars and fellows were placed at various national laboratories including: Los Alamos National Laboratory, four; Lawrence Livermore National Laboratory, 14; Oak Ridge National Laboratory, 15; and Pacific Northwest National Laboratory, eight.

Airport explosive detectors

Bayo Falase's (6115) project focused on the performance of trace-explosives detectors. He assessed factors that affect the performance of IONSCAN machines, used at airports and high security areas to detect explosives.

"Explosives detection is an integral part of homeland security," Bayo says. "The ability to protect people and information has been a focal point since the events of 9/11."

Bayo conducted field tests with the Albuquerque Police Department bomb squad and did laboratory tests to study the impacts of variability of a thumbprint application of explosives to a surface. This was to help answer questions such as if an adversary were to handle explosives and touch a vehicle, would we get similar results every time? Results showed that there was two to five times more variability than when using a syringe to apply the explosives.

Bayo says the second part of the research is ongoing and is testing factors in the field such as sampling location, explosive type, method used, and high mass versus low mass.

"This research will benefit homeland security because the purpose is to be able to help security forces know what to do to increase the effectiveness of the IONSCAN machine, so that they can detect explosives and prevent terrorist attacks better," Bayo says.

Bayo is an undergraduate student at the University of New Mexico and is mentored by Clifford Ho (6115).

(Continued on next page)

Sandia/California DHS scholars help enhance security

Steve Hurd (8941), program manager for the Center for Cyber Defenders at Sandia/California, hosted three DHS scholars this summer — in addition to 18 other interns.

The three DHS scholars were Tristan Weir, George Chamales, and Jason Franklin.

They worked on a variety of projects, including a study related to "spyware," wireless intrusion detection research, data mining techniques applied to intrusion detection information, and red teaming.

"The link between these projects and Homeland Security seems fairly obvious," says Steve. "Anything we can do to provide US cyber defenders better tools, techniques, or information certainly enhances homeland security.

"Ultimately, what we want to gain from these research projects is moving forward toward our vision of 'a secure cyberspace' and our mission of training the next generation of US cyber defenders as well as increasing our knowledge in these areas."

Todd Lane (8141) was mentor to Allyson Fisher. Allyson's project was the Toolmarks LDRD. It was designed to boost the ability of the DHS and related organizations to respond to the biological threat of the future — genetically engineered bioweapons agents.

Todd says the team is developing the tools to identify and rapidly characterize such agents.

One of the most valuable experiences of the work according to Allyson was the opportunity to interact closely with professional scientists.

Transforming metals: Peter Michel wins bronze medal at SkillsUSA National Championships

By Iris Aboytes

It was not at the Athens Olympics, but Peter Michel (14133-2) still won a bronze medal.

Peter's medal was recently awarded in the Precision Machining Contest at the SkillsUSA National Championships in Kansas City, Mo.

The contest consists of individual state champions from across the country competing against each other in seven different machining skills areas — manual lathe, manual milling, CNC (computer numerical controlled) lathe, CNC milling, drill press/surface grinders, process control/inspection, and professional development — and three written tests covering machine theory, engineering drawing interpretation, and geometric tolerancing.

To qualify for the contest, Peter first placed in the top three at TVI's in-house competition and then won the state championship. Michael McReaken (14133-2), a machinist apprentice at Sandia and a previous New Mexico Precision Machining SkillsUSA champion, was his mentor.

Peter did not always want to be a machinist. He was a gunsmith by trade, and decided to take classes at TVI to become a better gunsmith. Taking his classes, he got hooked on machining. "It is awesome," says Peter, "to hold a hunk of metal in your hand and by the end of the day, you can see its transformation — and you did it. It is the coolest thing. There is a lot of personal satisfaction."

A friend told Peter about Sandia's Advanced Manufacturing Trades Training Program (AMTTP). In the summer of 2003 Peter started in the MEST (Mutual Education of Skills Training) program, a trades training program for college students to prepare them for possible entry into the Apprenticeship Program upon completion of their associate's degree. Peter received his associate's degree in Metals Technology last May and recently began his apprenticeship in the machine shop.

"Peter has worked hard to acquire the skills and knowledge that served him so well at the SkillsUSA National Championships and if he continues to apply himself as he has thus far, he has a bright future ahead of him here at Sandia manufacturing the hardware that Sandia's engineers require," says Tom Souther (14133), Trades Training specialist.

For more information about the MEST and the Apprenticeships Programs, contact Tom at tmsouth@sandia.gov.

The awards ceremony was held at the Kemper arena where 15,000 people, including competitors, judges, teachers, and industry representatives were present.

"Without Sandia I could not have gotten the award," says Peter. "My coworkers are very supportive and always there if I need help. When I went there I felt like I was taking Sandia with me."

MAN AND MACHINE — Peter Michel demonstrates the precision machining skills that earned him a medal at the recent SkillsUSA National Championships in Kansas City. (Photo by Randy Montoya)

Scholars

(Continued from preceding page)

Parallel programming models

Jonathan Brown conducted research on parallel programming models in the Scalable Computing Systems Department. These models are an abstraction for programmers and algorithm designers used to hide unnecessary details of the hardware while capturing sufficient details to be useful in actual parallel systems.

Parallel programming models, and the languages, libraries, and tools that implement them, should be expressive, intuitive, robust, and predictive, Jonathan says.

"The idea is to maximize both programmer productivity and utilization of hardware resources," he says. "Simulation is useful in understanding a terrorist event in a major city, what its repercussions would be in an 'urban canyon' environment, and how to best respond."

To achieve the resolution needed by today's large-scale simulations in a reasonable time, parallel supercomputing must be used, he says. As these assets are applied to new problems, new codes must be written.

"Using message passing for parallel applications is not the easiest programming environment. It requires software developers to write algorithms to the machine, not to the problem," he says. "A better model would achieve the performance of message passing at lower cost in terms of programmer time, and this would lead to better turn-around on solutions to these problems."

His initial work this summer was in virtual shared-memory models. A virtual shared-memory model is an attempt to bridge shared-memory-style programming to modern multiprocessor systems. Shared memory is known to be a reasonably natural programming paradigm, but shared-memory hardware is expensive and does not scale well.

Building on his work during the summer, Jonathan, a graduate student at the University of Michigan, will continue to work with Zhaofang Wen (9223) at Sandia and two researchers from Notre Dame.

Trinity Site tour is Saturday, Oct. 2

The National Atomic Museum's semi-annual Trinity Site National Historic Landmark Tour will leave the museum Oct. 2 at 6 a.m. and return about 4 p.m. The tour will include docent lectures, walking Ground Zero, and visits to Jumbo and the McDonald Ranch House. Seats are limited, so anyone interested should make reservations now. Tour members will have lunch at New Mexico Tech. Cost is $50 per person. Ben Benjamin, who was at Trinity during the first test, will present a lecture at the museum Oct. 1 at 7 p.m about the test. The lecture is free to tour participants; others are welcome to attend for $3. Make reservations for the tour and/or lecture by calling 242-6083.

Juan Ramirez, Robert Longoria Named 2004 HENAAC Award Winners

Sandia retiree Juan J. Ramirez (contractor, 9700) and Sandian Robert Longoria (2663) have been notified they are HENAAC award winners (Hispanic Engineer National Achievement Awards Corporation). The awards will be presented at the HENAAC 16th Annual Conference in October in Pasadena, Calif.

JUAN RAMIREZ and a young friend in Chetumal, Mexico.

Juan will receive the HENAAC Albert V. Baez Award, established in 1995 to honor engineers and scientists for outstanding technical achievements and service to humanity.

Juan co-founded *el Centro de Ensenanza Moderna* (CEM), or center of modern education school, in Quintana Roo, Mexico (*Lab News*, Sept. 5, 2003). The school provides quality, affordable, bilingual education to the young families of Chetumal, his hometown. The city of about 250,000 is a predominantly agricultural coastal area on the Yucatan peninsula.

Robert will receive HENAAC's Luminary Award, presented to top Hispanic professionals in engineering, science, and technology. Robert has been honored for his technical achievements and for his 20 years of commitment to volunteerism in the community, particularly with the Boy Scouts of America.

Robert has served in almost every capacity in scouting, from unit leader to Council Commissioner. He currently serves as the Council Commissioner for the Great Southwest Council. The program has a concerted effort to provide scouting in the predominately Hispanic community of south Albuquerque and to youth in the Navajo Nation.

Sandia National Laboratories

Hispanic Heritage Month Celebration

Thursday, Sept. 23 - 11 a.m. to 1 p.m.

Coronado Club - Mexican buffet available for purchase

Mariachi music, door prizes, information booths

ROBERT LONGORIA meets with several members of a local Boy Scout troop.

Both winners credit their families for showing them the way. "My father, Don Luis, believed that education was the 'great equalizer,' " says Juan. "My mother, Dona Anita, sees the CEM as a celebration of my father's values and interests."

"My father, Raymond, served this nation for three decades in the Navy, including risking life and limb in World War II," says Robert. "While my father was away, my mother Odelia shouldered the family responsibilities with love, discipline, and strength."

— Iris Aboytes

Manager promotions

New Mexico

Jim Ang from PMTS, Computer and Software Systems Dept. 9220, to Manager, Scalable Systems Integration Dept. 9224.

Jim joined Sandia in December 1989, in the experimental shock physics group, where he worked on hypervelocity launch technology, studied impact flash phenomena with advanced optical diagnostics, and developed pulsed laser holography for impact fragmentation studies.

JIM ANG

From 1993 to 1996 he led development of the Technology Information Environment for Industry (TIE-In), an online technology transfer system that provided controlled-access national laboratory computer-based resources to external users. This project fostered conceptual designs that predated the Web by a year and grid computing by several years.

Between October 1996 and September 1998 Jim was on detail in Washington, D.C., to the DOE/HQ ASCI (Accelerated Strategic Computing Initiative) program office. There he participated in formation of the PathForward program element — supporting collaborative partnerships with US industry to accelerate key high-performance computing technologies — and led the effort to establish the Validation and Verification program element.

Upon his return to Sandia in 1998, Jim worked on the ASCI DisCom program element, where he helped define a process for tri-lab coordination to establish Sandia's distance computing environment for ASCI White. For the last couple of years his responsibilities included understanding Sandia's capacity and capability computing demands, development of an integrated platform strategy to address these demands, and representing Sandia's high-end computing needs at weekly tri-lab ASCI meetings.

Jim has a BA in physics from Grinnell College, a BS in mechanical engineering from the University of Illinois, and an MS and PhD in mechanical engineering from the University of California-Berkeley.

* * *

Dennis Eilers, from Manager, Embedded Subsystems Dept. 2337, to Level II Manager, Advanced Systems Dept. 5720.

Dennis joined Sandia's Trajectory Sensing Signal Generators Department in October 1978. His work at the Labs has been in a wide variety of Sandia programs, including nuclear weapons programs such as B83, B90, and the beginnings of the W76. He has also worked on a number of Work for Others (WFO) and IWFO programs.

DENNIS EILERS

He was promoted to Level I Manager in 1994 and since then has managed work on flight computers, satellite electronics development, and both ASIC and FPGA design.

Dennis received a BS in electrical engineering from the University of New Mexico in 1983 and an MS in the same field from Stanford University in 1984.

* * *

Kent Meeks, from Manager, Defense Programs Science & Technology Dept. 1021, to Level II Manager, Stockpile Systems Program 2 Dept. 2820.

KENT MEEKS

Kent has worked for the most part in various aspects of advanced nuclear weapon technology and system development since he joined Sandia in October 1986. He first joined the Phase 1 & 2 Division and began to support advanced weapon safety technology development. As a staff member, he led projects developing advanced firing system technology and provided leadership in the development of microsystems technology for weapon applications.

He was promoted to department manager in 1998 and managed advanced weapon technologies and led efforts in safety, use control, and microsystems development.

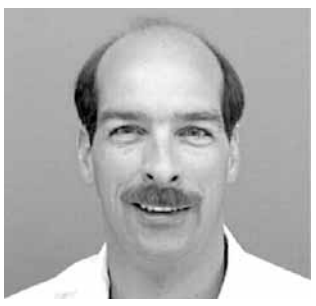
In 2000, Kent moved to the Advanced and Exploratory Systems Department, which focused on weapon concept development. In January 2004, he joined the Science and Technology Program, providing leadership of the Required Tech Base and Facilities Program. In his capacity as Dept. 2820 Manager, he serves as Deputy Program Director in charge of bombs and cruise missiles.

Kent has a BS in electrical engineering from Rice University and an MS in electrical engineering from the University of New Mexico.

* * *

Gary Sanders, from Level II Manager, Deputy Director Stockpile Systems I Dept. 2110, to Director, Facilities Management & Operations Dept. 10800.

Gary has worked in nuclear/mechanical engineering of reactors and weapons, and nuclear safety design/evaluation and testing since he joined Sandia in September 1980, as a member of the Nuclear Reactor Safety Studies Assessment Department. There for six years, he analyzed nuclear reactor facility designs for safety issues in case of accidents or natural disasters. He then spent the next three years analyzing and testing nuclear weapon safety designs against normal and abnormal accident conditions.



GARY SANDERS

He was promoted to Division Supervisor of the Nuclear Weapon Safety Assessment Department in November 1989. After two years there, he went to DOE/HQ for two years, working on nuclear safety for weapons and DOE operations at Pantex and the Nevada Test Site.

Gary spent four years as manager of the Nuclear Weapon System Surety Department, leading the group evaluating nuclear weapon safety, use control and security, including DOE operations and the Air Force and Navy operations, facilities, and training. He then went to the Pentagon for two years as the Sandia technical advisor to the Air Force Nuclear and Counterproliferation Agency.

He was promoted to Level II Manager in 1999. For two years, he was the Deputy Director for Stockpile Systems Program Management.

Gary then became ML II Line Manager for the New Mexico Weapon System Engineering center responsible for the Trident warheads, Minuteman warheads, B61 bombs, and use-control systems.

He has a BS in nuclear engineering from Pennsylvania State University and an MS in mechanical engineering from Penn State.

Air Force honors Stichman, Rottler, Henson for weapons stockpile efforts

Three 'Exemplary Civilian Service' awards 'really represent work of hundreds of Sandians,' says VP John Stichman

By Bill Murphy

Three Sandians have each received the prestigious "Award for Exemplary Civilian Service" from US Air Force Maj. Gen. Robert Smolen for their work with the Air Force on the nuclear weapons stockpile and other issues related to nuclear weapons management.

Smolen presented the awards to John Stichman, VP of Weapons Systems Div. 2000, Steve Rottler, Director of New Mexico Weapon Systems Engineering Center 2100, and Doug Henson, Director of California Weapons Engineering Center 8200. In his capacity as Air Force's Director of Nuclear and Counterproliferation, Office of the Deputy Chief of Staff for Air and Space Operations, Smolen has for several years worked closely with Sandia's weapons program leaders. (Shortly after making the awards presentations, Smolen took on a new assignment as a senior member of the president's National Security Council.)

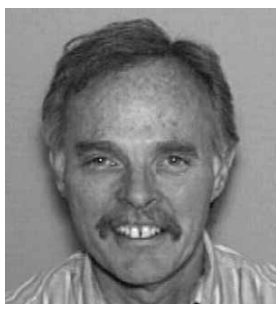
John's award citation says he "focused his superior leadership abilities and technical acumen to enhance all aspects of nuclear weapons management." It continues, "Dr. Stichman has been instrumental in implementing and supporting the Air Force Fellowship Program to preserve and grow nuclear weapons expertise [among Air Force personnel]. . . . [He] has been at the forefront of every effort to sustain and improve the aging nuclear stockpile. His insight and leadership have been invaluable and have contributed directly to the reliability of the national nuclear deterrent force." John was praised as "a key leader in the Joint Nuclear Surety Study supporting the safety and security of all Air Force weapons."

US AIR FORCE Maj. Gen. Robert Smolen, right, presents the Award for Exemplary Civilian Service to John Stichman, VP of Weapons Systems Div. 2000.

MAJ. GEN. SMOLEN presents the Award for Exemplary Civilian Service to Steve Rottler, Director of New Mexico Weapon Systems Engineering Center 2100.

Steve was cited for his stewardship of the New Mexico-designed warheads in the US nuclear weapons stockpile.

"Dr. Rottler [the citation reads] has been a key leader responsible for establishing Life Extension Programs to sustain and improve the reliability" of weapons in the stockpile . . . . His insight and leadership have been invaluable and have contributed directly to the reliability of the national nuclear deterrent force."



DOUG HENSON received his recognition award in a separate ceremony.

Doug's citation lauds his stewardship of California-designed warheads in the stockpile and notes "he has been a key leader responsible for developing and implementing several innovative microsystem-based sensor systems in Joint Test assemblies used for surveillance of stockpiled weapons. These test devices help establish weapon system reliability data critical to US nuclear operations planning." Doug's leadership and technical expertise [the citation reads] "were essential to the design of critical weapons system repairs for the B83 gravity bomb. . . ."

The three award recipients were said to reflect great credit upon themselves, Sandia, and the US Air Force.

John says the awards are bigger than him, Steve, and Doug.

"Three people got awards," he says, "but those awards really recognize the work of hundreds of people across the nuclear weapons program to help the Air Force achieve success."

John notes that two of Sandia's three current Life Extension Program efforts — those are programs to assure the continued viability of aging weapons in the stockpile — are focused on Air Force weapons, the W80 missile-based warhead and the B61 gravity bomb. (The other LEP project focuses on the W76, a navy weapon.)

"Sandians are successfully meeting many challenges, incorporating new technologies, and meeting new cost objectives, while implementing improved surety in the stockpile."

VP John Stichman

John says the awards from Gen. Smolen serve as a timely reminder that the Labs' weapons program is "very healthy."

The three major LEP initiatives, John says, "provide an excellent opportunity to stretch our engineering and program management skills." All three programs, he says, "represent a healthy set of activities and give hands-on experience to the newer folks in our program, while at the same time helping meet the critical needs of the military."

Sandians, he says, "are successfully meeting many challenges, incorporating new technologies, and meeting new cost objectives, while implementing improved surety in the stockpile."

The achievements and breakthroughs in the Labs' weapons work are not limited to the technical line, John says. "We're implementing new programmatic processes that are absolutely vital to success, including formalized risk management and formalized cost control."

Sandia's weapons work, John says, taps into a very broad cross-cut through the Labs' engineering science and management disciplines. "We're exercising our capabilities in both depth and breadth."

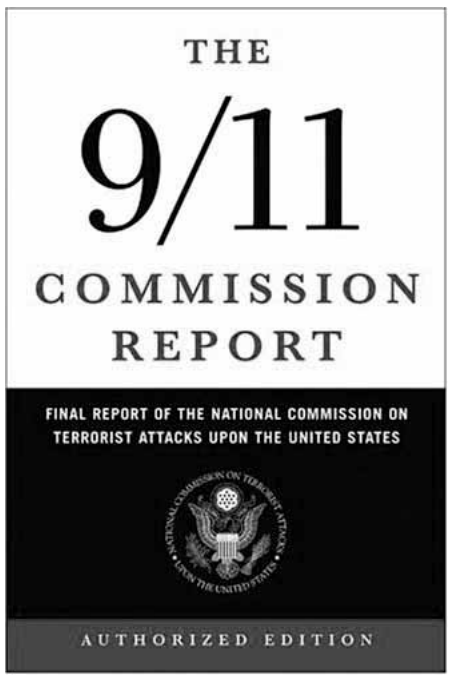
CIA veteran, report contributor Michael Hurley to talk on 9/11 Commission Report

Who:	Michael Hurley
Topic:	The 9/11 Commission Report
When:	Sept. 20, 1:30 p.m.
Where:	Steve Schiff Auditorium
Videolink:	Bldg. 904 auditorium, CA, 12:30 p.m. PDT

CIA veteran Michael Hurley, a key contributor to the report on the 9/11 commission that investigated the terrorist attacks on the United States, will speak to Sandians in the Steve Schiff Auditorium Monday, Sept. 20, 1:30-3:30 p.m. (It will be video linked to the Bldg. 904 auditorium in California, at 12:30 p.m.)

His title is "The 9/11 Commission Report: Required Reading for Every American." Hurley is Senior Counsel and Director of the Counterterrorism Policy Review of the National Commission on the Terrorist Attacks Upon the United States.

He will describe the key findings of the 9/11 Commission on the facts and circumstances surrounding the 9/11 attacks and explain why the commission believes its recommendations will help keep America safer and more secure. He will also give his views on the likelihood that key recommendations will be implemented. He indicates his talk will emphasize the need to "bring foreign policy back into US counterterrorism policy."



Hurley has worked in the Central Intelligence Agency's Directorate of Operations for 21 years; for 14 of them he was posted overseas. Within days after the 9/11 attacks he volunteered to serve in the CIA's Counterterrorist Center and to serve in Afghanistan. He was the lead coordinator on the scene for "Operation Anaconda," the largest military campaign against al Qaeda in Afghanistan. He spent more than 14 months in that country leading efforts to hunt for Osama bin Ladin and his lieutenants.

In May 2003, the 9/11 Commission chairman, Tom Kean, and Vice Chair, Lee Hamiliton, asked the CIA to detail Hurley to the 9/11 Commission. In this position he and his team were responsible for conducting more than 150 interviews and reviewing hundreds of thousands of pages of the most sensitive US government documents.

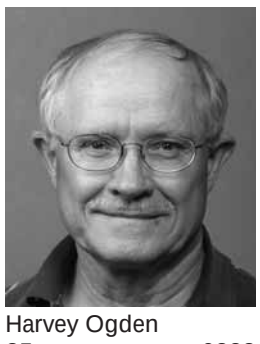
He organized the commission's late March public hearings of top government officials and the early April public hearing of Condoleezza Rice. He wrote many of the sections of the 9/11 Commission's final report and helped edit the entire book.

His talk is sponsored by Sandia's Office of Counterintelligence.

—Ken Frazier

Mileposts

New Mexico photos by Michelle Fleming



Harvey Ogden
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Jim Rice
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Recent Retirees

Dave Barton
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Paul Hlava
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Juan Paul Atencio
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Gerald Crowder
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Richard Fairbanks
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Faye Long
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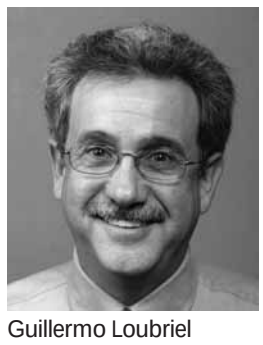

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Steven Scott
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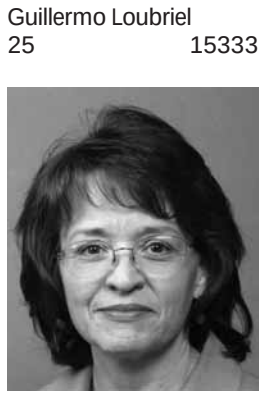

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Thomas Henderson
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John Jojola
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Samuel Jones
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William King
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Jannifer Levin
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Dorothy Meister
20 2612

William Miller
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Tia Reid
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Albert Romero
20 2565

Peggy Smith
20 9618

Norman Stephens
20 2997

Mason Blaich
15 5702

Roy Fitzgerald
15 10763

Faraj Ghanbari
15 2951

Thomas Grasser
15 9112

Darlene Hagerman
15 1312

Raymond Lemke
15 1674

Timothy Meisenheimer
15 1748

Kent Shelton
15 2552

Jose Torres
15 1677

Feedback

Q: *Is a Kirtland AFB parking permit/decal required for a moped, as defined by the NM DMV?*

A: According to Kirkland Air Force Base Vehicle Registration and AFMC Form 387 ID Card Handbook dated 10 March 2004, all motor vehicles to include Mopeds that have an engine that is 49cc (cubic centimeter) or greater, require a base sticker.

The Sandia Personnel Security department recommends that a Sandia sticker or vehicle pass be issued to all motor vehicles regardless of engine size. This will mitigate any undue confusion or delay at the KAFB gates. In addition, if a circumstance should arise questioning the ownership of a given vehicle, then the base sticker will allow quick verification of ownership. *— Boris Starr (4223)*

* * *

Q: *With all the MESA construction & additional personnel, are there plans for increased parking capacity in the parking area south of Bldg. 897 to handle the additional staff?*

A: As part of the MESA construction project two new parking lots will be built directly west of the current Bldg. 897 lots similar in size to the two existing lots. *— Ed Williams (10864)*

$2.16-per-month health care, great golf scores, a 'leveling off' of the weapons program, Solar One, flat-panel displays, and State Fair art

40 YEARS AGO, Sandia technical artist George Marks won the purchase award at the 1964 New Mexico State Fair. The Fair acquired his painting, "Odd Man Out," for $500; it is now part of the State Fair's permanent art collection.

This monthly column highlights Sandia Lab News *items from 50, 40, 30, 20, and 10 years ago, but each column does not necessarily include items from each decade.*

50 years ago . . . Costs and benefits for Sandia's brand-new hospitalization and surgical insurance plan were explained in the Sept. 10, 1954, *Lab News*. Employees were to pay $2.16/month for individual coverage or $7.77/month for themselves and dependents. Benefits included $8/day for hospital room and board, up to $250 for surgical benefits, and $15 for an ambulance call.

40 years ago . . . The Sept. 25, 1964, issue reported that Everet Beckner, who had been at Sandia only three years, had been promoted to supervisor of the Electro Physics Research Division. Beckner went on to become a Sandia VP, retiring in 1991. Today he is Deputy Administrator for Defense Programs in the National Nuclear Security Administration. That same issue reported that Jim Leonard of the Aerospace Design Project Division had set a new record for a Sandia Golf Association tournament, shooting a 68 at Albuquerque's Los Altos course. Still sporting a fine game today, Jim and his wife June (a *Lab News* staffer in the late '50s and early '60s) are now retired and living in Woodland Park, Colo., where they enjoy family and a gorgeous view of Pike's Peak.

JUST 10 YEARS AGO Sandia researchers were part of a federal consortium investigating ways to make the US more competitive in flat-panel display technology.

30 years ago . . . Sound familiar? A Sept. 27, 1974, interview with then-President Morgan Sparks contained a response that has been restated in similar words many times by Sandia management: "Although the prospects are that the . . . weapons program, measured in constant dollars, will level off or perhaps decrease somewhat in the years ahead, it is still our mainstream activity and is likely to remain so. New initiatives in non-weapons work are exciting, and I believe they are vital to the future of Sandia, but in focusing attention and publicity in these new areas we should not lose our perspective. Most of our people still support our historical functions — functions that the nation will continue to need in the years to come."

20 years ago . . . The Sept. 14, 1984, *Lab News* announced that following successful completion of a two-year test and evaluation period by Sandia, the DOE had turned over the Solar One pilot plant near Barstow, Calif., to Southern California Edison for commercial power operation. The demonstration solar central receiver facility operated until 1988. (A next-generation facility, Solar Two, was constructed later and operated 1996-99.) No commercial concentrating solar power systems operate in the US today, but there are plans to build several worldwide, and research continues. For a technology update, see www.energylan.sandia.gov/sunlab/overview.htm.

10 years ago . . . A great prediction: The main page-one headline in the Sept. 2, 1994, issue read, "Flat panel displays may become the TV screens of the future." The story was based on work Sandia researchers were doing with colleagues from industry and from other national labs in a consortium to improve US competitiveness in flat panel displays and advanced information components.

— Larry Perrine

IES Service Mercado promises useful information, good time for Sandians

See quicker, easier ways to get your work done . . . and give your ideas too

By Rod Geer

The Service Mercado set for 11 a.m.–1 p.m. on Oct. 6, under a big tent just east of the Thunderbird Cafeteria, is designed to have a thoroughly festive feel while also carrying a very serious purpose.

"Simply put," explains Jane Tardiff (10710), "we want this to be a memorable event during which Sandians who use IES [Integrated Enabling Services SMU] services — and frankly that's everyone at the Labs — can see the latest time-saving improvements these services have adopted. Also Sandians can provide us feedback on their ideas for additional time-saving services."

Jane, who heads up planning for the Mercado, adds, "We'll show Sandians quicker, easier ways to get what they need to complete their projects and meet their deadlines whether they are in direct mission areas or other parts of the Labs.

"And we'll be handing out free 'IES cream bars' just for coming."

About 30 IES organizations or service areas are expected to have staffed display/discussion areas.

Some of the Mercado's attractions: a demonstration of the new Intranet Corporate Portal (which Sandians have been requesting for several months); the IES Help Desk; the future of WiFi at the Labs; the Tech Library's e-service; WebShip; the new, faster review and approval process; and Reapplication's new runner service and 'shopping cart' program.

Travel, Payroll, Health Services, Creative Arts, and others also will be represented.

"Throughout the IES SMU we are committed to providing solutions that fit our customers' needs," Jane says. "This Mercado will show how that's occurring and how we want to improve in the future."

The IES Service Mercado is being held during National Customer Service Week, which was started by the International Customer Service Association in 1988. According to the association, a goal of activities for the week is to provide an "opportunity to generate even stronger commitments to customer service excellence."

IORTA Technical Forum presents:

Defeating Al Q'Aida: SOFTWAR Counter-Hiraba

Wednesday, September 22nd, 2004
Sandia National Laboratories
Building 825 (TTC/Steve Schiff Auditorium)
Lecture: 0930-1130, Reception: 1130-1200

In his newest lecture, called "Defeating Al Q'Aida: SOFTWAR Counter Hiraba," Mr. de Caro takes an out-of-the box view of the Al Q'Aida strategy and applies the six principles of SOFTWAR to engage and defeat their cause forever. SOFTWAR covers the nature of the medium of television, the nature of the global television business, the utilization of global TV as an inexpensive intelligence system, and as medium for a new and extremely effective kind of Information Warfare. Chuck is a former CNN Special Assignments correspondent, has written stories for newspapers and magazines, and has been a technical advisor to TV magazines such as Hard Copy, Sightings, and Encounters, as well as to dramas such as Quantum Leap, J.A.G. and Navy NCIS. This lecture is open to KAFB, DOJ, and NM Government personnel interested in this topic. No Sandia badge is required; however, ability to enter base on your own is required. Information: 284-3178. See www.aerobureau.com.