



S A N D I A

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exhibit opens
in California
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Staff celebrate nuclear deterrence program milestones

Pandemic-delayed party recognizes first production units

By **Myles Copeland and Whitney Lacy**

Belatedly celebrating the achievement of first production units for the **W88 Alteration 370** and **B61-12 Life Extension Program**, team members gathered with Labs Director James Peery, nuclear deterrence executives, and representatives from Kansas City National Security Campus and Los Alamos National Laboratory on May 4 at Kirtland Air Force Base's Hardin Field. Four officials from the NNSA — Principal Assistant Deputy Administrator for Stockpile Sustainment Michael Thompson, Assistant Deputy Administrator for Stockpile Management John Evans, Director of the B61-12 Life Extension Program Division Robert McKay and Director of the W88 ALT 370 Program Division Jay Pape — expressed their thanks to staff and to New Mexico Weapon Systems Engineering



FPU SUCCESS — Associate Labs Director Rita Gonzales addresses the crowd during a May 4 celebration marking the achievement of first production units for the W88 ALT 370 and B61-12 Life Extension Program.

Photo by Bret Latter

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Together We Rise



DISASTROUS BLAZE — The Calf Canyon and Hermits Peak Fire burns in the hills outside of Las Vegas, New Mexico, aided by wind and extreme drought conditions. Photo courtesy of Kevin Lopez

Sandia staff raises funds for New Mexicans affected by wildfires

By **Manette Fisher**

As fierce wildfires spread through New Mexico, burning hundreds of structures and forcing thousands of residents to evacuate, Sandia found a way for the workforce to help.

“We know that when people in our state are struggling, our employees feel the desire and immediate need to react and pull together,” said Sandia Community Involvement specialist Roberta Rivera.

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Asian American and Pacific Islander Heritage Month celebration



CAI WEI DANCE — The Albuquerque Happy Dance Group performs Cai Wei during the Asian American and Pacific Islander Heritage Festival at the National Museum of Nuclear Science and History.

Photo by Lonnie Anderson

Celebrating rich culture through song, dance and art

By **Stephanie Holinka**

Organizers and participants gathered at the National Museum of Nuclear Science and History on May 7 to celebrate the 25th annual Asian American and Pacific Islander Heritage Festival. The event was cosponsored by the museum, Sandia and its Asian Leadership and Outreach Committee, Talin Market and the Asian Business Collaborative.

The festival opened with remarks from museum Executive Director Jim Walther.

Sandia's Chief Information Officer John Zepper welcomed the audience as well, discussing Sandia's goals of "Cultivating

a culture of inclusion by supporting our diverse workforce through engagement, learning and ensuring equal employment for everyone.”

In the main Periodic Hall, a full house was treated to cultural presentations and dances from local organizations including the Chinese Culture Center and Lin's Martial Arts Academy, New Mexico Chinese School of Arts and Language, the Hindu Temple Society of New Mexico and the Taiko drummers.

Sandia researcher Cliff Ho discussed impacts of climate change on local renewable energy resources.

Sandia electrical engineer Lili Xiao guided interested participants in the creation of origami crafts, which was fun for both children and adults.

Throughout the museum, visitors enjoyed displays of ikebana flower arrangements by the Japanese American Society of New Mexico and the Ichiyo School of Ikebana in Albuquerque.

Hungry visitors enjoyed a sampling of regional foods from Talin Market and fun beverages and desserts from Bing Tea Mobile Dessert Café.

Sandia's Labs Director James Peery and Associate Labs Director Deborah Frincke attended to show their support, and the museum reported about 570 attendees, which is in keeping with the attendance level of pre-pandemic celebrations.

“The lively event brought back fond memories of many past celebrations,” said Sandia researcher and Asian Leadership and Outreach Committee Chair Tian Ma.

In conjunction with the May observation of Asian American and Pacific Islander Heritage Month, the committee will feature and highlight Asian American and Pacific Islander colleagues' contributions and achievements at its regular meetings. [i](#)



LION DANCE — The Albuquerque Chinese Culture Center and Lin's Martial Arts Academy perform a Lion Dance to bring good luck and fortune.

Photo by Lonnie Anderson



AAPI CELEBRATION — Members of the Hindu Temple Society of New Mexico perform a Saraswati Kautukam dance. Photo by Lonnie Anderson



Passing the gavel

PRESIDENTIAL TRANSITION — Sandia's Deputy Chief Research Officer Basil Hassan, left, passes the American Institute of Aeronautics and Astronautics presidential gavel to Deputy Labs Director Laura McGill on April 27 at the institute's Awards Gala in Washington, D.C. AIAA members elected Laura to succeed Basil last year. Laura will serve a two-year term as president of the institute that represents nearly 30,000 individual members from 91 countries and 100 corporate members to advance engineering and science in aviation, space and defense. As immediate past president, Basil will serve on AIAA board of trustees for a year and as chair of the AIAA foundation board for two years.

Photo by American Institute of Aeronautics and Astronautics

Program milestones

CONTINUED FROM PAGE 1

Director Jim Handrock, who led efforts for both programs.

FPU's for both systems were delivered during 2021, and a planned celebration for the W88 ALT 370 was delayed in response to the pandemic.

"I thank you for your patience as we navigated a multitude of pandemic-related hurdles to make this gathering happen," Deputy Labs Director for Nuclear Deterrence and Chief Technology Officer Laura McGill told the crowd of roughly 400 people. "Each of these FPU's is singularly impressive. That they were delivered within less than five months of each other is really incredible."

Acting as emcee, McGill ushered to the podium a series of speakers eager to share their appreciation not just with the limited audience that was able to attend, but also with the more than 3,300 individuals across Sandia sites who worked on these programs through the development and production engineering phases.

"We spend a lot of time reflecting on things that go wrong," said James. "As scientists and engineers, that's part of our job. But we spend too little time remembering our achievements. Remember this."

Associate Labs Director Rita Gonzales added, "I am consistently impressed by how generous you are with your time and knowledge, both with our leadership team and with each other."

"Even in pressure-packed situations, you take the time to thoughtfully share your expertise, to help us understand really complex technical issues and possible solutions, so we can make



GROUP EFFORT — Staff who worked about 30% or more of their time on the W88 ALT 370 and B61-12 Life Extension Program over the past five years gathered at Hardin Field on May 4.

Photo by Bret Latter

the best decisions," she said. "More importantly, I have watched you work together and offer that same respect, patience and time to each other. It makes me really proud to be a Sandian."

Associate Labs Director Steve Girrens spoke about what a high level of achievement it is reaching first production units.

"An FPU is really momentous," he said. "It is the product of years and thousands of people. It takes partnership between some of our country's very brightest — you here, in concert with our California site, Los Alamos, Kansas City, Pantex, NNSA, the Air Force, the Navy. You all came together to make something real that our nation vitally needs."

A similar celebration is planned for staff in California in the coming months. [ti](#)

Jim Handrock honored by NNSA, Air Force and Navy



LEADERSHIP, EXPERTISE AND SERVICE — Jim Handrock led the B61-12 and W88 ALT 370 programs from early designs to first production units. Prior to that, Jim had more than 20 years of service in different assignments, mostly within the nuclear deterrence programs at Sandia's California site.

Photo by Craig Fritz

By Kristen Meub

Jim Handrock, Sandia's director of New Mexico weapons systems engineering, received a series of awards and commendations from the NNSA, the Air Force and Navy recognizing his leadership, expertise and service to the nation during a celebration at Sandia on May 4.

The celebration, held on Kirtland Air Force Base, marked two important achievements: the first production units for the **W88 Alteration 370** on July 1 and the **B61-12 program** on November 23. During the last 11 years, Jim led both programs at Sandia from their early design stages to the beginning of production.

Jim received the following awards and special commendations:

- The NNSA's Defense Programs Award of Excellence, presented by John Evans, NNSA assistant deputy administrator for stockpile management.

- The NNSA Administrator's Award of Excellence Gold Medal, presented by Michael Thompson, NNSA principal assistant deputy administrator for stockpile sustainment.
- A letter from Air Force Lt. Gen. James C. Dawkins Jr., which was presented by Robert McKay, NNSA director of the B61-12 Life Extension Program Division.
- A letter from Navy Vice Adm. J.R. Wolfe Jr. and an award from the Navy Strategic Systems Programs, which was presented by Jay Pape, NNSA director of the W88 ALT 370 Program Division.

With the Administrator's Award of Excellence Gold Medal, NNSA Administrator Jill Hruby said Jim's contributions and achievements, particularly in delivery of the W88 ALT 370 and the B61-12 first production units, have ensured consistent leadership through significant post-Cold War transformations and have helped ensure the safety, security and reliability of the nation's nuclear deterrent.

In a letter, Wolfe wrote Jim has consistently pushed the nuclear security enterprise toward greater responsiveness, leading the development of novel stockpile stewardship tools and capabilities.

Dawkins extended his gratitude to Jim for his service and expertise and wrote that his efforts were critical to enhancing the partnership between the Air Force and Sandia, ensuring the enterprise made informed decisions on matters of the greatest national consequence.

Jim said he was very appreciative and honored to be recognized and added that he shares the recognition with the teams for both weapon systems.

"These assignments have been the most challenging and fulfilling of my career," Jim said. "I have truly been honored to have worked with so many talented and dedicated people along the path to this accomplishment. This is an achievement that the nation should be very proud of."

A career in nuclear deterrence

In 2011, Jim was asked by Labs leadership to move to New Mexico to lead the B61-12 and W88 ALT 370 programs. Prior to that he had more than 20 years of service in different assignments, mostly within the nuclear



GOLD MEDAL — Jim Handrock was presented with the NNSA Administrator's Award of Excellence Gold Medal by Michael Thompson, NNSA principal assistant deputy administrator for stockpile sustainment, during a May 4 celebration of the achievement of first production units for the W88 Alteration 370 and the B61-12 Life Extension Program held at Kirtland Air Force Base's Hardin Field.


Photo by Bret Latter

deterrence programs at Sandia's California site.

Jim said his first role was in gas transfer systems and was a great experience in component-level work, laying a good foundation for what would come later. Other highlights include being manager of the team that installed the operating system on Red Storm, a supercomputer, and taking an assignment based in Washington, D.C., where he was part of the first [NNSA Science Council](#).

"From being a staff member on a weapons program to being in management and involved with everything from electrical modeling, simulation and reliability to advanced computing to structural analysis — there is a whole variety of things that you can do within your career at Sandia," Jim said. "What I appreciate is that I've been able to see the weapons program from nearly every aspect and visit partners throughout the enterprise, from manufacturing plants to attending flight tests. It was a fantastic opportunity."

Jim started his career at Sandia 34 years ago and said that while he is preparing to retire this summer, he still sees the same themes at the Labs that originally drew him to begin his career there.

"What drew me to Sandia still holds today — nationally important work that employees believed in and knew made a difference to the nation and the world," Jim said. 

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New Mexico wildfires

CONTINUED FROM PAGE 1

Partnering with the United Way of Central New Mexico on a funding campaign called **Together We Rise**, Sandia staff were invited to contribute funds to help those affected by the fires. The campaign launched Monday, May 9, and staff members have already contributed \$83,934 to the campaign, which lasts through May 27. Sandia's Community Involvement team also hosts a list of local collection drives on their website as other ways to help.

In addition to funds donated by the workforce, NTESS, which manages the Labs, added a \$25,000 match. Sandia staff hit the match within two hours of when the campaign went live. All funds raised will be managed by the Albuquerque Community Foundation and the United Way of Central New Mexico.

"This fundraising campaign is for all fires in New Mexico," Roberta said. "If more funds are raised than are needed at this time, the extra money will be used throughout the rest of fire season. We know this is not the end."

Through the donation portal, there are a few options for donors to choose from. For example, there is an option to give funds that will go where the need is greatest, and other

options that benefit specific fire recovery efforts throughout the state.

"Sandia's generosity will play a critical role in helping people and communities back on their feet after experiencing the distress caused by these devastating wildfires," said Rodney Prunty, president and CEO of United Way of Central New Mexico. "We are proud to partner with Sandia employees to facilitate their fundraising efforts that will help so many New Mexicans."

'Anxious and heartbroken'

Wildfires in New Mexico ignited early this year. The largest, near Las Vegas, forced more than 13,000 residents to evacuate before summer. **Sandia staff members with connections** to the affected areas have been anxious as they await news from family and friends. The fires have already taken homes, property and animals and continue to threaten small towns.

"It has been devastating for my family, having to see generations of memories lost in this fire," said Sandia software systems engineer Andres Padilla. "This is much more than a fire; it's a culture loss for our state and the communities of San Miguel and Mora counties. We can only hope that one day our children can see the beauty of our mountains and valleys like we did growing up."

Andres said his family's land near Las

Vegas is essentially "a valley full of family" with a ranch that has been passed down at least three generations.

"I have relatives who are still at the ranch waiting it out and fighting any fires that come their way," he said. "I was up there helping my parents move all of their stuff, and we saw the fire come over the ridge. It started coming down into the valley, and it was just heartbreaking to see and know that everything was going to be burned."

He said everything around his parents' is gone and although some houses owned by siblings, aunts and uncles are still standing, many of his relatives have been evacuated and displaced. Some are staying in hotels and others in campers. Some who do not have insurance that will cover other places to stay are staying in their homes.

"I have family members at their houses living off of generators," he said. "They've lost everything around them — their barns, hay, garages and greenhouses. They're trying to make the best of what they have left."

Andres said the 25-minute drive from the family ranch to Las Vegas was "the most beautiful drive," but his dad said it is now depressing as the land is now black, trees are burned and greenery is gone. Sandia solutions architect David Bustamante who also has family in the area said watching the fires and waiting has been taxing.



RAGING FIRES — The Calf Canyon and Hermits Peak Fire tear through mountains and valleys near Las Vegas, New Mexico. Sandia and United Way of Central New Mexico have partnered on a fundraising campaign to help people affected by the fires. Staff members have already raised \$83,934.

Photo courtesy of Andres Padilla

"I get emotional when I say this. Never in a million years could I ever imagine fire coming that close to (Las Vegas)," David said. "It was within two miles of my parents' house and you could see it wanting to creep over that ridge. You could see that there was a clear possibility that it was going to enter the city."

David drove to his parents' house May 2 to make sure they were safe and help gather important papers, documents and other meaningful items in case the fire got closer to the home. His mom left with one of his brothers to stay in Albuquerque while his dad chose to stay and wait.

"There is history that is important to the community there," David said. "To see the flames around, it sends shock waves."

It is a helpless feeling knowing about the pain of those struggling, said Sandia information enterprise systems technologist Kevin Lopez who also has family and friends who live in the Las Vegas area. One of his aunts was evacuated and has been staying in a recreational vehicle at a state park for more than two weeks, and his uncle's parents lost their home.

"I am anxious and heartbroken for a lot of the families there who are losing everything," Kevin said. "They are losing their houses that they've had in their family for generations — the memories and the history — some people are losing all of that."

Kevin hopes fire conditions will improve soon, that the winds will die down and flames will settle.

"We are at the mercy of the winds and flames," he said. "We are watching where it's going and hoping people who live near the area get a break."

Andres said the only positive thing to come out of the fires is seeing how the community and state have come together. People his family does not know have found ways to contact his dad to see if he would like to move cattle to their land.

Andres said some ranchers did not have time to move animals when initial fires ignited, so firefighters cut fences so cattle could run.

"I know that a lot of the firefighters said when they went down there, it was like Armageddon," he said. "There were fires everywhere, animals and wildlife."

David praised firefighters who have been working to contain and put out the flames.

"The fires are massive, and they're on those jobs 24/7 trying to save populations and homes," he said. "Kudos and thanks goes to them."


Sandia researchers work on climate research

While the threat of current fires is immediate and Sandia staff members have the option to assist through the fundraising campaign, some researchers are looking at the long-term picture of climate change and say current modeling looks grim.

Sandia atmospheric physicist Erika Roesler said she works on a team that researches ways to improve understanding

and quantify uncertainties of future climate scenarios that can aid ecosystem and human adaptation, mitigation efforts and research intervention methods. Detrimental climate change events such as wildfires affect communities disproportionately. Sandia has new initiatives to include equity and environmental justice with climate change research.

"Climate projections for this region show increasing temperatures and decreasing moisture availability. These conditions are going to further stress the current landscape's vegetation profile," Erika said. "Mega fires are predicted to increase in frequency and intensity in the coming years."

For more information on Sandia's climate change research, visit the [Climate Security website](#). 



GREAT LOSS — The wildfires have destroyed homes, property and animals and continue to threaten small towns, like Las Vegas, New Mexico.

Photo courtesy of Andres Padilla



SMOKEY SKIES — The Calf Canyon and Hermits Peak Fire burns near Las Vegas, New Mexico, damaging land and homes owned by families and friends of Sandia staff.

Photo courtesy of Kevin Lopez

Mileposts



Wahid Hermina 40



David Nagel 40



Ed Saucier 40



Jake Deuel 35



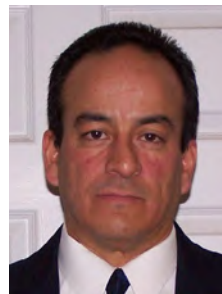
Micheal Glass 35



Ward Dann 30



Paiboon Tangyonyong 30



Larry Varoz 30



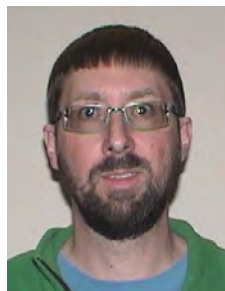
Lora Baca 25



Jason Crenshaw 20



Dave Henderson 20



Patrick Hunter 20



Christian Maestas 20



T.J. Mannos 20



Philip Ortiz 20



Jeff Pankonin 20



Marcos Zamora 20



Katya Casper 15



Greg Ten Eyck 15



John Korbin 15



Alan Sonntag 15



Teresa Soto 15



Jesse Whitehead 15

Recent Retirees



Eric Chavez 34

Sandia researcher named SIAM fellow

By Neal Singer

Sandia computational scientist and applied mathematician Ray Tuminaro has been named a 2022 fellow of the Society for Industrial and Applied Mathematics for “contributions in iterative linear solver algorithms and software that address scientific computing applications on large-scale parallel systems.”

A distinguished member of Sandia’s technical staff, Ray has been praised for exceptional versatility in shepherding basic research ideas from inception to application, aided by close interactions with scientists and by his creation of efficient mathematical software.

“I’ve been extremely fortunate to work with topnotch research collaborators during my career, and I’m grateful for it,” he said upon hearing news of his fellowship. “I appreciate the vibrant research atmosphere that exists within my center and the warm community of talented colleagues.”

He praised “opportunities to work on engaging technical challenges, interesting seminars and visitors, and a highly adept and flexible leadership team.”

He also acknowledged the importance of sustained funding from the DOE [Office of Science’s Advanced Scientific Computing Research](#) Applied Mathematics Program as “essential in making long-term contributions possible.”

Colleagues have described Ray’s research approach as “uncommon and forward-thinking.” Without his accomplishments, Sandia’s highly visible scientific computing suite Trilinos might not exist. Trilinos, led by Sandia researcher Mike Heroux, won several international awards and was based in part on Ray’s leading development of the Aztec iterative solver library, which provides algorithms described in Sandia literature as “easy to use and efficient.” That library won a 1997 R&D100 award and was part of a 1997 Gordon Bell Prize finalist nomination, led by Sandia researcher John Shadid.

Ray has served on the editorial board of SIAM’s *Journal of Scientific Computing*, was a section editor for *SIAM Review* and has been on program committees for a range of international conferences. He also served as co-chair for five Copper Mountain Conferences on

Iterative Methods — one of the most important meetings in the field. While co-chair, Ray broadened the diversity of the conference topics, expanded the meeting scope and helped grow attendance to the highest levels in decades. Participation in student-paper competitions rose from about 20 per year to nearly 50, making the awards a highly competitive opportunity.

He has published




SIAM FELLOW — Sandia computational scientist and mathematician Ray Tuminaro has been named a 2022 fellow of the Society for Industrial and Applied Mathematics.

Photo by Dino Vournas

22 papers in SIAM journals. He has been described as having extraordinary intuition about numerical algorithms and their applications, as well as advancing the state-of-the-art of multigrid algorithms. Those achievements were extensions of Ray’s doctoral thesis at Stanford University in 1989, “Multigrid Algorithms for Parallel Processors.”

Ray also has devoted generous amounts of time and energy in helping develop and orient the careers of young people. He served as mentor for many students and postdoctorates at Columbia University, Technical University of Munich, Berkeley Lab, Lawrence Livermore National Laboratory, University of New Mexico and Sandia, among other locations.

Ray will be recognized for his achievements during SIAM’s annual meeting July 11-15 in Pittsburgh, Pennsylvania.

SIAM is an international society of more than 14,000 individual, academic and corporate members from 85 countries. It seeks “to build cooperation between mathematics and the worlds of science and technology to solve real-world problems,” according to its website. 

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Sandia Labs has official social media accounts on several online communities to engage in conversations about our work, update followers about the latest Labs news, share opportunities, and support the open government principles of transparency, participation and collaboration.

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From HR to security: Sandian's career path offers ongoing challenges, opportunities

'The world is your oyster' at Sandia

By **Julie Hall**

In 2005, Mike Kline had just finished a major project installing PeopleSoft systems at Intel locations throughout the world when Sandia came knocking.

"Sandia was about to do a human resources software upgrade and they wanted my help," Mike said. Though he wasn't looking for a job at the time, he decided to join Sandia after some negotiations, leaving Intel, his first job after college. He was hired into the HR systems and communication group that supported staffing and recruiting, where he helped lead the rollout of the software hiring tools.

Fast forward 17 years and Mike is now a deployed security professional. In those intervening years, he has held a variety of positions in fields as disparate as recruiting and security. He has been responsible for all of Sandia's national diversity recruiting events; he helped develop the Labs' **Wounded Warrior** program; and he has handled site surveys, logistics and security for multiple conferences held in places around the world like Madagascar, so scientists from Sandia and Somalia could exchange information in a safe environment about protecting chemical and biological agents from nefarious uses. The path has been circuitous, largely unplanned and rewarding.

"It's been a strange, unique, interesting journey. You come here and you're not limited to what your degree is in, which is so awesome," Mike said. "You have the opportunity to apply what you're passionate about to your work."

From the Air Force to college in Albuquerque

When Mike came to Sandia, "everyone said you'll never get a clearance because of all the places you've been." His father had been in the military and his family moved all over the world. Mike followed suit, serving in the Air Force for 20 years at bases in the U.K., New Mexico and Florida.

After leaving the Air Force, he ended up in Albuquerque, which he was familiar with through being stationed at Kirtland Air Force Base. He entered college, earning degrees in intercultural communication at the University of New Mexico and human resources management at Webster University in Albuquerque.

While in college, he started scoping out job opportunities



THE ROAD TO SECURITY — Deployed security professional Mike Kline joined Sandia in 2005 to work on human resources systems. Since then, Mike has worked as a staffing specialist for Sandia's nuclear weapons and cyber organizations, a diversity recruiter and an international business risk management analyst.

Photo by Bret Latter

in the area. He was hired at Intel where he initially worked in photolithography on Pentium chips. He went on to positions in global procurement and HR systems and training, which led to his involvement with software that offers HR and financial management applications. His experience installing such systems in Russia, China and Malaysia made him a highly sought-after candidate to help Sandia with its upgrade.

Other opportunities arise

After Sandia's HR software upgrade was completed in 2006, the systems and communications group Mike worked in was reorganized. Mike became a staffing specialist for Sandia's nuclear weapons and cyber organizations. Following that he became a diversity recruiter, which entailed recruiting for Sandia at national events sponsored by professional organizations like the American Indian Science and Engineering Society and the National Society of Black Engineers, along with recruiters from Sandia's management and operating contractor.

As a recruiter, he was instrumental in creating the Critical Skills Master's Program, which was initially formed to help Sandia recruit employees in cyber and optical engineering who were U.S. citizens. Now called the Critical Skills Recruiting Program, the program is designed for graduates with a bachelor's degree in key disciplines aligned with Sandia's mission who want to obtain a technical master's degree while employed at Sandia. Additionally, he worked with then-Sandia Vice President

of Defense Systems and Assessments James Peery, now the Labs' director, in creating the policy defining Sandia's Wounded Warrior Program.


Tapping into international experience

After nine years in HR, Mike joined International Business Risk Management in a role that tapped his previous logistics, operations and international experience. Over the next six years, as an international business risk management analyst, he traveled to 13 countries in Africa and the Middle East to set up and manage international conferences. The conferences involved scientists from Sandia and those regions and focused on reducing global chemical, biological and nuclear threats. In this role, Mike was also involved in security — ensuring that Sandians and conference attendees were safe at their hotels and the conference location and developing emergency plans and evacuation routes in case something were to go awry.

In 2017, the security experience gained from that position, together with his other skills, gave him the background to become a deployed security professional, which are embedded in Sandia's divisions to act as security partners, offer trainings, share best

practices, perform assessments and track security incident trends, among other responsibilities. As a security specialist, Mike has supported national security programs, Sandia's Microsystems Engineering, Science and Applications complex, the audit and ethics organization, and is currently supporting mission services.

Mike said the ability to move to new jobs and take on new challenges at Sandia keeps things fresh and interesting. Each position offers the opportunity to learn new skills, explore a different part of Sandia, gain new experiences, work with new people and expand his network.

"At Sandia, the world is your oyster in so many fashions," Mike said. 

In the weeks leading up to Careerapalooza, a career exploration event for Sandians, Lab News is featuring staff members who have taken unusual and interesting career paths.

Employees are invited to learn more about career mobility and opportunities at Sandia by participating in Careerapalooza events June 21-24. Visit the event website or watch for announcements in Sandia Daily News.


Careerapalooza to offer a glimpse at career mobility within the Labs

Sandia has long billed itself to potential hires as a place where you can have multiple careers without ever leaving the Labs.

Now Sandia is reminding current employees of its brand promise through Careerapalooza, a career exploration event to be held June 21-24. The event will feature in-person and virtual events designed to better acquaint staff with opportunities for internal career mobility, as well as presentations and panel discussions on the skills and tools that will help them advance throughout their career: résumé writing, interviewing, mentoring and more.

"Internal mobility is more than just finding someone who is already on roll to fill a job opening," said Chief Human Resources Officer Brian Carter. "It also gives existing employees the opportunity to improve their skills, develop new ones and remain excited and engaged in their work and in Sandia."

"I encourage all Sandians from every division, whether they're relatively new or have been here a while, to participate in Careerapalooza to learn more about the many career paths available and how their career interests align," he said.

See the preliminary schedule of events here and on the Careerapalooza website. Topics are subject to change. Watch for additional announcements in Sandia Daily News. 

JUNE
21

Tuesday, June 21
9 a.m.-4 p.m. MDT, 8 a.m.-3 p.m. PDT
Steve Schiff Auditorium and livestream

- Navigating the résumé and application process at Sandia.
- University, Education Programs & Student Intern Opportunities at Sandia
- Internal dialogue and unspoken opportunities to be great.
- Career paths: movement within Sandia – best practices and tips.
- Additional panel discussions.

JUNE
22

Wednesday, June 22, 10 a.m.-2 p.m. MDT
Thursday, June 23, 12-4 p.m. MDT
Mountain View Club, Kirtland Air Force Base

- Mock interviewing.
- Speed mentoring.
- Division information tables.
- Career Development Program Office resources.
- Refreshments.
- Games.
- Photo booth.
- Networking.

JUNE
24

Friday, June 24
9 a.m.-4 p.m. MDT, 8 a.m.-3 p.m. PDT
Steve Schiff Auditorium and livestream

- University, education programs & student intern opportunities at Sandia.
- Interview success begins with you.
- Constructing and revising your résumé.
- Diversity and inclusion in action.
- Additional panel discussions.

Albuquerque Business First names Sandia professional among 40 Under 40

By **Meagan Brace**

Each year Albuquerque Business First recognizes a group of young leaders who are making a difference in the community through their career achievements and philanthropy. Sandia executive strategy professional Zach Mikelson is among this year's class of **40 Under 40 honorees**, recognized for his strategic vision within the Labs and the impact he has made beyond it. He will be honored at an awards program today and will be featured in a special publication of Albuquerque Business First on Friday.

A visionary leader

At Sandia, Zach is responsible for setting a vision and tangible goals for the Mission Services division, which includes finance and accounting, procurement and project management. He leads teams within the division through problem solving and strategic planning, champions inclusion and diversity, plans events for new hires and actively mentors others who are looking to advance their career and cultivate new skills.

"The defining moment of my career was being hired at Sandia National Laboratories. Given my values of service and impact, Sandia is the pinnacle career destination for me, and it was validation that everything I had done in my career led me to achieving that goal," Zach said.

A catalyst of change

Aside from joining Sandia, a major turning point in his life came five years ago when he and his wife received devastating news: their son Theo would be born with a very rare and serious heart defect called hypoplastic left heart syndrome, meaning he would be born with only half of a heart. For the first four months of his life, their son underwent three life-saving open-heart surgeries and countless procedures. Since New Mexico does not have the facilities nor the surgeons to support a case like Theo's, his medical care was provided by the Children's Hospital in

Aurora, Colorado — a common scenario for many babies born with heart defects in New Mexico.

The mental, emotional and physical stress that came with their child's uncertain health, the medical bills that awaited them and the distance from their jobs, family and support system for an undetermined amount of time took a severe toll on Zach and his wife. One night while sitting by Theo's hospital bed, they envisioned turning their own struggle into a source of comfort for those who would follow in their footsteps.

In 2018, Zach and his wife partnered with two local families whose children were also born with congenital heart defects, a nurse and a Roswell teacher, who is passionate about the cause, to co-found **Lexiam Heart Foundation**, a nonprofit that provides educational, emotional and financial assistance to families of children in New Mexico diagnosed with a congenital heart defect. Zach currently sits on the board of directors, plans and organizes fundraisers, provides support to new clients and manages other aspects of the day-to-day operations.


"In a little over four years, we have helped over 200 families with over \$100,000 in expenses associated with medical intervention for their heart warrior — including groceries, gas, airfare, hotel stays and medical bills — to make sure no family ever has to go through what we went through again," he said. "And the best part is, we are just getting started."

In addition to the work Zach does with Lexiam Heart Foundation, he sits on the board of directors for the New Mexico Music Hall of Fame, an organization that promotes local musicians and raises money for Musicians in Crisis. Zach was previously a member of The Active 20-30 Club of Albuquerque, a group of young professionals who volunteer and raise money for charities that benefit local children.

A loyal New Mexican

Zach earned his bachelor's degree in political science and master's degree in public

administration from the University of New Mexico. He loves the melting pot of people, food, music and art within the state and said Albuquerque has led him to everything that is important to him: an amazing wife, two incredible sons (including Theo who is now thriving and excited to start kindergarten next year), his dream job and a cause that is near and dear to his heart.

"I am honored to have been selected as one of New Mexico's most outstanding professionals. The honorees for this year have done amazing things to impact our community, and I believe that my work has and will continue to be an impactful part of making our city and state the amazing gem that it is." 



LEADING WITH PURPOSE — Zach Mikelson is one of 40 outstanding professionals to receive a 2022 40 Under 40 Award from Albuquerque Business First for his career achievements and philanthropy. **Photo by Craig Fritz**

Weapons exhibit an interactive tribute to Sandia's nuclear deterrence mission

By **Paul Rhien**

Photos by **Dino Vournas**

Building 915 at Sandia's California site has a new look, thanks to a collaboration with Creative Services and nuclear deterrence programs. Completed earlier this year, a weapons exhibit in the lobby and main corridor of the building highlights nuclear deterrence programs and cybersecurity efforts based at the Livermore campus.

The new weapons exhibit was created as an interactive tribute to Sandia's nuclear deterrence work, said Loren Stacks, a creative designer who leads experiential design projects across the site.

"From the beginning of this project, our aim has been to provide an opportunity for visitors, new hires and employees to see actual representations of the wide range of work scope done on-site," Loren said.

In the early stages of planning and conceptualizing how to transform the space, Loren and creative designer Krissy Galbraith met with managers of nuclear deterrence

programs in California to explore how to tell a story to visitors in a way that was impactful and visually compelling.

Like graphics developed for other spaces across the campus, the display features an abstract engineering and science pattern with a subtle patriotic feel. And as with other graphics Loren has designed, the patterns and illustrations on the exhibit's wallpaper and lit panels include Easter eggs, or hidden images, including drawings of delivery vehicles, nuclear deterrence program and Air Force logos, and historic elements, such as Fat Man and Little Boy.

The weapons exhibit is expected to have some longevity, Loren said, with the ability to expand and update digital content over time as needed.

Unclassified engineering drawings and weapons models were provided by nuclear deterrence programs to be used in creating illustrations and exhibit artifacts. Brian Cass and the machine shop created all mounts for weapon models and determined how to display them safely and effectively throughout the exhibit. Creative designer



SUSPENDED MODEL — Suspended above the stairs is a B83 joint test assembly model, surrounded by blue sky wallpaper graphics. The model was built on-site using 3D printing and a large polyvinyl chloride, or PVC, pipe.




ELEVATED EXHIBIT — A new weapons exhibit in the lobby and main corridor of the Building 915 at Sandia/California highlights nuclear deterrence programs and cybersecurity efforts based at the Livermore campus.

Brent Haglund and communications and information management staff Tim Deschler and J.C. Ross conducted interviews and are gathering content for interactive displays to tell about Sandia's nuclear deterrence mission. Interactive content is expected to be finalized and added to the exhibit later this year.

Throughout the development of the exhibit, Mike Hardwick, director of California weapon systems engineering, the Sandia/California's leadership team, and other managers provided significant feedback and support, Loren said.

"We've received overwhelmingly positive feedback from staff and guests," Mike said,

sharing his gratitude and appreciation for the new exhibit. "It's been really gratifying to see the new weapons exhibit take shape. We hope this experiential design transformation will draw our visitors in and give them an opportunity to learn more about nuclear deterrence work as well as instill pride in the work we all do to support the mission." 



B83 ENGINEERING — The B83 display includes graphics applied to the face-lit and halo-lit fabric panels layered over graphic wallpaper featuring more engineering drawings. Each display in the corridor includes a smaller touch display with interactive content.



W87-0 AEROSHELL — The W87-0 display features another aeroshell model. The machine shop at Sandia/California built a rolling base for each of the aeroshell models.



MOUNTED TELEMETRY — The telemetry exhibit includes a telemetry model mounted to the face of the acrylic display.



INTERACTIVE DISPLAYS — Weapons demonstration videos play on the digital display. Interactive content is being developed to provide high-level overviews of each program and model.

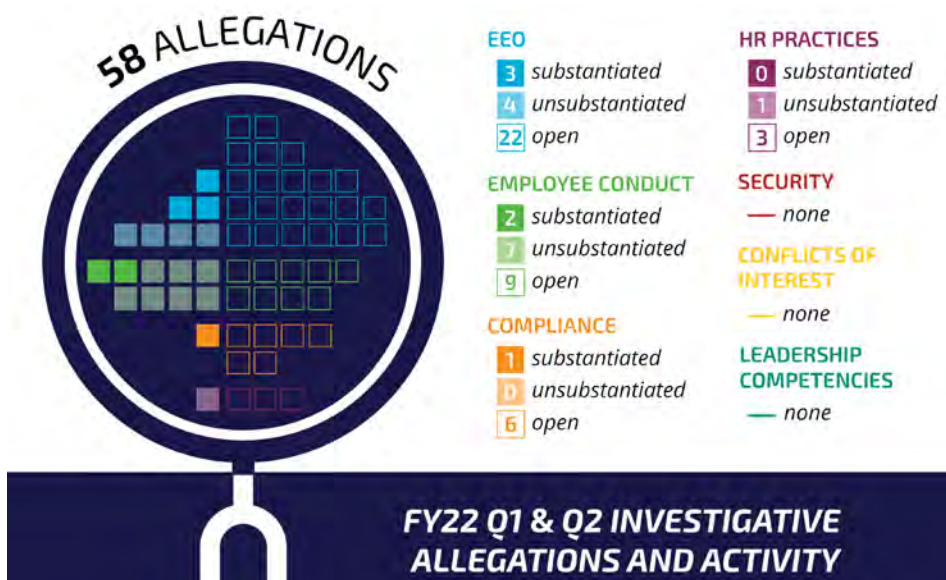


GAS TRANSFER SYSTEMS ARTIFACTS — The Gas Transfer Systems display includes artifacts and graphic wallpaper. Museum track lighting throughout the space adds to the aesthetic appeal of the exhibit.

Ethics Corner

Ethics office midyear update

Graphic by **Stephanie Blackwell**



The ethics office encourages staff to seek advice from or express concerns about misconduct to managers; Employee and Labor Relations; the Inclusion, Diversity, EEO and AA organization; or an ethics officer. All members of Sandia's workforce are essential to creating a respectful, positive and ethical environment. Ethics officers act as catalysts for your best decision-making. Staff can call the Ethics Anonymous Helpline at 505-845-9900. [f](#)