SCIENCE AND TECHNOLOGY

VOLUME 2, SPRING 2010

Science and Technology Newsletter

Spring 2010

Research Director,
Research and Intelligence

Dr. Robin Nissan

Naval Air Warfare Center Weapons Division
1900 North Knox Road, Mail Stop 6309
China Lake, CA 93555-6100
robin.nissan@navy.mil

FRONT: (Left to right) A dragonfly takes a brief rest on a branch, and vibrant flowers decorate Californian gardens.

BACK: A hummingbird at a feeder in Ridgecrest, CA. Thunderstorms rumble over I-15 in northern Utah.

Photographs courtesy of Scott Munro, NAWCWD.

NAVAIR Science and Technology (S&T) Newsletters are published to provide unclassified technical information that pertains to chemistry, life sciences, physics, and technical communication. This newsletter also intends to inform the NAWCWD S&T community about updates, professional development opportunities, and technology highlights.

The contents are not necessarily the official views of or are endorsed by the U.S. Government, the Department of Defense, or the United States Navy.

Please direct article submissions and subscription requests to

Science and Technology Managing Editor

NAWCWD Code 4L6200D

1900 North Knox Road, Mail Stop 6309

China Lake, CA 93555-6100

"We are committed to improving the transfer of S&T into Warfighting capabilities."

CONTENTS

WEB ACCESS

All issues of the Science and Technology Newsletter are accessible online for Navy Marine Corps Intranet (NMCI) users. Go to the SciTech website at https://mynavair.navair.navy.mil/scitech and select the Communications page. The SciTech community of interest (COI) is an environment designed for the unique needs of NAVAIR Department of Defense professionals who work in the field of S&T.

REQUEST REPRINTS

To request reprints call (760) 939-8729.

Employee News

NAWCWD Expands Science and Technology Community

Science and technology (S&T) are the foundations of research, development, testing, and evaluation work conducted at the Naval Air Warfare Center Weapons Division (NAWCWD). As such, the team members of the Research & Intelligence Department (Code 4L0000D) are indispensable to our mission to support the Warfighter.

What's New?

The NAWCWD call for In-house Laboratory Independent Research (ILIR) and Independent Applied Research (IAR) proposals was released in mid-May. The call provides important information for submitting proposals, along with key dates. For more details call (760) 939-0272.

Dr. Robin Nissan, Research Director, Research and Intelligence Department, welcomes new hires.
Source: NAWCWD Photo Lab

Welcome Aboard

Dr. Alfred J. Baca

Dr. Baca is a new Research Chemist in Code 4L4200D. He earned a PhD in chemistry from the University of Illinois at Urbana–Champaign and joined the team October 2009.

Shaleen Lambert

A Ridgecrest native, Lambert serves as the Acting Branch Head for the Technical Communication Office (TCO), Code 4L6200D. She transferred to TCO from Code 400000D in October 2009. Lambert has dedicated over 14 years to federal service and earned a B.A. in accounting from California State University, Bakersfield. She is currently working on a Master's degree.

Dr. Heather Meylemans

Dr. Meylemans is a Postdoctoral Fellow of the American Society for Engineering Education (ASEE) and supports Code 4L4200D. Originally from Denver, Colorado, she earned a PhD in chemistry from the University of Colorado before joining the team in March 2010.

Kevin R. Johnson

Kevin R. Johnson is a new physicist in Code 4L4100D. He earned a B.S. in physics from the University of Missouri–Rolla and an M.S. in Physics from the University of Missouri–Columbia. Johnson joined the team in September 2008. In his free time, Johnson enjoys flying gliders and airplanes.

By Michelle Campbell

NAWCWD Welcomes Award-Winning Mathematician

In today's rapidly advancing technological world, recent developments in applied mathematics play an important role in defense applications. In February, the Naval Air Warfare Center Weapons Division (NAWCWD), China Lake, California, welcomed award-winning mathematician and University of California–Los Angeles (UCLA) Director and Professor of Applied Mathematics, Dr. Andrea Bertozzi, as a Distinguished Speaker in the Colloquium Series. Dr. Bertozzi presented "Applied Mathematics in Defense Applications" to a full house, addressing current research methods that will aid the defense community.

Dr. Bertozzi geared her lecture toward scientists, who composed the majority of the audience, and masterfully discussed topics such as collaborative searching through swarming, image processing, and multi-sensor data fusion techniques.

Swarming is one of Dr. Bertozzi's most well-known areas of research. Swarming occurs when a group composed of biological or non-biological individuals displays three main characteristics:

1. **The group moves in an extensive, coordinated fashion without centralized control.**
2. **The group density is reasonably consistent toward the center and has a distinct edge along its boundary.**
3. **The individuals are usually only able to interact over a distance significantly smaller than the group's overall size.**

Dr. Bertozzi explained that so far research has shown "larger swarms are more accurate [and] multiple smaller ones more efficient."

Her team is currently researching methods to develop and improve swarming techniques applicable to robots, especially ways to increase longevity, provide more efficient energy consumption, and create more reliable communication. The application of such techniques could enable the robots to search for targets, such as land mines, in areas or conditions too dangerous for people.

Dr. Bertozzi's team is also working to perfect imaging techniques that could make clearer and more reliable data available more quickly to the defense industry. One of these techniques is the patent-pending Cahn-Hilliard inpainting.

Inpainting fills in damaged or missing areas in an image by using information from nearby sections. Dr. Bertozzi and her team modified an existing mathematical equation named Cahn-Hilliard to inpaint images faster. She and her team have also researched a boundary-tracking algorithm to reduce noise in segmented images and recently proposed a deblurring algorithm to sharpen images. By using photographs taken at China Lake, she demonstrated how such equations can improve images hindered by obstacles such as turbulence.

Multi-sensor data fusion is another key component of defense research. Data fusion involves aligning information from multiple sources, as well as the methods and tools that make combining that information possible. Defense applications include target identification and tracking and situation assessment. Dr. Bertozzi's research focuses on pan-sharpening (combining low-resolution color images with high-resolution black and white images to create one high-resolution color image), hyperspectral sharpening (enhancing data from across the electromagnetic spectrum, such as ultraviolet and infrared light, by merging low-resolution hyperspectral images with high-resolution images), and human event data (consolidating human activity in space and time with geographical data).

Audience members expressed their appreciation for Dr. Bertozzi's engaging presentation, which drew requests for her to continue past her scheduled hour. Many of those present lined up to talk with her afterwards.

"She's probably one of the top ten in mathematical research in the country," said Jennifer Flenner co-founder of the Colloquium Series (4.7.2.5), "We [were] lucky to have her."

Dr. Bertozzi's striking resume includes a B.A., M.A., and PhD in mathematics from Princeton University, over 85 publications, and the 2009 Sonia Kovalevsky Award for significant contributions to the field of applied mathematics. Her research team has supported the Army Research Laboratory (ARL), the Office of Naval Research (ONR), and the Defense Threat Reduction Agency (DTRA), as well as the Los Angeles Police Department, which uses her research to predict crime.

For specific dates, times, and locations of each lecture, please call (760) 939-1758.

Future Speakers

Juliet Gopinath	University of Colorado at Boulder	Assistant Professor	22 June
Peter Delfyett	CREOL	Professor	10 August
Wendell T. Hill	University of Maryland	Professor	30 September

Tips for Effective Conflict Resolution in the Workplace

By Michelle Campbell

The word conflict often conjures up negative images such as fighting, a time of crisis, or feeling anxious and uncomfortable. For a select few, however, the word has positive connotations, including opportunity and growth. What makes the difference?

The answer lies in how equipped one feels to handle disagreement. The Women's History Month program at the Naval Air Warfare Center Weapons Division (NAWCWD), China Lake, California, recently invited Merri L. Hanson, Founder and Director of Peninsula Mediation and Alternate Dispute Resolution (ADR), to present tips on choosing healthy conflict resolution strategies. It is possible to "comfortably and effectively resolve and manage conflict," Hanson explained to the approximately 50 attendees at her presentation on 25 March.

Conflict Management

The key to preventing, reducing, and resolving conflict is strong communication.

"To have productive communication, you need to separate people from the problem," Hanson said. "Be unconditionally constructive, and assume there is a solution. Be firm in your goals and flexible in your means."

These strategies reside in Interest Based Negotiation (IBN) techniques, the foundation of Hanson's conflict resolution and mediation process.

IBN focuses on five important methods:

1. **Understanding the interests and needs of all involved parties**
2. **Treating problems as joint problems**
3. **Seeking a win-win solution**
4. **Expanding options for joint benefits**
5. **Striving to create together what neither party could accomplish individually**

IBN allows co-workers to collaborate, which boosts creativity, improves problem solving skills, and enables both sides to have needs met.

Co-workers and supervisors can informally implement IBN techniques. Hanson elaborated on two crucial elements of effectively doing so.

First, make every attempt at early resolution. While avoidance is a natural response to discord, immediately acknowledging a problem can prevent it from escalating into a formal complaint, which can save money and time, and often provide a simpler solution.

"Emotions progress," Hanson explained. "Before feeling angry, a person might start out feeling annoyed, then frustrated, then upset, then angry, and then finally enraged. Catch problems when they are an annoyance; don't wait."

Difficult as it may be, do not let roadblocks such as anger, fear, uncertainty, stubbornness, inflexibility, and pride prevent early communication.

Resolution is most beneficial when done in person. While it may be tempting to communicate electronically, face-to-face interaction allows for clarity and immediate feedback. Use a tone and body language that conveys sincere listening.

This sets a strong foundation for the second crucial element of implementing IBN: distinguishing the root cause of a disagreement. Most conflicts are multi-faceted, initially appearing as dissatisfaction with assignments, evaluations, discipline, or work environments. However, often the above concerns are only surface issues. Most conflicts have emotionally based underlying causes, such as mistrust, wrong assumptions, or differing expectations, values, working styles, and personalities. Hanson suggests calmly using the phrase "Tell me more about this" to help the other party clarify emotions.

Conflict management is a positive step toward a more productive and collaborative environment.

Conflict Prevention

The most important proactive strategy is to build relationships with co-workers. In a strong working relationship, employees and managers are accessible, present clear expectations, show a genuine interest in each other, recognize that individuals possess different personalities and temperaments which influence work styles, and are positive.

"Use the Five-to-One Rule—five constructive messages to one negative," Hanson said.
Avoiding preconceptions is also key. Make the choice to base workplace decisions on objective facts.

"I think one of the best aspects [of her presentation] is that these tips can be utilized in the workplace and in private lives," said audience member Mary Wedel, Deputy Equal Employment Opportunity (EEO) Officer. Wedel added that one of Hanson's most applicable tips is "[to] remember people communicate on different levels. We need to be cognizant of that to be successful in the workplace."

Merri L. Hanson established Peninsula Mediation and ADR in 1991 and has provided services for the National Aeronautics and Space Administration (NASA), the Department of Homeland Security, and the Department of Transportation. She earned a M.A. in communication and conflict management and has completed post-graduate work in organizational psychology.

Have I Got a Story for You!

By Barbara Lupei

The Naval Air Warfare Center Weapons Division (NAWCWD) Technical Library's Storytelling Program featured Alice Atwood on 29 April at 1400 in the Science and Technology Library (Building 02496). "Small-Scale Testing and Combustion-Driven Hazards" described a series of small-scale tests that have been assembled over a period of more than thirty years. These tests are used to characterize the ignition and combustion behavior of solid energetic materials and their application to the understanding of various hazards, such as deflagration-to-detonation transition and cookoff. The experimental test results are used to characterize new ingredients and formulations, gain an understanding of a particular hazard's response, generate data to populate models for analysis of system-level behavior, and validate models of specific constitutive relationships.

"Have I Got a Story for You!" is a knowledge-sharing program that preserves the past, enhances the present, and inspires the future.

Call the Scientific and Technical Library at (760) 939-3649 for more information.

Upcoming Events

June 2010

2010 Annual Award Ceremonies

Date: 14 June 2010

Description: The 2010 Annual Awards Luncheon is coming soon. Tickets are $15 and must be purchased by 7 June.

Location: Paradise Community Center at China Lake, and Building 3015 at Point Mugu.

Additional Info: Tickets can be purchased at China Lake from Karen Scott (760) 936-1468, Linda Knollenberg (760) 939-5638, and Debbie Ashley (760) 939-2478.

China Lake Distinguished Speakers Colloquium Series

Date: 22 June 2010

Description: Juliet Gopinath from the University of Colorado will be presenting her recent research in Ultrafast and Ultrabright Lasers. All ESDPs are encouraged to attend this lecture and earn training credits. This series is made possible by the Training Center Partners in Education Program.

Location: 1000D Michelson Laboratory, China Lake, CA

Additional Info: For more info call Scott Merritt at (760) 939-8650 or visit http://ecee.colorado.edu/~julietg

July 2010

Science and Technology Newsletter Submissions

Description: This is your newsletter, and we want to hear from you. Science and Technology submissions are requested by 9 July (COB) for consideration in the Summer 2010 issue.

Location: N/A
Additional Info: Contact the Science and Technology Managing Editor for publication guidelines at (760) 939-8729 or write to Science and Technology Managing Editor, NAWCWD (Code 4L6200D), 1900 N. Knox Rd., MS 6309, China Lake, CA 93555-6100.

August 2010

2010 Naval Science and Technology Partnership Conference

Date: 24-26 August 2010

Description: The Office of Naval Research will host a conference that will raise awareness of ONR's S&T strategy and broaden partnerships.

Location: Hyatt Regency Crystal City, Arlington, VA
Additional Info:
http://www.navalengineers.org/events/individualeventwebsites/ONRPartnership/Pages/ASNELandingP

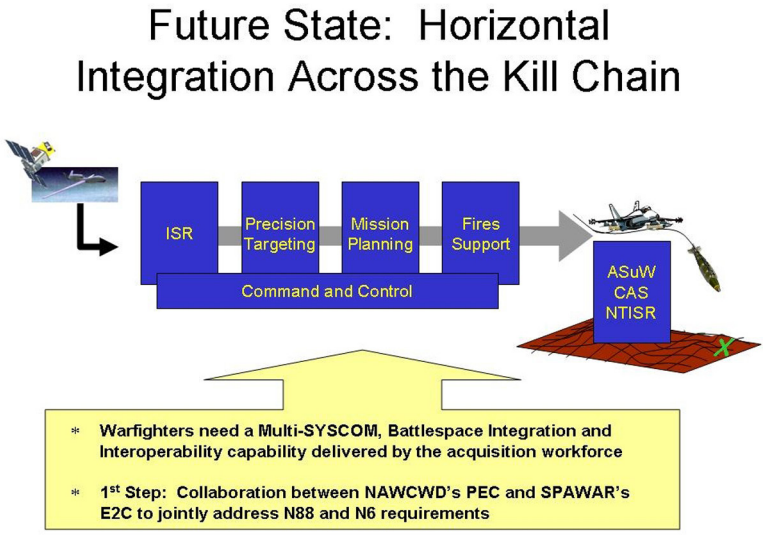
By Theresa Goldstrand

NAWCWD Hosts the First Annual "Delivering Warfighter Effects" Symposium at China Lake, California

With the goal of better serving our Warfighters, the first annual symposium for "Delivering Warfighting Effects (DWE)" was held at China Lake. In attendance were delegates from government agencies that included the Office of the Chief of Naval Operations (OPNAV), Operational Test and Evaluation Force (OPTEVFOR), Naval Strike and Air Warfare Center (NSAWC) at NAS FALLON, Program Executive Office for Command, Control, Communications, Computers and Intelligence (PEO (C4I)), Space and Naval Warfare Systems Command (SPAWAR), and NAVAIR/NAWCWD.

The symposium provided a centralized environment for high-level observers to gain an understanding of "horizontal integration," to witness communications-based warfighting capabilities, and focus on creating processes to achieve horizontal integration (between the services).

Horizontal Integration is the often-used term that describes how different programs work together to operate smoothly and seamlessly with each other.



The focus was limited to two specific warfighting effects:

1. **Nontraditional Intelligence Surveillance and Reconnaissance/Targeting for a strike mission.**
2. **Network Enabled Weapons Mission with Full Motion Video (like that currently used on the unmanned aircraft systems).**

NAWCWD and SPAWAR jointly demonstrated the Engineering Laboratory capabilities of NAWCWD's Precision Engagement Center and SPAWAR's Enterprise Engineering and Certification facility.

The entire Naval enterprise and Marine Corps are tasked to deliver Joint warfighting effects and provide superior capabilities that are sustainable in the future. One of their greatest challenges is to streamline these emerging warfighting processes so they are compatible between the U.S. military services and our allies.

NAWCWD is fine-tuning a horizontally integrated process to link our programs of record with an effects-based system. This process, currently under the leadership of NAVAIR 4.1 Director, Software Engineering, Joan Johnson, has been developed over the last five years at NAVAIR and NAWCWD with extensive participation from critical Program Executive Officers and Program Managers, including NAWCWD former Commander, Rear Admiral David Dunaway.

The DWE symposium was significant because it provided a forum for our military decision-makers to engage in open dialog and to commit to working together to deliver weapon effects.

One of the goals achieved at the meeting was to explore the complexity of the 4.1 "System of Systems" engineering problem and identify gaps. Systems of Systems Architecture is the newly designated Division 41P000D within NAVAIR that is tasked to apply the "systems of systems" approach in the battlespace. It is an engineering term that talks to a battlespace picture as opposed to a program picture.

Rich Zajicek (NAVAIR 41P, Weapon Systems Integrator) and Cmdr. Robert Cassol (Principal Program Manager for Air Integration, PMW-750) are making plans for the next DWE symposium, which is scheduled to take place at China Lake in mid-2010.

Continuing discussions and demonstrations will include Air-Surface Warfare and Close Air Support missions that are currently being developed at NAVAIR/NAWCWD. For more information call either (760) 939-1089 or (858) 537-8988.

Rich Zajicek
Source: NAWCWD TCO

This article has been reprinted with permission of the Rocketeer II.

Leadership Corner

By Kimberly Silver

This spring 2010 issue of *Science and Technology Newsletter* highlights CAPT Mark Storch, who formerly served as the United States Navy (USN) Commander of the Naval Air Warfare Center Weapons Division (NAWCWD). The Weapons Division is responsible for research, development, acquisition support, test, evaluation, and in-service engineering for U.S. weapons systems.

CAPT Mark Storch, USN (Retired)
Source: NAWCWD VCO

A Sound Legacy

Building a legacy takes hard work, dedication, and of course, time. A sound legacy will remain long after the original architect has left the drawing board. In some cases, it virtually becomes a blueprint for others to study and follow. This concept holds true whether you are a Commanding Officer or a Physicist.

CAPT Storch has built a sound legacy of technical excellence, effective leadership, and dedicated service to our nation. Nearly 31 years ago, he was commissioned through the Naval Reserve Officers Training Corps (NROTC) and earned his Navy Wings.

He later served as an antisubmarine-warfare pilot, completing two sea duty tours.

In 1989, he became an Aerospace Engineering Duty Officer. As his career progressed, he became the Integrated Defensive Electronics Countermeasures Program Manager and later served as the Officer-In-Charge at the Naval Air Pacific Repair Activity Detachment (Guam).

His acceptance of orders to work at the Pentagon afforded him an opportunity to serve as the Executive Assistant to the Principal Deputy Assistant Secretary of the Navy for Research, Development, and Acquisition. After the tour, he returned to the V-22 Program, taking on the role of the Weapons System Integrator.

In 2002, CAPT Storch first reported to the Naval Air Weapons Station (NAWS), China Lake, California, where he was selected as the Executive Officer (2002), Commanding Officer (2004), and finally the Vice Commander for NAWCWD (2006). Today, he is the Acting Commander and will retire from service this summer.

During our 1 April interview, CAPT Storch shared, "My retirement date is 1 June. I am onboard long enough to turn the Command over to CAPT Mathias Winter and plan to have my retirement ceremony on 20 May. On 1 June I will officially be out of the Navy."

There is a widespread sentiment of respect and best wishes for CAPT Storch.

"I have thoroughly enjoyed working with CAPT Storch. I have a tremendous amount of respect for him. He has been an outstanding leader.

"He is truly an officer and a gentleman, and his loyalty to our Nation, our constitution, and our citizens is testament to his integrity."

Marci Burnett

I will miss him," said Maryanne Millis, Flag Administration (Code 500000D).

"It has been my privilege and honor to have been able to serve with CAPT Mark Storch these past three years. NAWCWD was fortunate that the CAPT accepted the position as our Vice Commander in 2007, and was able to step in as our Acting Commander this past year. With his extensive knowledge and background of China Lake and Point Mugu, he has been an exceptional leader for the Weapons Division. He is truly an officer and a gentleman, and his loyalty to our Nation, our constitution, and our citizens is testament to his integrity. I will truly miss him when he retires," said Marci Burnett, Executive Associate to Commander.

"CAPT Storch has held significant successive leadership positions at Point Mugu and China Lake, spanning a longer-than-usual tour of duty. This is a unique opportunity in a dynamic military organization, and CAPT Storch has led with consistency and integrity, always clearly focused on safety, people, and mission. I have appreciated his professional support and his cheerful, friendly attitude. It has been a real privilege to work alongside him on the NAWCWD Team," said Susan Read, Public Affairs Specialist (Code 750000D).

The Art of Leadership

Good leadership is an art. It requires a symphony of knowledge, skills, abilities, and attitude that must harmonize with the group that one is trying to lead. During our interview, CAPT Storch explained, "When I first came to the NAVAIR Command 18 years ago, I appreciated the fact that it was predominantly civilian. It is difficult to lead by force. People do not respond to threats to perform. Instead, to be successful, you must learn how to be a motivator so that people can work at their peaks."

In order to motivate others, one must maintain a strong moral compass and lead by example. Failure to do so often taints the perception of the leader and may lead to a loss of confidence, low morale, and other difficulties in the workplace.

"People in positions of power must demonstrate trust, integrity, leadership, and credibility in order to motivate others," he advised. "People want to do what you have set forward because you have motivated them."

This approach has resonated well with his staff and colleagues. His charisma and expertise in organizational communication also helped him to fine-tune and motivate Weapons Division workers.

Bill Stephenson, Visual Information Specialist (Presentations) (Code 4L6200D), said, "I have worked with and supported CAPT Storch on many briefings and several speaking engagements. He's a great speaker. It has been a pleasure to work for and with him. The CAPT has a great sense of humor, he's easy to get along with, and knowledgeable about so many aspects of the work we do here. He always took the time to talk with us during projects and told others that he appreciated our work efforts."

"People in positions of power must demonstrate trust, integrity, leadership, and credibility in order to motivate others."

CAPT Storch

"In my interactions with CAPT Storch, he was always approachable and responsive. As far as working with him on his video teleconference comments, he was quick to praise and never critical. If I summarized his comments accurately, he was complimentary; if not, he'd say, "Let's try this..." said Barry McDonald, Audio Visual Production Specialist (4L6200D).

CAPT Storch also believes that good leaders must have a combination of integrity, humility, and a sense of humor.

"Integrity is important because people will not respond to hypocrites. Humility is necessary because there is no need for overbearing attitudes, and a sense of humor is great because it helps people feel more comfortable with each other," he advised.

According to CAPT Storch, this combination helps to foster a professional relationship between leadership and the workforce.

"I will have to get used to not being the Commander-In-Charge. I can do it because I value the spirit of teamwork," said CAPT Storch.

He is looking forward to working in a defense-related area and will explore work opportunities in town with contractors or on base as a civil servant.

Dr. Robin Nissan, Research Director, Research and Intelligence Department (4L0000D), said, "CAPT Storch has been a great friend of the Research and Intelligence Division. He is a great leader and I hope we will be working with him in the future, as he accepts his next challenge."

CAPT Storch and his wife will continue to reside in Ridgecrest, California, as their two children are currently attending a local high school.

Leveraging Lessons Learned to Face New Challenges

As NAWCWD continues to prepare for the new challenges ahead, CAPT Storch offers three key lessons learned, as follows:

1. **Understand what our customer base thinks about us.**
   NAVAIR surveys indicate that our customer base values what we do for them. As a Command, we can improve by gaining a better understanding of whether or not our customers are satisfied. At the Integrated Program Team (IPT) level, we should act upon the feedback that our customers offer.
2. **Improve communications between military and civilian personnel.**
   Our Logistics Division (6.0) is positioned globally to facilitate communication between military and civilian personnel and respond to Warfighter's requests. Similarly, the Warfare Response Center can respond to requests from military personnel within hours. It also helps to have military officers deployed in the Weapons Division to engage with civilian personnel and identify when improvements are needed.
3. **Ensure that the workforce understands what we do for the Warfighter and why.**
   It is important for all personnel to understand their relevance to the Fleet. In 4J and 4L, this is very common, as today's research and planning efforts may not have an impact until many years later. In addition, workers who are far removed may not realize what role they have in helping the Warfighter: **We are responsible for delivering vital products to the Fleet.**

> **"I stand in awe of what the S&T community does. In the Weapons Division, I have witnessed amazing basic research projects, and there is a tremendous amount of opportunities that eventually result in a technology edge for the Warfighters."**
>
> **CAPT Storch**

American Indian Science & Engineering Society (AISES) Award

Eligibility Military & Civilian
Due Summer 2010

To recognize American Indian and Alaskan natives in engineering, science, and other related technology disciplines. (For American Indian and Alaskan Natives). For more info call (703) 614-6502.

Society of Hispanic Professional Engineers-STAR Awards

Eligibility Check criteria for specific award
Due 14 June 2010

Society of Hispanic Professional Engineers (SHPE) Star Awards recognize the significant accomplishments of Hispanics in engineering, math, and science.

Award Categories:

- Jaime Oaxaca Award *
- Junipero Serra Award
- Honorary Member
- Professional Role Model *
- Promising Engineer
- Hispanics in Technology
- Corporate Achievement

Asterisk (*) indicates the nominee must be a SHPE member.
For more info go to: http://oneshpe.shpe.org/

Invention/Patent Award

Eligibility Military & Civilian
Due Ongoing

To recognize an invention (i.e., any patentable original design, or improvement of existing design for a machine, process, or manufactured item). The Counsel Office (K00000D/E) may be contacted for additional award information and provides guidance and direction on applying for a patent.

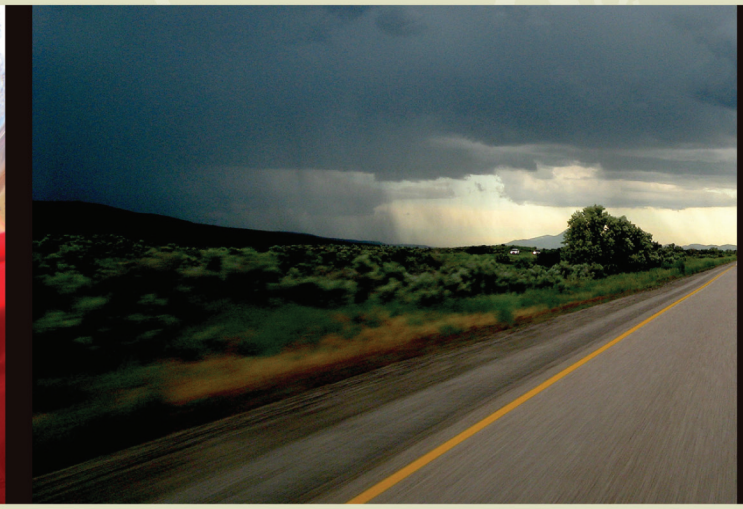
Research and Engineering Excellence Award

Eligibility Military & Civilian
Due Ongoing

To recognize employee(s) in the Research and Engineering Competency for outstanding achievement in various disciplines that contribute to the mission of NAWCWD. For more info contact your Award Coordinator.

More info and criteria are available online for NMCI users:

https://c27ntivpaxr01.navair.navy.mil/NAWCWD/TFSM/html/maintainers/downloads/unsorted/awards_manager_guide.pdf



Approved for public release; distribution is unlimited.

NAWCWD TS 10-048