



# Foundation Focus March 2019



NPS President Rondeau joined local alumni at our first alumni association event on Feb. 22 at NPS.

## A note from our President and CEO, Rich Patterson

We have had a strong start to 2019 at the foundation. Already, we've added more than 300 new members to our network, hosted a new quarter social with more than 100 attendees, met with our development committee to discuss this year's priorities, and planned regional alumni events across the country. The first alumni gathering was just two weeks ago, right here in Monterey. Local NPS graduates came out to reconnect with each other, celebrate the start of the alumni association and hear from new NPS President Vice Admiral Ann Rondeau.



After meeting with Admiral Rondeau myself, I echo the words of Secretary of the Navy Richard Spencer when he says, "Admiral Rondeau brings with her an unparalleled record of leadership and achievement as a university president, change agent, officer and leader." I look forward to her leadership and to supporting her vision for NPS outlined in the NPS 2019 Institutional Priorities. These priorities reveal where we are concentrating our support to the school for the coming year. I share them with you all as valued supporters of NPS in hopes that you recognize your integral role in each one. Your support of NPS means you are directly impacting our national security, strengthening our military capability, and funding essential programs to hasten innovation in our Department of Defense.

### **NPS 2019 Institutional Priorities include:**

1. Seed and Seedling Funding
2. Sea Land Air Military Robotics (SLAMR) Facility
3. Monterey Cyber Institute
4. Learning Spaces of the Future
5. The Emerging Technology Fusion Center
6. Data Science and Analytics Group

You can read more about these on page two. I look forward to working with our NPS liaisons, foundation board members and staff to make these institutional priorities a reality. Together, we can supply the resources for top military and civilian leaders to overcome the most pressing defense challenges.

- Rich Patterson, NPSF President and CEO

# 2019 NPS Institutional Priorities

## Our Areas of Focused Support

### 1 Seed and Seedling Funding

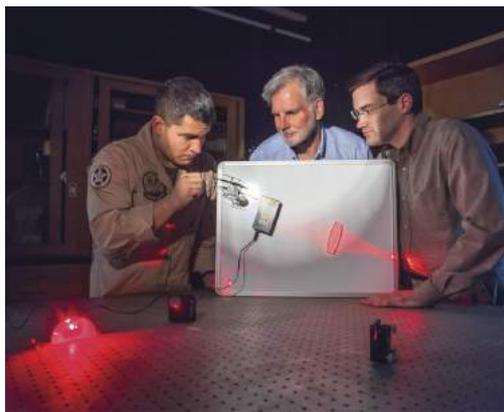
A unique program that combines the spirit of venture capital thinking with innovative ideas from some of the brightest minds in national security. With our initial funding, NPS professors and students turn their ideas into actionable improvements in the Department of Defense, and often receive additional funding from outside sources as they advance in their research.

### 2 Sea Land Air Military Robotics (SLAMR) Facility

Our nation's premier education and research facility to explore multi-domain robotics that enhance national security. The SLAMR facility will spark national collaborations between industry, academic and government entities. It will also connect students to the multi-domain environment, in order to keep up with the rapidly evolving capabilities of emerging technologies,

### 3 Monterey Cyber Institute (MCI)

An institute that will work with the SLAMR Facility to address cyber threats by bringing together the "best and brightest" in academia, industry and government. To solve the most complex cyber challenges, MCI will focus on four areas of collaboration: Education, interdisciplinary research, a solutions test lab and policy creation.



### 4 Learning Spaces of the Future

Redesigned "classrooms" that facilitate active learning, flexible learning environments and enhanced technology integration. These new, intelligently designed learning spaces will support ubiquitous technology, collaboration and personalized learning while facilitating a shift from content-based learning to the next generation of learning based on skills and experiences.

### 5 The Emerging Technology Fusion Center

A new space that positions NPS to integrate with Silicon Valley, lead in the Department of Defense efforts to enhance innovation, and prioritize emerging technology. The center will streamline the development of operationally relevant technologies and allow for easier partnerships with other innovation centers and venture capital firms.

### 6 Data Science and Analytics Group

A curated repository of NPS talent, infrastructure, relationships and geography to serve as the primary research coordination site for data science. The group will advise Department of Defense organizations on pivoting to data-driven decision-making processes and support faculty research with data infrastructure and engineering methods.

# An Interview With Vice Admiral Brian Brown

## NPS Alumnus and Commander of Naval Information Forces



Vice Admiral Brian Brown graduated from NPS with a degree in Meteorology and Physical Oceanography. His naval career started at the U.S. Naval Academy, where he commissioned as a Surface Warfare Officer. As a flag officer, Brown commanded the Naval Meteorology and Oceanography Command, and later served on the staff of the Chief of Naval Operations. In 2014, he was appointed as the head of the Navy's Space Cadre. In 2018, he took command of Naval Information Forces. He took time to share some important assertions and advice with us. Below is an excerpt of his interview. To read more, visit [NPSFoundation.org/blog/VADMBrown](https://NPSFoundation.org/blog/VADMBrown)

### How has your NPS experience been valuable to you throughout your Naval career?

"I think the real "secret sauce" to the NPS experience is that I learned to think differently as I approach problems. This change occurred through stimulating discussions with world-class professors, application of real-world naval challenges within the curriculum, and working through a thesis that had roots in fleet problems and advanced our knowledge towards solving them."

### What skills did you acquire in your military career thus far that have served you well in commanding our Naval Information Forces?

"The key skill I developed is learning to lead with humility, to be a servant leader. I can't say I've perfected it; we all continue to grow on our Navy journey. The higher up I rose in ranks, and the broader the scope of responsibility I assumed, I realized my job became more about serving those who work for me. I aim to guide and allow my folks the opportunity to grow by giving them the latitude to accomplish the mission with their scope of responsibility. People respond well to this model, it's never let me down. The teams I have been a part of, including Naval Information Forces, have been higher-performing teams because they feel they are critical to mission success. I've had many role models in my career who successfully lead this way that I attempt to emulate, including my thesis advisor at NPS. An ounce of civility goes a long way."

### What are the biggest challenges facing the Information Warfare community currently, and how are you and your team preparing to overcome them?

"As a community comprised of a broad range of specialties operating in the information domain, we are still coalescing as a single community and gaining a sense of what it means to be Information Warfare (IW) ... The pace of change of technology is also challenging for us – we have to evolve in the information space at a rate that our current processes for manning, training, and equipment are not optimized to support today."

“We will deliver better-trained Information Warfare professionals; optimized manning; and modernized, cyber-resilient, and user-designed tools to maximize Navy lethality and to compete and win if called upon.”



Read the rest of the interview at [NPSFoundation.org/blog/VADMBrown](https://NPSFoundation.org/blog/VADMBrown)

# Seed Project: Modernizing Tactical Communication with SDNs

We recently selected 12 student and faculty research projects to receive seed funding through our Defense Innovation Fund Seed Program. One of those projects aims to modernize tactical communications and the network infrastructure of the Navy and Marine Corps. Lead researcher and NPS professor Preetha Thulasiraman says using certain commercial technologies can help mitigate cyber threats against these military networks. We spoke with her to learn more.

## Q&A with Lead Researcher and NPS Associate Professor, Preetha Thulasiraman

### Why is this research important?

"Currently, the tactical networks used by the Department of Defense are very rigid, lack scalability and are too complex. We have to leverage commercial technological innovation to make sure we have a tactical networking infrastructure that is agile enough to adapt to highly contested and congested environments. Software defined networking (SDN) is one approach that will allow us to move in this direction."

### Specifically, how will SDNs increase the security of tactical communications?

"Military operations are highly mobile. The function of a tactical network is to deliver data from one node to another. Oftentimes, data intelligence has to be relayed through multiple networks with very little infrastructure. Networks at the tactical edge come with low-rate and unreliable wireless links.

Software defined networking is a paradigm that is founded on the concept that decision-making in a network can be separated from the physical hardware. In other words, network behavior can be controlled through software, thereby decreasing reliance on devices such as routers and switches to make decisions. The idea is to use SDNs to make data routing decisions in a centralized way and then translate them to forwarding actions. SDNs have an advantage – they offer a global view of the network topology, which achieves greater situational awareness. An SDN architecture facilitates traffic monitoring, threat diagnoses and security policy implementation in a centralized manner. We have much more control on how security is implemented and handled."



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### What challenges do you anticipate as you aim to modernize military network infrastructure?

"One of the main challenges of introducing new technology to military network infrastructure is interoperability and backwards compatibility with legacy devices. Even as we propose the use of cheaper, potentially more flexible technologies, we cannot eliminate all of the tactical infrastructure that currently exists. Technologies like SDN need to coexist with legacy nodes that use standard legacy communication protocols. One way to overcome this is to introduce hybrid solutions that will configure SDNs to use existing communications protocols when necessary, while at the same time simplifying network operation, as it is intended to do."

➔ See the full list of 2019 seed projects at [NPSFoundation.org/blog/2019seeds](https://NPSFoundation.org/blog/2019seeds)

# Alumni Association News & Events

## Alumni In the News: NPS Graduate Writes Article on Cybersecurity and Post-9/11 Counterterrorism



Maj. Michael Senft receives an award from former NPS President Ronald Route in 2015 for his exceptional academic performance at NPS.

2015 NPS graduate Maj. Michael Senft recently wrote an article titled "Lessons Not Learned: Why Our Post-9/11 Counterterrorism Experiences Should Inform Our Cybersecurity Strategy." The article was published by the Modern War institute at West Point and outlines ways to strengthen cybersecurity efforts from the tactical to the strategic level.

[Read More](#)

## Remaining 2019 NPS Alumni Events



Mark your calendars! We're excited to announce our plans for the 2019 NPS alumni events. These events give you the opportunity to foster both professional and personal relationships within a distinguished network of NPS graduates.

**Patuxent River: May 2**

**Alexandria: May 5**

**Quantico: May 6**

**San Diego: August (Exact date TBD)**

Stay tuned as we release more information. To be sure we keep you in the know on events in your area, update your contact information by clicking below.

[➔ Are you a graduate who recently moved? Update your contact info.](#)

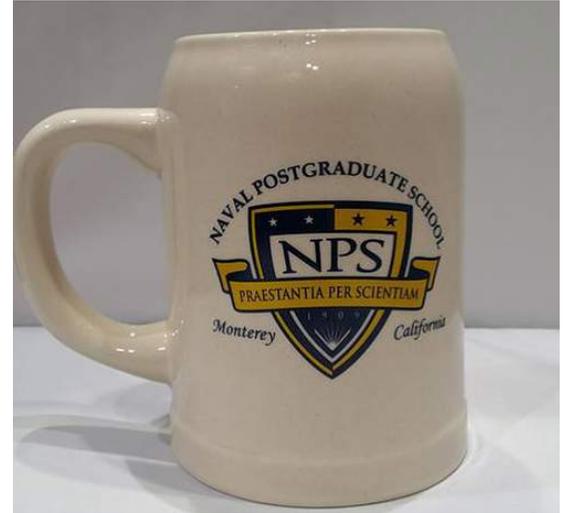
# Foundation News & Events

## Trident Room Mugs Are Back In Stock

Mugs are now back in stock! Foundation members, don't miss your chance to get your iconic Trident Room mug for free (\$16 value) as one of your member benefits.\*

Visit our Peacock Shop  
inside Herrmann Hall to  
claim yours today!

\*Valid for NPS students,  
alumni, faculty/staff only



## Secretary of the Navy to Speak at March Graduation

Secretary of the Navy Richard V. Spencer recently announced he will be speaking at the NPS Winter Quarter Graduation Ceremony. The ceremony is scheduled for Friday, March 29 at 10 am in King Hall.



## You're Invited! New Quarter Kickoff Social

April 11, 11 am-1 pm at NPSF Cottage

- Enjoy free lunch
- Bring your friends
- Meet club presidents
- Sign up to become a foundation member
- Celebrate the start of the new quarter and National Submarine Day
- **RSVP before April 1 to [smoore@npsfoundation.org](mailto:smoore@npsfoundation.org)**

Join us for subs at the cottage to celebrate

# National Submarine Day

April 11  
11 AM to 1 PM  
The NPSF Cottage  
283 Cottage Way, NPS Campus

Open to foundation members and anyone interested in membership.

# Foundation News & Events

## Johnson & Johnson CEO Alex Gorsky to Hold Q&A at NPS



As part of the Secretary of the Navy Guest Lecture series, Johnson & Johnson CEO Alex Gorsky will hold a Q&A session with NPS student on Friday, March 15. The session will be in King Hall from 1-2 pm and is open to anyone with base access onto NPS.

Gorsky started his career with Johnson & Johnson as a sales representative and continued to advance on in positions of sales, marketing and management, including assignments in the U.S., Europe, Africa and the Middle East. He became CEO in April 2012.

He is a graduate of the U.S. Military Academy at West Point and spent six years in the U.S. Army. He currently serves on the Board of Directors of IBM, the Wharton School of Business Board of Overseers and the Board of Directors of the Business Roundtable.

**When:** Friday, March 15,  
1-2 pm

**Where:** King Hall at NPS

## In The News: Wall Street Journal Reports "*Chinese Hackers Target Universities in Pursuit of Maritime Military Secrets*"

The Wall Street Journal recently reported that 27 U.S. educational institutions have been targets of Chinese hacking. The schools include The University of Hawaii, the University of Washington and Massachusetts Institute of Technology. The goal behind the attacks? U.S. officials and cybersecurity experts say the recent hacks are "part of an elaborate scheme to steal research about maritime technology being developed for military use."

Most of the universities targeted share the following commonalities: They include research hubs focused on undersea technology and are connected to a Massachusetts oceanographic institute that was also a target in the recent hacks.

The attacks have been linked to a specific Chinese hacking group that is also behind the former breaches of Navy contractors and subcontractors, which resulted in the theft of "sensitive military information such as submarine missile plans and ship-maintenance data."

\*The original article by author Dustin Volz appeared in the March 5, 2019 issue of the Wall Street Journal.

 [Read the full WSJ article here. \\*Requires subscription.](#)

# Get Involved

## Support:



### Amazon Smile

Amazon donates 0.5% of every purchase you make at [smile.amazon.com/ch/23-7098729](https://smile.amazon.com/ch/23-7098729) to the NPS Foundation.

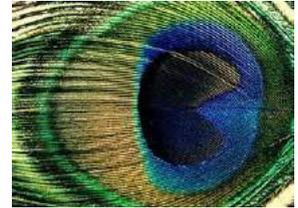
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### Defense Innovation Fund

Help fund early stage research projects that improve national security and military operations.

[Donate](#)



### Peacock Shop

Visit our store inside Herrmann Hall or shop online for NPS clothing, gifts memorabilia and more.

[Shop Online](#)

## Connect:



### Alumni Network

Are you a NPS alumnus? Make sure you're listed in our alumni directory!

[Get Listed](#)



### Social Media

Follow us on Facebook, Twitter and LinkedIn to stay in the know about foundation news and events.

[Follow Us](#)



### Contact Us

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## Our Mission

"To support, promote and advance the mission of The Naval Postgraduate School by working with school leadership to identify strategic institutional priorities, and by raising, managing and disbursing private gifts that provide the margin of excellence for continuing educational and intellectual discourse in areas of strategic consequence at the nation's preeminent national defense research university."