
THE PATUXENT PARTNERSHIP

ANNUAL REPORT

2019



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DEVELOP. CONNECT. ACHIEVE.



The Patuxent Partnership connects the dots to foster collaboration among academia, industry, and government from technology to STEM initiatives in Southern Maryland and beyond to promote growth for the betterment of all.



The Patuxent Partnership, or “TPP” as we are known, is a non-profit member organization connecting with government, industry and academia to advance technology, increase STEM workforce development, and support economic growth in our area.

TPP accomplishes these objective through programs, forums and other activities focused on the exchange of ideas, information, and items of interest to our members. We make sure there is time for networking and sharing when we have an event. Recent programs included Mission Readiness and Artificial Intelligence. Science and technology and tech transfer are topics of critical interest. STEM workforce development, and opportunities to partner at the Federal, State and local level are important considerations.

We work to support and expand the technology base in Southern Maryland, from NAWCAD to the developing technology hub at the St. Mary’s County Airport. Our work with academia is an important part of increasing the intellectual capital and workforce capacity. Collaboration makes for success.

Our Partnership Intermediary Agreements (PIA) with NAWCAD and Indian Head support their missions and keep the community informed. Our Educational Partnership Agreement (EPA) with NAWCAD and St. Mary’s College of Maryland (SMCM) has supported internships, an Applied Physics Curriculum and various STEM related initiatives. We recently signed a PIA with Indian Head and look forward to increasing connections between Indian Head and Pax River.

TPP and CSM have a long term partnership. TPP has a Pathways Scholarship at CSM that supports engineering, cyber and computer science. This \$10,000 annual commitment covers two full annual scholarships. The Flight Academy at CSM, also known as the Aviation Classroom Experience (ACE), is in its second year. In addition to programs during the academic year, two one-week ACE summer camps are offered.



LIKE NO OTHER CONNECTION

a message from our **EXECUTIVE DIRECTOR & BOARD PRESIDENT**

Dear Friends and Colleagues,

Your confidence in TPP, as evidenced by your presence at our programs and your support of our activities, has resulted in another successful, productive year for TPP. The opportunity to work with all of you in industry, government, academia, and organizations such as the Southern Maryland Navy Alliance and Leadership Southern Maryland, has allowed us to expand the breadth of our activities and to expand our membership. We value our members and the opportunity to work with you and get to know you. TPP is all about “connecting the dots.”

Pax River and Southern Maryland continue to thrive and grow, and TPP is pleased to be a part of it. Engaging with members and the community to develop programs that are both relevant and interesting is a primary focus. Your comments and feedback help us to better serve you.

TPP had several major programs this year. The Federal government shutdown early in 2019 did create a challenge for us. Our Position, Navigation and Timing program had to be rescheduled, as some of the speakers were not available. It was a very successful program. Mission Readiness and Artificial Intelligence also were major programs. For our Patuxent Defense Forum, a collaboration with the Center for the Study of Democracy at St. Mary's College of Maryland, we also partnered with the U.S. Arctic Research Commission, the Wilson Center's Polar Institute, and the U.S. National Ice Center. The program took place at the Ronald Reagan Building in Washington, D.C.

TPP is pleased to be supporting the Naval Aviation Support Consortium (NASC), formed to support the technology needs of the Naval Air Warfare Centers (NAWCs) and the Naval Air Systems Command (NAVAIR) through the use of Other Transaction (OT) Authority. CMG manages the Consortium and administers the OTA with NAWCAD.





Our partnership with the Center for the Study of Democracy at St. Mary's College of Maryland (SMCM) is going strong. We also are engaged with SMCM through our Education Partnership Agreement with SMCM and NAWCAD.

As we were completing our three year ONR Grant focused on STEM workforce development at NAWCAD, TPP was awarded the 2018-2019 MD JSHS grant. We partnered with NAWCAD and SMCM and worked with students across the state, culminating in the 2018 MD JSHS Symposium on March 30, 2019, at SMCM.

The active support and engagement of our members and benefactors, and your confidence in TPP, are the reasons for our success. Thank you for the privilege of serving you and working with you to Develop, Connect and Achieve. We look forward to another exciting year.



Warmly,

Bonnie Marie Green
Executive Director

Bert Johnston
President, Board of Directors



OUR MEMBERS

20

government

200

industry

9

academia

36

professional associations

14

community affiliates

13

benefactors

Many of our members are NAWCAD & NAVAIR focused. They also are interested in improving the region's quality of life through education, workforce development, and retention. Members provide key support to TPP programs and activities, from science fairs to AI.

Our members are invested in a wide range of activities and collaborations designed to increase interest and involvement in STEM disciplines throughout the community.

OUR BENEFACTORS

ASEC

HTii

Naval Systems, Inc.

Bell

KBR

Northrop Grumman

Boeing

L3 Technologies

PAE

**General Dynamics
Information Technology**

Lockheed Martin

Raytheon

SAIC

Member of the Year: Naval Systems, INC. (NSI)

Naval Systems, Inc. (NSI) is The Patuxent Partnership (TPP) Member Organization of the Year for 2018. NSI was incorporated in the state of Maryland in 2004 and has been headquartered in Southern Maryland since its founding. NSI is a member in good standing of TPP and was selected based upon the company's performance, support of TPP's mission, their corporate culture, and company and employee involvement in community affairs and volunteer activities.

Naval Systems, Inc. (NSI) is a Service Disabled Veteran Owned Small Business (SDVSOB) headquartered in Lexington Park, MD with over 190 employees serving 12 PMAs, 4 PEOs, and 11 International/FMS program offices. NSI is a key member of six (6) Southern Maryland community-oriented non-profit organizations and significantly contributes to the goals of TPP.

The company culture and strong growth demonstrate NSI's core values of Quality, Integrity, Teamwork, and Success, rounded out by an energetic commitment to the Southern Maryland community. NSI is unique among its peers in that all four of its owners (two women and two men) are residents and stakeholders of Southern Maryland.

NSI delivers to its predominantly NAVAIR customer base a diverse set of valuable expertise, while offering a responsive small business approach to providing solutions for the Warfighter. Our business strategy maximizes partnering with other Southern Maryland businesses, thus maximizing local benefits and quality of life. NSI enjoys an unparalleled reputation for quality service and community give-back, as evidenced in its community partnerships and participation.

NSI is committed to its mission and guided by its core values. The NSI mission is to promote U.S. national security through innovative solutions and strategic partnerships: "Supporting the Warfighter!" NSI achieves its mission through innovative solutions that enable decisive advantage to those who protect and defend our nation. NSI's core values of Quality, Integrity, Teamwork and Success are reflected in the way they do business. NSI recognizes and promotes the inherent dignity and unique capabilities of every individual and is recognized for local community involvement and generous giving.



PROGRAMS

25
programs

2,111
attendees

10
venues

Center for the Study of Democracy

TPP and the Center for the Study of Democracy at St. Mary's College of Maryland have a history of collaboration, jointly sponsoring and presenting programs of interest to our members and the broader community. We present an annual Patuxent Defense Forum and other programs throughout the year, discussing issues related to U.S. domestic and foreign affairs and defense. This year's Patuxent Defense Forum addressed issues related to diminishing polar ice and national security challenges, as well as related issues.

Association of Naval Aviation Squadron #18

TPP has partnered with the Association of Naval Aviation's Squadron #18 Patuxent River for more than 10 years, hosting over 39 panel presentations to date. The panels focus on topics of interest to the naval aviation community. These programs are an outstanding opportunity to share the Navy's significant contributions and what is happening "inside the gate" with our members and others. Net proceeds from these programs support STEM initiatives and scholarships in Southern Maryland.

TPP/ANA Panel - Naval Aviation Agility and Lethality w/ Mr. Dan Nega, DASN (Air)

03-Oct | Patuxent River Naval Air Museum

Sponsor: Lockheed Martin

CAPT Craig Grubb, Program Manager PMA, Multi-Mission Helicopters Program Office; **CAPT David "DW" Kindley**, Program Manager, PMA 265, F/A-18 and EA-18G Program Office; **Mr. Tony Schmidt**, SSTM, Director Rapid Prototyping, NAWCAD; **CAPT Michael S. Wojse**, Carrier Strike Aircraft & Programs Branch Head

NAWCAD Industry Day

25-Oct | University System of Maryland at Southern Maryland

Mr. Jeff Guarnero, Deputy Department Head AIR 2.5, Contracts; **Ms. Leslie Taylor**, Deputy Assistant CDR for Test and Evaluation, Executive Director, NAWCAD; **Mr. Ken Senechal**, Director, Capabilities Based Test and Evaluation; **Mr. John Murray**, Deputy Director, Office of Small Businesses Program, NAVAIR; **Mr. Al "Bunky" Hensler**, Deputy Division Head, AIR 2.5 1 Contracts

TPP 2019 Annual Meeting

31-Oct | University System of Maryland at Southern Maryland

Ms. Bonnie Green, Executive Director, The Patuxent Partnership; **Ms. Annie Wienschenk**, Maryland Technology Internship Program, University of Maryland, Baltimore County; **Mr. Kee Abell**, Strategic Education Office, Naval Air Warfare Center - Aircraft Division (NAWCAD); **Dr. David Barrett**, University of Maryland/Engineering Education and Research Partnerships, NAWCAD; **Dr. Josh Grossman**, St. Mary's College of Maryland

TPP/ANA/MCAA Panel: Marine Air: The Sea-Based Inside Force w/ Lt. Gen. Steven R. Rudder, DCA, USMC

4-Dec | Patuxent River Naval Air Museum

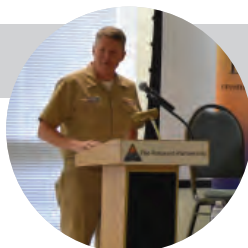
Sponsor: Bell

Brig. Gen. Gregory L. Masiello, USMC, Program Executive Office for Air Anti-Submarine Warfare, Assault & Special Mission Programs; **Col. Matthew G. Kelly**, USMC, Program Manager, PMA-275, V-22 Joint Program Office; **Col. John Neville**, USMC, Program Manager, PMA-263, Navy and Marine Corps Small Tactical Unmanned Aircraft Systems Program Office; **Col. Jack D. Perrin**, USMC, Program



TPP ANA Panel: Naval Aviation Agility & Lethality
10.3.18

FMS Briefing w/ RDML Frank Morley
10.9.18



NAWCAD Industry Day
10.25.18



TPP 2018 Annual Meeting
10.31.18



NAWCAD Industry Day

Through our partnership intermediary agreement with NAWCAD, TPP supports NAWCAD Industry Day events. These Industry Days facilitate dialogue between representatives from NAWCAD labs, contracting experts, and NAWCAD leadership, and over 300 industry representatives.

Defense Acquisition Workforce Continuous Learning

Many of our programs align with Department of Defense acquisition workforce continuous learning goals for professional improvement. Our programs offer a variety of opportunities for the defense workforce to learn about new acquisition, technology, and initiatives and broaden technical

expertise. Programs presented in the last year provided the opportunity for acquisition workforce employees to earn up to **54** continuous learning points. TPP also is working with the Defense Acquisition University (DAU).

Young Professionals

In 2017, TPP held its first program focused on the under-35 workforce to support professional development and workforce retention for the region's young professionals. In the last year, we have expanded our collaboration to sponsor additional events, partnering with NextGen Professionals (St. Mary's), Calvert County Young Professionals Network, Charles County Young Professionals Group, NAVAIR Professional Development Council and the local community.

Manager, PMA-261, H-53, Heavy Lift Helicopter Program Office;
Col. David Walsh, USMC, Program Manager, PMA-276, Marine Light/Attack Helicopter Programs

ITAR/EAR Export Compliance Program

19-Dec | *Precise Conference Center*

Mr. Tom Jarboe, President of Kieyos, LLC and certified professional in ITAR export compliance.

2019 St. Mary's County Science & Engineering Award Program

25-Feb | *Great Mills High School*

Sponsor: *INCOSE Southern Maryland*

Dr. Troy Townsend, Assistant Professor of Chemistry, St Mary's College of Maryland gave remarks; Superintendent **J. Scott Smith** recognized awardees.

Woman's History Month Program w/ **Ms. Emily Harman**, Director, Office of Small Business Programs, DoN

11-Mar | *Precise Conference Center*

Update on Small Business

TPP/ANA Panel: Speed In Acquisition & Contracting for Naval Aviation w/ **VADM Dean Peters**, NAVAIR Commander; **Mr. William P. Bray**, DASN (RDT&E)

13-March | *Patuxent River Naval Air Museum*

Sponsors: *Naval Systems, Inc.; St. Mary's County Department of Economic Development*

Mr. Jeff Guarnero, Deputy Department Head, Contracts;

Mr. Gary Kurtz, SES, Assistant Commander for Acquisition, NAVAIR Program Management Competency; **Mr. Michael Stewart**, SES, Deputy Director Integrated Warfare; **Ms. Leslie Taylor**, SES, Deputy Assistant Commander for Test and Evaluation, NAVAIR, Executive Director, NAWCAD



**TPP/ANA/ MCAA Panel:
Marine Air:
The Sea-Based Inside Force**
12.4.18

Holiday Party
12.18.18



**ITAR/EAR Export
Compliance Program**
12.19.18



**2019 St. Mary's County
Science & Engineering
Award**
02.25.19



PROGRAMS

NAWCAD Industry Day

26-Mar | University System of Maryland at Southern Maryland

Mr. Jeff Guarnero, Deputy Department Head AIR 2.5, Contracts; **RDML John Lemmon**, Commander, NAWCAD; Assistant Commander for Research and Engineering, NAVAIR; **Mr. Gerald Swift**, Director, AIRWORKS; **Mr. Al “Bunky” Hensler**, Deputy Division Head, AD 2.5.1 Contracts; **Mr. Jeff Guarnero**, Deputy Department Head AIR 2.5, Contracts; **Ms. Tracy Medford**, Division Head, AIR 2.5.1 Contracts; **Ms. Cassandra McDuff**, DFAS; **Mr. Tony Schmidt**, Director of Rapid Prototyping, Experimentation and Demonstration, NAWCAD; **Mr. Todd Parcell**, Deputy Chief Technology Office; **Ms. Denise Cifone**, NAWCAD Senior Advisor and RDT&E Portfolio Manager; **Mr. Rick Tarr**, Director NAWCAD Technology Transfer Office

Senator Chris Van Hollen Program

08-Apr | St. Mary's College of Maryland

Collaboration with the Center for Study of Democracy at St. Mary's College of Maryland

Mission Readiness

16-Apr | Southern Maryland Higher Education Center

Sponsors: Lockheed Martin; Bell; Smartronix; Adobe; Artemis Electronics; Andromeda Systems, Inc.; KBR; Leidos; NSI; Sabre Systems, Inc.

VADM Dean Peters, NAVAIR Commander; **RADM Roy Kelley**, Commander, Naval Air Force Atlantic; **RADM Shane Gahagan**, PEO (T); **Mr. Tom Rudowsky**, SES, Director, Naval Air Systems Command Sustainment Group; **CAPT Mike York**, USN, Director, Aviation Operations, NAVSUP WSS; **RADM Michael Zarkowski**, commander, Fleet Readiness Center; **Ms. Lacy Ketzner**, Partner/Managing Director, Boston Consulting Group; **Mr. Chris Holder**, Research and Engineering Lead for COMFRC; **Mr. Bill Taylor**, SES, Assistant Deputy Commandant for Aviation, HQ-USMC; **RDML (select) Stephen Tedford**, Vice Commander, NAVAIR; **Mr. Rich Bomhold**, Director SV2020; **Mr. Brian Frank**, In-Service Support Center Team Lead, SV2020; **Mr. Garry Newton**, SES, Deputy Commander, NAVAIR; **Ms. Candy Chesser**, SES, Director, Logistics Management Integration, NAVAIR; **Mr. Tony Cifone**, SES, Director Deputy Assistant commander for Research and Engineering, NAVAIR; **Mr. Roy Harris**, SES, Director of Industrial Operations, Naval Air Systems Command Sustainment Group

TPP 2019 Annual Member Dinner with Under Secretary of the Navy, Thomas B. Modly

15-May | Reconstructed State House - Historic St. Mary's City

“Top 10 Concerns That Keep Me Up at Night”

Positioning, Navigation & Timing Conference

21-May | University System of Maryland at Southern Maryland

Sponsors: Northrop Grumman, Booz Allen Hamilton, NSI, Sabre Systems, Inc., Survive Engineering, WBB, Inc.

Dr. Chris Ekstrom, Deputy Oceanographer and Navigator of the Navy; **Mr. Kevin Coggins**, Vice President, Cyber & Engineering, Booz Allen Hamilton; **RADM Brian Corey**, USN, PEO Unmanned Aviation and Strike Weapons; **Dr. J.P. Laine**, Division Leader for Positioning, Navigation & Timing, Draper; **Ms. Fray Spellerberg**, Deputy Director, Joint Navigation Warfare Center; **Mr. Marshall Haker**, Senior Systems Engineer, WBB Inc.; **Mr. Mark Allen**, Deputy Director, NextGen Collaboration and Messaging Office, FAA; **Dr. Evan Anzalone**, Guidance and Navigation Team Lead, NASA - Marshall Space Flight Center; **Dr. David Bevely**, Professor, Dept of Mechanical Engineering, and Director of the GPS and Vehicle Dynamics Laboratory, University of Auburn; **Dr. Aaron Darnton**, Deputy Chief Technology Officer, Naval Undersea Warfare Center Keyport; **Mr. Naveen Joshi**, Director, EGI Modernization & Assured PNT Programs, Northrop Grumman Corporation; **Mr. Stephen Spehn**, Deputy Science Advisor, USEUCOM; **Dr. Eric Adles**, Principal Professional Staff, JHU/APL; **Mr. Joe Alexander**, Special Programs and Technical Integration, DoD CIO/NLCC & PNT; **Dr. John Burke**, DARPA; **Dr. Jason Mitchell**, Assistant Chief for Technology, Mission Engineering and Systems Analysis Division, NASA Goddard Flight Center; **Dr. Greg Reynolds**, Navigation Technical Area Lead, CCDC Aviation & Missile Center

Navy Working Capital Fund w/ Gene Townsend

30-May | University System of Maryland at Southern Maryland

Gene Townsend, former comptroller for Naval Air Warfare Center Aircraft Division

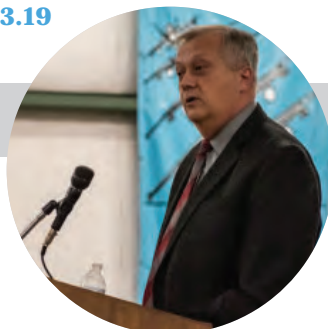


Emily Harman Program

03.11.19

TPP/ANA Panel: Speed In Acquisition & Contracting for Naval Aviation w/ Mr. William P. Bray, DASN (RDT&E)

03.13.19



NAWCAD Industry Day

03.26.19

Senator Chris Van Hollen

04.08.19



Positioning, Navigation & Timing

May 21, 2019



GPS is vital to mission success for today's warfighter in the field. It provides critical positioning, navigation, and timing (PNT) information. But what happens when a GPS signal is unavailable? What are alternative solutions to obtaining PNT data?

Dr. Christopher Ekstrom, deputy oceanographer and navigator of the Navy, addressed the issues and approaches to providing PNT solutions in a GPS-denied environment as the keynote speaker at the one-day conference.

Ekstrom also serves as the technical director to the Oceanographer of the Navy. In previous assignments, he led the planning and programming across all areas of precise time generation and dissemination, as well as astrometric products that support missions across the Department of Defense. He also led the development of advanced atomic clocks for the Department of Defense Master Clock. The resulting

clocks, called rubidium atomic fountains, are the most stable continuously operating clocks in the world. Ekstrom holds a Ph.D. in experimental atomic physics from MIT and has received the Navy Meritorious Civilian Service Award, the AFCEA International and U.S. Naval Institute Copernicus Award, and the U.S. Naval Observatory Simon Newcomb Award.

Convening leaders, decision-makers, and subject-matter experts from government, industry, and academia, the PNT conference covered topics that included PNT and the warfighter, positioning and navigation technology, timing and communication technology.



Mission Readiness
04.16.19



Annual Dinner
05.15.19

**Positioning, Navigation
& Timing Conference**
05.21.19



**TPP/ANA Panel: Execution
and Test of Innovation Naval
Aviation Program w/
RADM Paul Sohl**
06.05.19

**Navy Working
Capital Fund with Gene Townsend**
05.30.19

PROGRAMS

TPP/ANA Panel: Execution and Test of Innovation Naval Aviation Program with RADM Paul “L.J.” Sohl, Commander, Operational Test & Evaluation Force
5-Jun | Patuxent River Naval Air Museum

CAPT Craig Dorrans, F-35 Enterprise Planning Director at JPO; **Mr. Daniel Nega**, SES, Deputy Assistant Secretary of the Navy (Air Programs); **CAPT Michael Orr**, Program Manager, PMA-234, Airborne Electronic Attack Systems & EA-6B Program Office; **CAPT Chad Reed**, Program Manager, PMA-268, Carrier Unmanned Aviation Program Office; **CAPT Greg Sleppy**, Commanding Officer, Air Test and Evaluation Squadron One

View from Pax River NAS:
Briefing with CAPT Chris Cox, CO, Patuxent River
10-Jul | KBR Conference Room

Capt. Christopher Cox, Naval Air Station Patuxent River Commanding Officer

Naval Aviation Systems Consortium (NASC) Industry Day
30-Jul | University System of Maryland at Southern Maryland

TPP/ANA Panel: “MUM-T’s the Word” - Manned plus Unmanned: Agile, Lethal, Effective w/ RADM Brian Corey, PEO, (U&W)
19-Sept | Patuxent River Naval Air Museum

COL James “Chewy” Frey, Branch Head Aviation Weapons Requirement Unmanned Systems, HQMC; **CAPT Michael “WooG” Wosje**, Carrier Strike Aircraft & Programs Branch Head; **CAPT Craig T. Mattingly**, Commander, Patrol and Reconnaissance Wing ELEVEN

Artificial Intelligence Program

25-Sept | University System of Maryland at Southern Maryland
Sponsors: Accenture; Booz Allen Hamilton; DataRobot; KPMG Alion; AM Pierce & Associates; Bell; NSI

Lt. Gen. Ed Cardon, US Army (ret), former Commanding General, US Army Cyber Command; **RADM Bert Johnston**, USN (ret); **Dr. David Aha**, Artificial Intelligence Director, NRL; **Dr. Karen Cooper**, Research Scientist, NAWCAD; Navy Liaison, ADL Initiative; **Dr. Harry Dreany**, AI Development Lead, Science & Technology Division, Marine Corps Warfighter Lab; **Dr. Dale L. Moore**, Director, DASM RDT&E Strategy and innovation, Lead DoN RDT&E 30 Year Strategic Plan; **Mr. Johann Soto**, AI Lead, NAWCAD; **Mr. Peter Pflugrath**, Vice President, Business Development, LMI; **Dr. Bruce Draper**, Program Manager, Information Innovation Office, DARPA; **Maj. Gen. William Hix**, US Army (ret), former Director of Strategy, Plans & Policy, Deputy Chief of Staff, HQ for Dept. of Army; **Dr. Rebecca Russell**, Machine Learning Scientist, Draper; **Mr. Rick Switzer**, Dept of State, East Asia Pacific Bureau, Japan Desk Economic Affairs Director; **Mr. Harry Wingo**, Professor of Cyber Security, College of Information & Cyberspace, National Defense University; **Mr. Rajeev Sharma**, CEO & President, ALQIMI; **Mr. Jason Tichy**, Senior Solutions Architect, NVIDIA; **Dr. William Regli**, Director, Applied Research Laboratory for Intelligence and Security, a University-Affiliated Research Center (UARC) of the DoD, University of Maryland; **Dr. Kristen Summers**, Technical Delivery Leader- IBM Data and AI; **Mr. Michael Taberski**, Senior Data Scientist, Data Robot; **Mr. Greg Allen**, Chief of Strategy and Communications, JAIC; **Mr. Willam Carter**, Deputy Director and Fellow, Technology Policy Program, Center for Strategic & International Studies (CSIS); **Mr. Dave Cook**, Government Lead, Figure Eight; **Mr. Jean-Charles “JC” Ledé**, Autonomy Technical Advisor & DoD Autonomy Community of Interest, AFRL; **Mr. Dave Vennergrund**, Sr. Director, Data and Analytics, GDIT; **Mr. Brent Williams**, CEO and Founder, Euclidian Trust; **Ms. Bonnie Green**, Executive Director, The Patuxent Partnership

TPP/ANA Panel: Manned plus Unmanned: Agile, Lethal, Effective
09.19.19



View from Pax River NAS
06.10.19

Artificial Intelligence w/ LTG Ed Cardon, US Army (ret)
09.25.19



Mission Readiness Program

April 16, 2019

This program focused on the greatest challenges to mission readiness and how these challenges are being addressed. A full day of speakers and panel discussions on April 16 explored readiness, sustainment, and moving forward together.

VADM Dean Peters, NAVAIR commander, gave the keynote address and set the tone for the day. His remarks were about “Addressing Readiness: A View from NAVAIR.” He was followed by **RADM Roy Kelley**, commander of the Naval Air Force Atlantic, whose remarks were about “Addressing Readiness: A View from the Customer”.

The first panel, “Refocusing the Foundational Elements of Sustainment,” was moderated by **Mr. Tom Rudowsky**, SES, Assistant Commander for Logistics and Industrial Operations, NAVAIR. Panelists include **RADM Michael Zarkowski**, Commander, COMFRC; **Brian Hirschman**, BCG; **Chris Holder**, Research and Engineering (AIR 4.0) lead for COMFRC; and **Bill Taylor**, SES, Assistant Deputy Commandant for Aviation, HQ-USMC.

There was much discussion during the panel on “Elements of Sustainment” which included **Sean Burke**, PEO (T); **CAPT Mike York**, Director, Aviation Operations, Naval Supply Systems Command Weapons Systems Support; **Tom Rudowsky**, SES, Assistant Commander for Logistics and Industrial Operations, NAVAIR; and **RADM Michael Zarkowski**, Commander, Fleet Readiness Center.

There was time for networking and exploring the various exhibits during the course of the day.

“Future Sustainment” was another critical panel discussion. **RDML (select) Stephen Tedford** talked about the Navy Sustainment System Model, and **Rich Bomhold**, Director SV2020, provided his insights about Sustainment Vision 2020.



The closing panel, titled “Moving Forward”, was moderated by **Brian Frank**. **Garry Newton**, SES, Deputy Commander, NAVAIR; **Candy Chesser**, SES, Director, Logistics Management Integration, NAVAIR; **Tony Cifone**, SES, Deputy Assistant Commander for Research and Engineering, NAVAIR and **Roy Harris**, SES, Director, Aviation Readiness * Resource Analysis, NAVAIR shared their perspectives.

After the Q&A, Mr. Newton provided the closing remarks.

STEM EDUCATION INITIATIVES

Education and workforce development are key components of TPP's strategic plan and support the community's economic diversification and success. We collaborate with public and private academic organizations and the Navy to advance STEM education and activities for students. Some of our member organizations also support STEM initiatives.



St. Mary's County Public Schools photo

Aerospace Techventures Camp presented a variety of topics in the STEM fields, for students entering grades 2 through 11. Over the course of 4 to 8 days, students explored concepts such as Engineering, Rocketry, Aeronautics, Coding, Robotics, Space Science and Space Citizenship. Students were able to participate in hands-on, minds-on activities in Forces of Flight, Coding, Cybersecurity, Engineering and Aeronautics. Teachers collaboratively planned their sessions with the upper grades and sought input from TPP, member organizations and NAWCAD regarding their curriculum. Guest speakers, including NASA astronauts and other subject matter experts, were invited to share their expertise and interact with students. At the conclusion of the camp, students showcased their learning through the completion of a project involving problem solving, creative thinking, invention, and synthesis of the concepts presented during their camp week.

Cyber Patriot encourages students to learn about cyber security and career opportunities. To support the critical need for cyber professionals in government and in the private sector; TPP and TPP Benefactor Northrop Grumman support Cyber Patriot. Seven teams, including two NJROTC teams, participated in the state CyberPatriot competition in January. The teams are tasked with managing a simulated corporate network, finding cybersecurity vulnerabilities, and hardening the system while maintaining critical services. Northrop Grumman is the national sponsor for CyberPatriot.

Science fairs and expos in St. Mary's, Calvert, and Charles counties showcase our region's best and brightest young minds from middle and high school. TPP recognizes the exceptional



work of these creative minds with a series of awards in junior and senior divisions. Some local award winners went on to recognition at the regional fairs.

Robotics programs can be found in nearly every school in Southern Maryland and are a fun and successful way to engage and educate our students and get them interested in STEM-related careers. Over 1,200 students are involved in competitive robotics in Southern Maryland.

STEM-ING is designed to introduce middle school girls to STEM-related careers. TPP has worked with NAWCAD in supporting the STEM-ING program since its inception. As a partner and sponsor of this event, TPP and some of our member companies and sponsors provide mentors, volunteers, and the financial support needed to ensure the program's success and growth. TPP supports fundraising and secures sponsors for the various workshops.

The Pathways to Engineering Program at CSM provides a path for students seeking engineering, cyber and computer science degrees from the A. James Clark School of Engineering, University of Maryland (UMD) in Southern Maryland. TPP provides two full scholarships each year for students in the Pathways to Engineering Program at CSM.

The National Academy of Finance (NAOF) at Chopticon High School prepares students for careers in financial services. In addition to serving on the Program Advisory Council for NAOF, TPP sponsors a NAOF intern each summer. The internship process is a valuable experience to help students connect

classroom instruction with real world application.

Southern Maryland Math Circles, sponsored by TPP member RED-INC, is led by Dr. David Kung with support from other faculty and students from the Math Department at St. Mary's College of Maryland. They bridge the gap between classroom curriculum and the exploration of open-ended math problems that challenge students of all ages. RED-INC sponsorship enables students to access to this extracurricular program free of charge.

TPP UAV Quadcopter Program began under our ONR STEM workforce development grant. Designed to generate interest in the field of UAV technology and engineering, it is open to all high school students in the tri-county area. The program provides training sessions at the students' assigned school and group trainings. TPP member Aviation Systems Engineering Company (ASEC) developed an online training program available to all students via STEM-Link. This online training is being utilized at other schools throughout the county. Now in the post-grant sustainment phase, interest and participation continues in the tri-county.

The Applied Physics Endowed Fund, established by TPP in 2012, was created to support the St. Mary's College of Maryland (SMCM) applied physics curriculum. The fund promotes research, internships, and professional development opportunities through collaborative efforts between SMCM, NAWCAD, and the DoD community in Southern Maryland. Many of the SMCM graduates go to work for the Navy at Patuxent River.



NAVAL AVIATION SYSTEMS CONSORTIUM (NASC)

The Patuxent Partnership is pleased to announce its partnership with Consortium Management Group, Inc. (CMG) to support the Naval Air Warfare Center Aircraft Division's (NAWCAD) Other Transaction (OT) Agreement with CMG on behalf of the newly formed Naval Aviation Systems Consortium (NASC), executed in July 2019.

CMG manages the Consortium and administers the OT Agreement with NAWCAD. The Agreement is a five-year, no-ceiling agreement which covers the full spectrum of the Navy's aviation-technology domains. Through its unique structure,

Consortium members are able to work with the Government to identify opportunities, target their technology offerings, expand into new markets and grow their businesses.

To kick off NASC activities, The Patuxent Partnership co-hosted with CMG the first Industry Day on July 30, 2019, in California, MD. Representatives from NAWCAD and CMG introduced NASC and the OT Agreement to the more than 300 in attendance.

Additional information is at www.NASCsolutions.org.



ONR GRANT

We completed the final phase of a three-year STEM workforce development grant from the Office of Naval Research, which enabled us to establish a STEM workforce development and recruitment pipeline for NAWCAD. This pipeline incorporates autonomous systems and unmanned aerial vehicles, cybersecurity, classical sciences, and augmented reality technology. Educational initiatives in these areas will benefit the current and future workforce at NAWCAD and in Southern Maryland. The full benefits of the grant initiatives will be realized over several years. TPP then was invited to take on the 2019 MD JSHS. It was the perfect program for our EPA with NAWCAD and SMCM.

Maryland Junior Science & Humanities Symposium



Junior Science & Humanities Symposium photo

High school students in Maryland were invited to participate in the 2018-2019 Maryland Junior Science and Humanities Symposium (JSHS) on Saturday, March 30, 2019 at St. Mary's College of Maryland. All students in grades 9-12 enrolled in public, private, or home schooled were eligible to participate.

The Patuxent Partnership managed the regional JSHS program in collaboration with the Naval Air Warfare Center Aircraft Division (NAWCAD) and St. Mary's College of Maryland.

Participating students submitted abstracts and papers in specified categories. Each paper was reviewed by three subject matter experts. Eight students were asked to present at the symposium on March 30. Other students had posters and presentations.

Students who were selected to make presentations at the Maryland JSHS were awarded scholarships from \$200 to \$2,000. The National JSHS awarded academic scholarships to the top finalists.

TPP 2019 ANNUAL DINNER

Under Secretary of the Navy, Thomas B. Modly, Headlined The TPP Annual Dinner, and there was not an empty seat under the tent. His remarks were pointed and heartfelt, as he talked about how Americans need, now, more than ever, to believe we are the “good guys.”

Mr. Modly offered his Letterman-styled list of the **top 10 concerns that keep him up at night**, except he is too tired at the end of the day to be kept up at night. But first, he has learned that he needs to explain precisely what his job is, as Under Secretary of the Navy.

“I’m like the XO of the Navy,” he said, prompting some groans and laughter. And after a capture-the-flag story of sailors’ hijinks to describe the depth of feeling held for XO’s, he concluded, with apparent understatement, “We’re not here to make friends.”

With that in mind, number 10 on Mr. Modly’s list of concerns is the 355-ship count now required by law. In addition to the increasing difficulty to categorize what is a “ship,” in this time of inter-operative systems, is the reality that, as ships are currently counted, there is only room in the budget to sustain 305.

Number nine is speed. If it takes eight years to go from concept to deliverable, 80 percent of the deliverables will be obsolete upon arrival.

Number eight is information, spiking in importance as this information revolution continues to accelerate. The Navy asked Congress for a fourth Assistant Secretary for Data and Information. No one currently, Mr. Modly said, is senior enough to manage this “huge void.”

Number seven is cost. An aircraft carrier today costs \$13 billion, a fighter aircraft runs \$90 million to \$100 million. A carrier and its associated systems used to represent 14 percent of the budget, now the percentage is 31.

Number six is the first completed audit of all of the Navy’s property, which is opening opportunities and delivering cost savings. One discovery was \$19 million in requisitioned parts stored in a warehouse the Navy didn’t know it owned. The parts have been put to use.

Number five is education, among his personal priorities, Mr. Modly said. Coordinating educational opportunities within a Naval University System is underway and education’s previously paltry budget is now a priority budget. This is not an altruistic, but strategic goal. “The ability to think in unpredictable situations is the difference between victory or loss,” he said. “This is where technology and strategy come together.”



Number four is the warriors, those heroes he praised at the start and again at the conclusion of his remarks. Some of our troops have been at war for 17 years. Improving their lives and their families is always a priority.

Number three is about the adversaries the United States faces today, which beyond Russia and China is a list “expanding more than you think.” The pressures facing the United States’ world relationships are not only military. US adversaries are providing larger and higher caliber infrastructure investments than America had been providing.

Number two is the universal concern about time and the lack of it. “I’ve been a year and a half in this job and figure I have a year and a half to go.” In that time he hopes to establish a path to address his list of 10, “so for whoever inherits [this job] after me, some things make sense.”

As for his top concern, he came full circle, back to the American “capacity to serve a cause larger than self.” That capacity is fueled by “memories,” he said, “the collective memories of the nation. That’s what makes us unique.”

Watch former President Ronald Reagan’s Normandy speech upon the 40th anniversary of D-Day, he encouraged. “He tapped what America believes in its heart, what was meant that day [in Normandy] ... It was real, a collective memory. ... (What) keeps me up every hour is that we may be losing that collective memory.”

“Faith and belief,” President Reagan says in his Normandy speech, “loyalty and love. Faith that what they were doing was right, faith they fought for all humanity ... pray God we have not lost the knowledge that there is a profound moral difference between the use of force for liberation and the use of force for conquest.”

“We are not perfect guys,” Mr. Modly quoted former Secretary of Defense James Mattis, “but we are the good guys.”

“Now,” Mr. Modly said, “more than ever, we need to believe it’s the truth.”

IPA PROGRAM

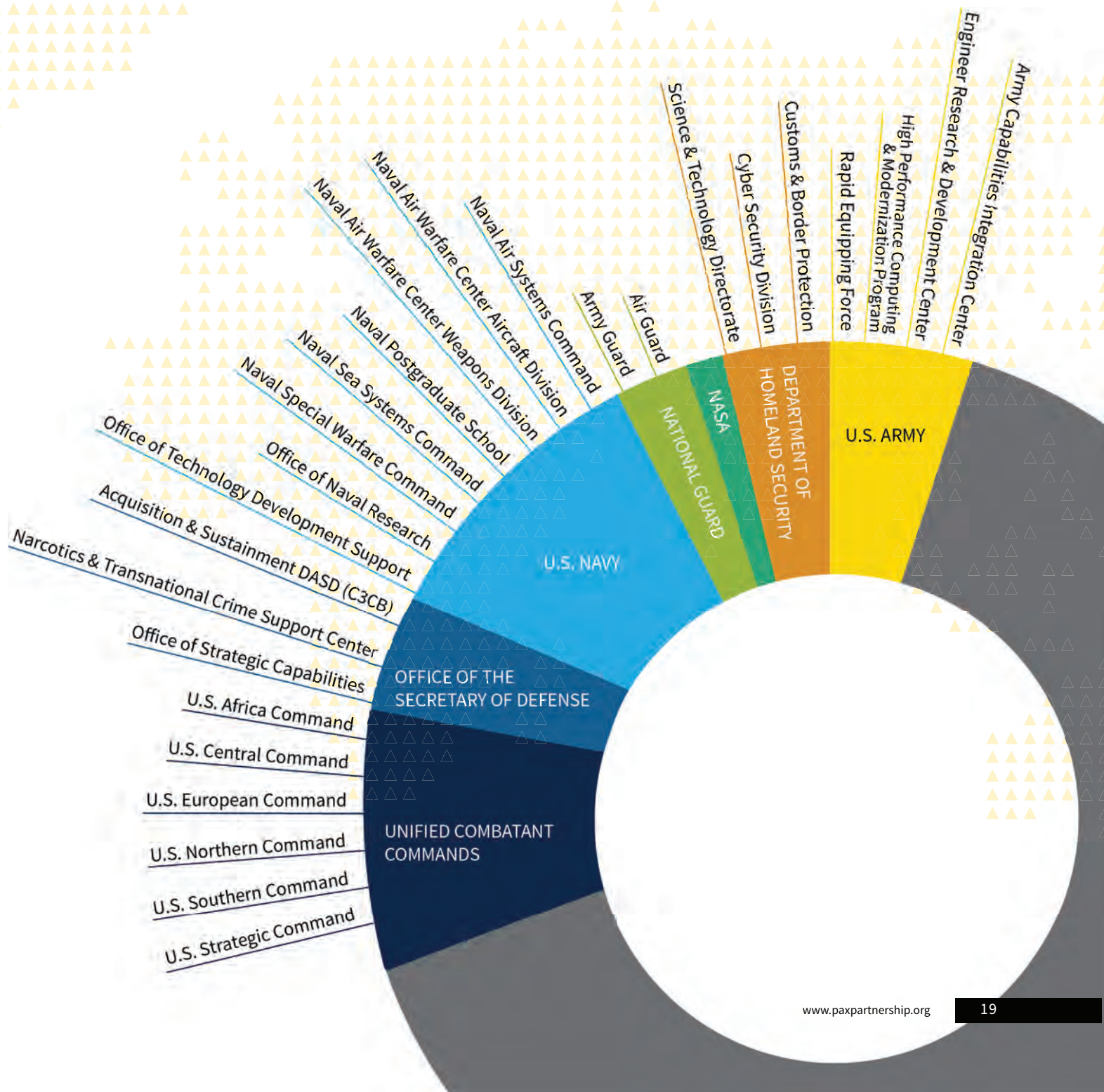
The Intergovernmental Personnel Act Mobility Program strengthens the government's capabilities and the accomplishment of agency mission requirements. The program allows for the temporary assignment of personnel between the federal government and eligible non-profit organizations. The IPA program is instrumental in the transfer and use of new technologies and other science and technology requirements, and promotes collaboration among government agencies.



TPP was authorized to participate in the IPA program in 1999, initially to support the Navy at Pax River. Since then, we have developed long-term relationships with many federal departments and agencies, including the Departments of Defense and Homeland Security.

TPP employs subject matter experts and details them to government agencies where they serve in senior positions to facilitate technology transfer and foster knowledge sharing across, within, and among government agencies, academia, and private industry. Many of our IPAs provide science and technology support. They are recognized experts in their fields, current in the latest technologies, and experienced senior-level managers.

With the insights derived from their work about emerging technologies and trends in science and technology development, our IPA employees help us strengthen our programs and foster big-picture discussions with our partners, members and the DoD throughout the year.



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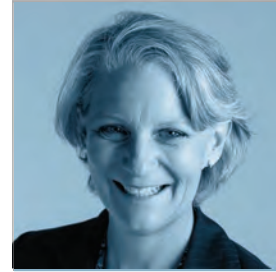
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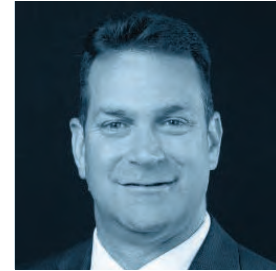
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BOARD GOVERNANCE

The Board Governance Committee is responsible for ensuring that the board composition and structure is in compliance with the bylaws and contains a diverse group of directors capable of accomplishing the mission and objectives of the organization. The committee provides the Board with periodic review of board composition and terms, identifies new board member candidates, and keeps the Board aligned with its roles and responsibilities and with the organization's purpose.

ACADEMIC & OUTREACH

The Academic & Outreach Committee identifies and recommends initiatives, programs and financial support aligned with our mission and the TPP strategic plan. Committee members provide regional support for STEM education-related activities and identify new opportunities to support STEM workforce development.

MEMBERSHIP COMMITTEE

The Membership Committee focuses on the recruitment of new members, engagement of current members, and assistance to members in partnering with each other and the greater Southern MD community. It also brainstorms ways to demonstrate the value of TPP membership.

IPA COMMITTEE

The IPA Committee focuses on the work of our IPAs, strengthening our relationships with government agencies, academia and our members.

FINANCE & ADMINISTRATION

The Finance and Administration Committee is responsible for ensuring the organization's financial stability by providing oversight on its budget and finances. The committee's primary role is to provide the expertise needed to assure the full Board that the organization is on sound financial footing. To perform this role effectively, committee members need to work as a team with the Executive Director, Finance Director, as well as accountants, auditors, and other financial professionals.

STRATEGIC PLANNING

The Strategic Planning Committee is responsible for developing the organization's mission, vision, and goals through the creation and implementation of a comprehensive strategic plan to be implement by the Board of Directors. The committee regularly reviews the organization's goals to ensure the strategic plan is in alignment with ever changing objectives of the community and Navy partners.



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