



NATIONAL SECURITY SPACE ASSOCIATION

Help Wanted: A National Security Space Community in Need of a Workforce

May 27, 2021

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You don't have to search for long to find articles about the dearth of STEM graduates here in the US. Or how many people will be needed in the workforce of the future that will fill high tech, multi-disciplinary and agile teams. It's not a deep Google search to find references of the National Security implications of limited STEM interest (and other critical fields) needed for complex systems to come to fruition. For example, "...in the past 15 years, India and China have outpaced the United States in the number of science and engineering (S&E) bachelor's degrees conferred. Together, these two countries have produced almost half of the total degrees, with India at 25% and China at 22% of the global total. By comparison, American S&E bachelor's degrees comprised only 10% of the global total," ([Charting a Course for Success: America's Strategy for STEM Education \(archives.gov\)](#)). As a community, and as a country, we know this requires attention. We must highlight the significance and challenge that comes with a career in the Space community – whether that be by designing the next-gen Mars helicopter for NASA or putting on the uniform as a Guardian in the U.S. Space Force (USSF). We all understand the fundamental level of importance and extent of this problem. The issue is not simply the lack of STEM graduates – it's an economic and national security problem that we have to address fundamentally as a community.

The National Security Space Association (NSSA) was founded in 2018 and has carried a strategic goal to focus on Workforce Development, both for industry and for government. From the onset, the NSSA has aimed to initiate an effort we call "Cleared for Success" whereby we help students at universities gain access to co-op

or internship programs that can help them learn about the National Security Space community and possible career paths of interest to them. And also getting students aligned with programs that can start a clearance process enabling them to explore a wider variety of possible careers upon graduation. This provides the NSSA's member companies strong ties to the universities and the students helping all identify and foster new talent into the various elements of the workforce.

I joined the NSSA in 2021 as a natural continuation of the work started in Col. (ret.) Eileen Collins' Education & Outreach subcommittee of the National Space Council's Users' Advisory Group, on which I have had the privilege of serving since 2018. The problem is huge; and there are infinite ways to define it and start to tackle it. There are many right answers. It is my belief that the only WRONG answer is to *not* help each other and work together on what we all know is such critical issue. To that point, we must continue the UAG's effort, shine a light on this issue and combine forces across programs that are already in place to accelerate the pace of change and get more people into the space community, the national security community and the USSF.

Our goal at the NSSA is to recruit people into the National Security Space community as a whole. Though, clearly, the personnel needs of the USSF are a focused and exacerbated example that we can leverage to springboard programs across the USG and our industrial partnership base.

Colleen Stover's excellent paper out of The Aerospace Corporation's Center for Space Policy and Strategy (*"Developing Future Space Workers: Leadership Needed Today"*, April 6, 2021) remarked, "Leaders should raise awareness of these opportunities and make the case for additional investment." We see this emphasis from Gen. John "Jay" Raymond, Gen. David "DT" Thompson, Lt. Gen. Saltzman and the highest levels of the new USSF. They frequently discuss their Guardian strategy and this state of readiness regularly and intently. We at NSSA were honored to host a roundtable with Gen. David "DT" Thompson, representatives from the USSF Directorate of Manpower, Personnel and Resources, and a set of world-class universities spanning the country and diversity of the workforce we hope to create. We are looking for ways to help each other accelerate and amplify our ability to bring the students we need into this critical, challenging and rewarding career field and community.

We used this session to explore how we can all leverage and amplify the USSF's organic efforts, how we can learn from each other and make this a stronger overall industrial area of focus and attention. Our main areas of discussion included:

1. It is absolutely critical to keep USSF leadership engaged and visible in this endeavor. We all acknowledge this is a national security issue and foundation for the USSF's initial build and success as a new armed service.
2. The USSF's University Partnership Program, NSSA's "Cleared for Success" program and specific university programs are complementary, and we will/are seeking how these programs can feather into each other to increase our impact, to include Historically Black Colleges and Universities, and Hispanic-Serving Institutions.
3. It would be valuable for the USSF to explore and create a clearer set of research priorities for the "EDU domain"; similar to SBIR-like areas of research by tightening the linkage between Personnel programs, and Innovation programs.
4. We will jointly explore definition of measures of merit for these programs. How can we ensure our programs are working and creating Guardians and industry members with the right skill sets at the right time?
5. For the USSF to succeed, it needs to build Guardians with the right technical competencies and with the right growth path to increase their knowledge base and breadth for future Command in an environment that is quickly becoming more joint, commercially integrated, and international.
6. This group of schools today is just a start for the USSF & NSSA programs. We all need to expand our outreach but need to ensure we do so with appropriate focus and resources.

The NSSA is proud of what we're creating with the "Cleared for success" program – our goal is to institutionalize this in concert with our industry members and collaborating universities. We want to expose students to the richness that is the National Security Space community and mission – it's not just STEM - it's policy, it's business. And it's engaging students with the next-gen tech development sectors, companies and Government entities are options for them to join and make a difference.

If you're reading this Op-ed, you're already part of the group that lives this and understands this problem. We all owe it to our mission and our nation to increase our outreach, be welcoming and nurturing, and make this path known (and fun!) so we can get the help we know we all need.
