

Reflections from Discovery Program Host Group Supervisors

Kyle A. Ott, Ann F. Pollack, Mary Ann M. Saunders, and Brad Wolf

INTRODUCTION

The Johns Hopkins University Applied Physics Laboratory (APL) Discovery Program is a 2-year rotational program for select recent college graduates, consisting of four rotational assignments in various technical departments and sectors across the Lab. The rotation assignments are typically 6 months long, and they provide staff members with challenging work and stimulate their professional growth. At the end of the program, Discovery staff members transition to a permanent position in one of the rotational groups.

During their rotations, staff members make significant contributions to a wide range of technical challenges. They gain broad exposure to technical areas at the Lab, grow their professional networks, and develop myriad professional skills. They bring these benefits to each group in their rotation as they solve problems, make connections, and lead efforts that benefit both their own career development paths and their host groups. This article includes reflections from host group supervisors on how Discovery Program staff members have made a positive impact on their teams.

BROAD EXPOSURE

Just as the Discovery Program staff members relished the opportunity to gain broad exposure (see Arribas Starkey-El et al., in this issue), the groups they joined appreciated how that exposure shaped the Discovery staff members' unique approaches to technical challenges.

Mary Ann Saunders (Asymmetric Operations Sector), on a Discovery Program staff member joining her group and immediately participating in independent research and development brainstorming: The perspective the staff member brought from prior rotations was outside of the box, so the ideas were excellent.

Often, this exposure allowed Discovery Program staff members to apply methodologies from one field to another in such a way that it changed a group's way of thinking and generated creativity on a team.

Brad Wolf (Force Projection Sector): Two Discovery Program staff members were able to take analysis methodologies they had learned in a computer vision application and apply them in the submarine domain. This presented us with new and novel analysis methodologies, along with an alternative metric approach that challenged our previous way of doing business. Most exciting was the spark of creative discussion around metrics that it generated within the group and multiple project teams.

Another reason this exposure is so valuable is because the Lab is so large and diverse. And, as in any large organization, it would be impossible for any single person or group to be aware of every project and initiative happening everywhere else. By rotating and learning which challenges different groups are trying to solve and the potential commonalities between the different challenges, Discovery Program staff members are able to connect people across the Lab who may not have previously known they could help each other.

Kyle Ott (Research and Exploratory Development Department): Be it novel methods for data processing or improved techniques for instrumentation, Discovery staff members have helped us do the seemingly impossible by helping stitch together the massive 8,000-staff-member institution that is APL.

PROFESSIONAL CONNECTIONS

Much like how Discovery staff members' exposure benefits the rotational groups, so too does the networking opportunity afforded to those rotating through the program. This chance to build enduring networks strengthens each group even after the Discovery Program staff member moves on to the next rotation. During their time in each group, Discovery Program staff members leverage their networks to bring members of the Lab together and solve critical challenges.

Kyle Ott: Many APL staff members work in diverse fields and challenges that draw on so many different disciplines, making networking crucial for success. This is certainly true of biomechanics. Even prior to biomechanics becoming an official group at the Lab, we were proud of our ability to develop strong networks within and outside of APL. The Discovery staff

members that have spent time with us only served to increase this networking capability by connecting us with parts of the Lab we were not previously aware of.

Mary Ann Saunders: One Discovery staff member was placed in our group after four rotations and that staff member had a network that far exceeded that of any other associate staff member in the group. The Discovery Program staff member often knew who to reach out to for questions outside the domain expertise of our group and seized opportunities for collaboration.

This networking opportunity is also valuable on an individual level. Many host group supervisors keep in touch with Discovery Program staff members beyond their rotation, building mentoring relationships that can last an entire career.

Mary Ann Saunders: I do my best to keep in touch with all the staff members that have come through my group, but it's getting more challenging because of the sheer number! When we do catch up, it's great to hear about the impactful work they are doing in their groups and provide some mentorship from an outside perspective.

Ann Pollack (Force Projection Sector): As a group supervisor in the Air and Missile Defense and Force



Discovery Program staff members make immediate contributions and forge lasting connections with staff members in their cohorts, in their host groups, and across the entire Lab.

Projection Sectors, I have hosted multiple Discovery Program staff members. Even when those staff members ultimately were paired with a different group for their final placements, I have stayed in touch and felt good to know that I helped them get their start at APL. It is very satisfying to see them thriving in their careers here.

CAREER FOUNDATIONS

The Discovery Program also provides a chance to grow the Lab's future leaders. Many host group supervisors are impressed with the initiative of Discovery Program staff members and their willingness to take on extra duties and leadership roles. By seeing this willingness in action, host group supervisors are happy to provide Discovery Program staff members with even more opportunities to expand their leadership skills.

Kyle Ott: Our group prides itself on its ability to create and develop diverse leaders. This is reflected in the many leadership positions that alumni of our group serve across the Lab. Discovery staff members embody this same desire and ability to take leadership roles. Our experience is that Discovery Program staff members do not shrink from the extra responsibility such a leadership position requires and often are the first to volunteer. Moreover, they are continually seeking to create new opportunities to develop both themselves and others within the group and take an active leadership role in many of these new opportunities.

Mary Ann Saunders: One of the Discovery staff members who spent their final rotation with the group I was in at the time ended up being placed in the group after the program. I was able to coach this person for a couple of years and witness their growth, due in part to the tools they learned while part of the Discovery Program. This staff member had initiative to ask questions and seek opportunities and always excelled at those opportunities. The staff member has led small teams and independent research and development projects and has more recently entered line management. I have since left that particular group, but the staff member has become incredibly well known across our branch for their innovative research ideas, and it's so amazing to hear this person's name so frequently.

Brad Wolf: Let's also acknowledge the Discovery Program leadership. They deserve a lot of credit for their extremely hard work in recruiting and developing staff members, as well as determining their best placements after the program.

It's not always just about the host group helping to grow the Discovery Program staff member. Discovery Program staff members have also served as "reverse mentors" to their host groups—and this makes for a more inclusive workplace for everyone.

Brad Wolf: One aspect of Discovery Program that I love is the insights that Discovery staff members gain from rotating through multiple groups. Each time we've hosted a Discovery Program staff member, the group's leadership team has been excited to hear new ideas that may help foster an inclusive environment in the group or identify some blind spots. Specifically, in a group with a large percentage of prior service members, we work hard to ensure that our military identity doesn't exclude or stifle creativity from our staff members who don't share that experience. At the end of every rotation, I feel the group is better for having hosted a Discovery Program staff member—that new ideas advanced our capabilities and strengthened our inclusivity.

CONCLUSION

Discovery Program staff members bring a distinct combination of broad exposure, professional connections, and career foundations to each of their host groups, which is mutually beneficial. These characteristics help the Discovery staff members and their host groups build connections across the Lab to solve technical challenges while forging meaningful long-term relationships. The program also offers the Lab a unique opportunity to develop some of its future leaders and ensure inclusive work environments. From a host group supervisor's perspective, the immediate impact that Discovery Program staff members have and the lasting relationships between Discovery Program staff members and host groups are remarkable, and we encourage any group across the Lab to welcome a Discovery Program staff member to their team.



Kyle A. Ott, Research and Exploratory Development Department, Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Kyle A. Ott supervises the Human Performance and Biomechanics Group at APL. He holds a BEng and an MEng in mechanical engineering, both from the Ohio State University. As a group supervisor, he has developed more than 30 engineers and scientists into leaders at the Lab. In addition to his supervisory experience, he is a biomechanical engineer and project manager with experience investigating a range of kinetic loading scenarios with a focus on biomechanics and a specialization in tissue and deformable materials testing and analyses. He has expertise in physical and computational surrogate model development for internal and external design, sensor sourcing and installation, test fixture design, and blast hardening. His email address is kyle.ott@jhuapl.edu.



Ann F. Pollack, Force Projection Sector, Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Ann F. Pollack supervises the Advanced Weapon Systems Group at APL. She holds a BS and an MS in engineering science as well as an MS in electrical engineering, all from Johns Hopkins University. She has extensive leadership experience as both a group supervisor and a project manager. She has extensive technical experience in missile systems engineering; requirements development; verification, validation, and assessment; and modeling and simulation in support of precision strike, strategic deterrence, and ballistic missile defense applications. Her email address is ann.pollack@jhuapl.edu.



Mary Ann M. Saunders, Asymmetric Operations Sector, Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Mary Ann M. Saunders supervises the Communication and Networking Systems Group at APL. She holds a BS in electrical engineering from Lehigh University

and an MS in electrical and computer engineering from Johns Hopkins University. In addition to her supervisory and project management experience, she has technical experience with RF communications systems and systems engineering, as well as optics, electromagnetics, and solid-state devices. Her background includes radio frequency and cyber test and evaluation as well as information operations. In her current role, she manages more than 50 engineers and scientists. Her email address is mary.ann.saunders@jhuapl.edu.



Brad Wolf, Force Projection Sector, Johns Hopkins University Applied Physics Laboratory, Laurel, MD

Brad Wolf supervises the Signal and Systems Analysis group at APL. He holds a BS in systems engineering from the US Naval Academy and an MS in mechanical engineering from the Georgia Institute of Technology. He has extensive experience in submarine combat and acoustic systems, combining his engineering, analysis, and system evaluation skills with his experience as a former submarine officer to assess the operational impact of system improvements. In his current role, he supervises nearly 60 technical staff. His email address is brad.wolf@jhuapl.edu.