

DATAWorks 2023: Day 2 Attendee Reactions

IDA Ideas host Rhett Moeller spoke to John Haman and Jason Hustedt, researchers in the IDA Systems and Analyses Center, about their experiences as attendees on the second day of the Defense and Aerospace Test and Analysis Workshop (DATAWorks) 2023, held at IDA in Alexandria, Virginia, on April 25-27.

[Begin transcript]

Rhett Moeller: Hello, listeners. I am Rhett Moeller. I am the host of IDA Ideas and welcome to this special podcast short as we continue to cover attendee reactions to a big event currently going on here at the Institute for Defense analyses, or IDA. Of course, if you joined us yesterday, you'll already know that IDA is in the midst of its 2023 DATAWorks workshop, and DATAWorks is short for the Defense and Aerospace Test and Analysis workshop. This is the result of a multi-organization collaboration with other organizations, including the director of Operational Tests and Evaluation (DOT&E); The National Aeronautics and Space Administration (NASA); and the American Statistical Association (ASA). As we mentioned yesterday, this is the eighth annual data works and IDA has the honor of hosting this big event once more from its new headquarters location in Alexandria, Virginia. Well, yesterday's offerings were about focused, short courses, today was a longer day and was dedicated to numerous shorter presentations and speed sessions. The intent was to fit a lot of information into a short timeframe. This means there was a lot to absorb, but it also means our guests joining me today will have a lot to draw from, as we ask some of the same questions. With that I'm happy to welcome both John Haman and Jason Hustedt, both from IDA's operational evaluation division, or OED. I know it's been a long day, but I just wanted to ask you to take a moment to introduce yourselves, give us a little bit about your professional and your educational background.

John Haman: Sure, my name is John Haman. I am an IDA research staff member for about five years now. I work in the Operational Evaluation Division. Most of my work is statistical in nature. So, this conference is really great for me. I split my time between working in the Test Science Group, which is like a group of statisticians and research psychologists and working other sort of program jobs around the division. My education, I'm a statistician by training. So, I got a Ph.D. in statistics in 2018 from Bowling Green State University.

Rhett Moeller: Jason?

Jason Hustedt: My name is Jason Hustedt. I'm a research staff member here at IDA in OED as well, and my work is focused mostly in cybersecurity and cyber assessments within the department. My educational background is I have a Ph.D. in biochemistry from the University of Maryland.

Rhett Moeller: Thank you. Welcome and thanks for joining us after a very busy day. I took a moment today to look over the agenda from yesterday there was a total of eight sessions. Today's included much more, keynote speakers. Nearly twice as many options. So, a lot going on. Obviously, there was a lot to take in. What was the standout moment for you today? What did you attend? Why did you choose it, John?

John Haman: I attended first in the afternoon session about autonomy and situational awareness. I also attended another session about statistics for defense as well as model validation, and I attended one of the speed sessions. For me I think there were a couple of parts during the day that really stood out to me. I'll say the first one was a talk that I saw by Miriam Armstrong on situation awareness. I think that she gave me a lot of great ideas about how we could do better. A better job of measuring situation awareness in the tests that we do. So, the reason this is important is because a lot of things that the government, a lot of systems that the government acquires, the whole point of that system is to give the war fighter or to give the operator a better view of the battle space, improve situation awareness, and we really don't have a good way of measuring that very well. The kind of current, I'll say, like the bronze standard is, we ask, the soldier, hey did you notice that, or are you aware of this? And obviously you don't know what you don't know, so she basically went through few different methods to kind of improve on these various subjective measures that, I think, is where we have a lot of room to grow, and I think that's some good work going on.

Rhett Moeller: Thank you. Appreciate that, John. Jason? What about you?

Jason Hustedt: So, I attended sessions today on cybersecurity, artificial intelligence, and then modeling and simulation, and what stood out to me from the cybersecurity and AI talks was that a lot of the academia and departmental focus that has been happening for test and evaluation of AI has been focused on the models themselves as opposed to the whole system view of artificial intelligence, and how it works with its surrounding environment. There's also a push to get very high performing AI models, but not necessarily to look at the cybersecurity and adversarial aspects of artificial intelligence, and how that applies to both models and the systems.

Rhett Moeller: That's becoming increasingly important as we see the power of these things, and how they can be misused, absolutely. When you get people together to talk about all these subjects, cybersecurity, statistical analysis, artificial intelligence, machine learning, so much more, you're bound to come across new ways of looking at these subjects. In the presentations you attended today, was there a moment like that? Did any presenters share something that caused you to look at your work in a different way, and I think John you've already somewhat addressed this.

John Haman: I did a little bit. One of the presentations I saw was about, kind of, how to do the best you can with the data that you've got in some sense. And so, presenters, Kyle Remley and Olivia Gozdz, they were discussing a method basically of evaluating a couple different policies. So, the DOD has different policies that determine how and when they buy different amounts of parts to repair their aircraft and submarines, and all of their equipment, and based on the policies that they have to buy parts it leaves them open to different levels of financial and readiness risk. You can imagine if the policy could say, Well, you don't have enough of this part, but then, if a war starts, you're going to need the parts, right? That's a risk that we have that we'd like to account

for, but we can't see into the future to know how to evaluate that exactly. But we can kind of evaluate these two policies by replaying the past in kind of a clever way and they called this their time machine. I thought that was insightful. It definitely makes me look at kind of some of the problems that maybe I've encountered and it's a little inspirational as well, because it's very much a best you can do with what you have. I think that's a lot of our job is actually what's the best I can do for with what I have.

Rhett Moeller: Great, and what's neat about that is, we actually spoke with Olivia yesterday on the podcast and so this ties in very nicely attendees are also presenting, and that's just wonderful to see that we're learning and sharing, and everyone's benefiting from it. So that's great, Jason. How about you?

Jason Hustedt: One of the things that was highlighted in the cybersecurity session this morning was that in our move towards more and more things on the cloud, the security of the cloud is frequently not the big problem, but the configuration of the application that is put there, and so how the end user configures or misconfigures something is frequently a problem, and that as the cloud providers have updated their systems to address those issues, they still leave the old versions there for legacy and many people may not move to the new version that helps prevent those misconfigurations. Some of those considerations were good to have presented, and have open source examples to go through.

Rhett Moeller: Great. That's good awareness. So, the second day, the longest day is over, and you've been exposed to a lot of concepts as the final day of this year's DATAWorks approaches. Is there anything you're really looking forward to?

John Haman: So tomorrow, in the morning, there's a session about artificial intelligence methods and current initiatives. And I am looking forward to that session because it looks like two of the talks are going to address some very serious problems with grappling with AI. One of the talks is going to really discuss some of the gaps in our infrastructure with testing AI. The other talk will be about assurance of responsible artificial intelligence. And this is really a Wild West kind of place. So, I think any advances are going to be very important. So, I'm really look forward to that.

Rhett Moeller: Great, Jason? What are you looking forward to?

Jason Hustedt: So, I have to admit that I haven't looked through the full schedule to know exactly what I'm going to go to. As John said, there's multiple talks on AI, and I know they're starting with a panel in the morning with a number of experts from academia and the Department of Defense, and I look forward to hearing that, and then kind of figuring out the schedule based off of what feels right in the moment.

Rhett Moeller: Sounds like a plan. Well, I hope you have a strong last day tomorrow, and we'll meet two more attendees tomorrow, as DATAWorks 2023 comes to a close at the end of the day. Thank you both very much for taking a few minutes to chat about your experience today. I'm glad to get a chance to speak with you, and to know that you're finding the conference fulfilling. So, thank you, John and Jason, for joining us.

John Haman: Thanks for having me.

Jason Hustedt: Thanks, Rhett.

Rhett Moeller: For more information, listeners, feel free to drop into our show notes and follow the link to the DATAWorks site. You'll find plenty of information about the rest of the week. Don't forget, if you missed our conference coverage from yesterday, be sure to check that out for a peek at some of the fascinating subjects covered in this annual event. Thank you for joining us, and we hope you'll join us again tomorrow for another podcast short as we close out DATAWorks with two more researchers.

Show Notes

Find us on [Twitter](#), [YouTube](#), and at [ida.org](#).

Learn more about these and other events during DATAWorks 2023 at <https://dataworks.testscience.org/full-agenda-day-2/>.