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Script: The Cybersecurity of Quantum Computing: 6 Key Areas of Research

SME(s): *Dr. Thomas Scanlon*

Interviewer/Facilitator: *Suzanne Miller*

Interview Conducted: *Friday, July 14, 2023 at 2 p.m. ET*

<Canned Intro>

Suzanne: Welcome to the SEI Podcast Series. My name is Suzanne Miller, and I am a principal investigator in the SEI's Software Solutions Division.

Today I am joined by Dr. Thomas Scanlon, who leads the data science program in the SEI's CERT Division. Dr. Scanlon recently participated in the [Workshop on Cybersecurity of Quantum Computing](#), co-sponsored by the [National Science Foundation](#) (NSF) and the [White House Office of Science and Technology Policy](#). Participants in the workshop examined the emerging field of cybersecurity for quantum computing, which is the topic of today's podcast. Welcome.

Thomas: *Thank you.*

- 1. Suzanne:** Tom, you have done a few podcasts with us previously. We will include links to those, but for those members of our audience who have not listened to your previous podcasts, please start by telling us what you do here at the SEI and what's the best part about your job.

- 2. Suzanne:** We have done previous podcasts on quantum computing. For those members of our audience who have not heard those podcasts—we will include links in our transcript—can you please give us a brief overview on quantum computing and how it differs from what we might call traditional, binary computing?

- 3. Suzanne:** You lead the data science team at the CERT Division. Can you talk about the areas where quantum computing and data science converge?

- 4. Suzanne:** In a recent blog post, you talked about the growing field of quantum computing and the aspects of quantum computing that make it a potential target for malicious actors. How do attack vectors in quantum computers differ from attacks leveraged against traditional computers?

- 5. Suzanne:** How can we protect ourselves from these types of attacks? Or, is that something you are working on now?
- 6. Suzanne:** In the workshop, attendees also developed 6 areas of future research. Can you walk us through those areas, and let us know what we can look forward to?
- 7. Suzanne:** One aspect that we like to emphasize on our podcasts is transition. If I am working in quantum right now, what steps should I be taking to protect my system? What resources are available to me?
- 8. Suzanne:** What is next for you? What else are you working on that we can bring you back to talk about?

Suzanne: Tom, thank you for talking with us today. We will include links in the transcript to resources mentioned during this podcast.

Finally, a reminder to our audience that our podcasts are available on Soundcloud, Stitcher, Apple Podcasts, and Google Podcasts as well as the SEI's YouTube Channel. If you like what you see and hear today, give us a thumbs up.

Thanks again for joining us.

<Canned Outro>