DM22-0378

Script: *Undiscovered Vulnerabilities: Not Just for Critical Software*
SME(s): *Jonathan Spring*
Interviewer: *Suzanne Miller*
Interview Conducted: Friday, April 22 at 1 p.m. ET

<Canned Intro>

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

Today I am joined by my friend and colleague Dr. Jonathan Spring. Dr. Spring, known to all of us as Jono, is a senior vulnerability researcher in the SEI's CERT Division. Today Jono is here to talk about a recent paper he published analyzing the number of undiscovered vulnerabilities that remain in information systems. He's also been a frequent guest on our show to talk about his work here at the SEI.
Welcome Jono.

Jono: *Thank you.*

1. **Suzanne**: For those members of our audience who aren't familiar with your work, start by having you tell us about yourself, what brought you to the SEI, and the work that you do here.

2. **Suzanne:** In the introduction of your paper, you state that you will "bring computing theory and security operations into conversation to answer the question, *How many undiscovered vulnerabilities are there in a piece of software?*" Tell us about this work and the catalyst for it.

3. **Suzanne**: In your paper you specifically focus on dense or sparse vulnerabilities. Explain for our audience what qualities define a vulnerability as dense or sparse?

4. **Suzanne**: Talk about your examination of vulnerabilities with respect to the fundamental computer science understanding of the halting problem and Turing machines. What was your reason for examining this problem through these lenses?

5. **Suzanne**: One aspect of our work that we like to highlight in our podcasts is transition. If I am an audience member who works with security systems, walk me through the

practical applications of this.

6. **Suzanne**: What's next for you? Where do you see this work heading? What can we bring you back to talk about?

Suzanne: Jono, 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>