



SCIENCE & TECHNOLOGY

Listening to a Spider's Web

April 20, 2021

The sound is strange and not of this earth.

Let's listen.

But this sound is very much of this earth. That is what a **spiderweb** sounds like. Well, that is what a mathematical model of a spiderweb sounds like.

Markus Buehler is an engineering professor at the Massachusetts Institute of Technology (MIT). He said from communicating to building, spiderwebs offer much information about their creators.

He explained to Reuters that spiders use "**vibrations** as a way to communicate with the environment" and with other spiders.

He said, "We have recorded these vibrations from spiders and used **artificial intelligence** to learn these vibrational patterns. Buehler then explained the scientists connected those **patterns** with certain actions, "...basically learning the spider's language."

Buehler and his researchers created **3D** models of spiderwebs when the spiders were doing different things -- such as making and repairing their webs as well as hunting and feeding. They then listened for patterns in the spider signals and recreated the sounds using computers and mathematical processes.

“Spiders are a whole different animal,” said Buehler. He explained they can hear and see things that we cannot with our human ears and eyes. So, by using science and math to turn vibrations into music, we begin to experience and better understand the world of the spider.

Buehler hopes his team’s work could help humans to understand the language of a spider and one day communicate with them.

The music, said Buehler, is what “... the spider would also experience. And so, we can begin to feel a little bit like a spider in that way.”

There are more than 47,000 kinds of spiders. They all create these webs to provide housing and catch food. Scientists say silk, the material created to form a spiderweb, is five times stronger than steel.

Buehler said that understanding the living structure of a spiderweb could lead to improvements of man-made materials and structures.

I’m Anna Matteo.

Reuters staff wrote this story for Reuters News Agency. Anna Matteo adapted it for VOA Learning English. Hai Do was the editor.

Words in This Story

spiderweb -*n.* the silken web spun by most spiders and used as a resting place and a trap for prey

artificial intelligence -*n.* a branch of computer science dealing with the simulation of intelligent behavior in computers

vibration -*n.* a continuous slight shaking movement : a series of small, fast movements back and forth or from side to side

pattern -*n.* the regular and repeated way in which something happens or is done

3D -*n.* a three-dimensional form
