# Spiders inspire creation of innovative microphone for hearing aids and tornado tracking



Engineers and scientists have long found inspiration in spider silk, given its remarkable properties. Researchers from Binghamton University and Cornell University have drawn from the unique way spiders use their webs as 'external eardrums' to create an innovative microphone. This spider-inspired device could advance applications such as hearing aids and tornado tracking.

These researchers, including Ronald Miles, Jian Zhou, and Junpeng Lai, showcased their work at the 186th Acoustical Society of America meeting in Ottawa. The novel microphone is based on a thin silicon cantilever that responds to air flow changes induced by sound, unlike traditional microphones that rely on pressure.

This approach not only allows for smaller, more efficient microphones but also aids in localizing sound sources in noisy environments. Funded by the National Institutes of Health, the team envisions this technology aiding earlier detection of hearing issues and other medical applications. The researchers have patented their invention and are collaborating with a Canadian company to develop new types of microphones.