



Md. researcher's bridge sensors aim to prevent tragedy

[Adam Tuss](#), wtop.com

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COLLEGE PARK, Md. -- Four years ago Monday, a major bridge collapsed in Minneapolis, killing 13 people and hurting many more.

A local researcher is trying to make sure that kind of catastrophe never happens again.

As he takes the wrapping off one of his small, wireless bridge sensors in his University of Maryland lab office, Mehdi Kalantari's face lights up.

"The sensors look for all signs of drastic change," says Kalantari.

The devices are being used right now on the Beltway's Northwest Branch Bridge in Silver Spring. Kalantari opens up his laptop and points out real-time, around-the-clock information that's being fed in from those sensors, showing everything from temperature change to the weight of the cars on the bridge.

"It's like a temperature gauge on your vehicle's engine," says Kalantari. "You're going to be able to see how (bridges) react. We could see what would be a healthy response, and what would be an unhealthy response."

The information collected also points out how severe a problem is if one develops. The good news regarding the nearly 50-year-old Northwest Branch Bridge is that it's in good shape.

Kalantari has been working on this bridge sensor technology for about five years, and says it is ready to be mass produced.



The sensors already are in place on the Northwest Branch Bridge in Silver Spring. (Courtesy Mehdi Kalantari/University of Maryland)



"We are going to go to the U.S. Department of Transportation to pitch this technology for 12 percent or 70,000 bridges across the U.S. that have structural deficiencies," he says.

He estimates each device will cost about \$50 -- and some larger bridges could require as many as 150 of the devices. Kalantari says if bought in larger quantities, the price tag could go down to about \$20 per sensor.

Right now, federal guidelines mandate that all bridges must be inspected at least once every two years. Kalantari says these wireless devices, coupled with those regular inspections, would provide far more accurate information -- and could put the brakes on another possible disaster like the Minneapolis bridge collapse.

"That was a tragic event," Kalantari says. My first reaction was, 'This could have been prevented.'"