

Researchers develop system to help prevent construction accidents and materials falling from buildings

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(Phys.org) -- Construction management experts at the University of Calgary's Schulich School of Engineering have developed a system that employs remote sensing technology to improve safety on construction sites by using tracking tags to monitor movements in real-time. Knowing the precise location of people, equipment and building materials will reduce accidents and could also help prevent materials from being placed too close to edges where they could fall.

Civil engineering professor Farnaz Sadeghpour and graduate student Reza Maalek developed the new tool, which uses Ultra Wide-Band signals, a type of [radio frequency technology](#).

"Most construction accidents happen because of workers clashing with equipment and people or objects falling off edges. Our system will address both," says Sadeghpour, assistant professor in the Department of Civil Engineering at the Schulich School of Engineering.

While the tool is still under development, researchers plan to enable the system to trigger an alarm when someone gets too close to a certain piece of equipment or when a worker or a piece of [building material](#) gets too close to an edge. The warning could come in the form of an alert on a mobile phone or an urgent announcement on a worksite.

In 2009, a three-year-old girl was killed when a sheet of corrugated steel

fell from a Calgary office tower that was under construction. A tracking system would help ensure materials are properly secured and kept a safe distance away from open thresholds. Other advantages include inventory and theft control. Removing an item from a site without authorization, for example, would trigger an alarm.

Ultra Wide-Band technology is becoming less expensive all the time and it could one day be widely used by industry as a cost-effective way to track important and valuable items.

Provided by University of Calgary

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