



## Living in interesting times

Necessity, it is said, is the mother of invention. It too, can be the catalyst to having new discoveries and fabrications introduced into use. Such is the case now with our heightened sense of awareness of our physical safety in the aftermath of the frightening events last September. There is a need to find ways to protect ourselves, to regain our sense of security and unfortunately, to strike back.

Ideas for improved engineering of tall buildings have been at the forefront. We addressed concerns about their safety and suggestions for innovative procedures in

our November/ December issue, and engineers in our Brampton (*The Link*, Vol. 6, No. 1) and Ottawa chapters have held panel discussions of the possibilities. A recent issue of *Popular Science* magazine reported on one new kind of concrete that contains recycled stainless steel fibres. The fibres, the magazine reports, increase the concrete's strength and its ability to absorb energy. The benefit would be a building that had a better chance of holding together and not raining debris on the streets below in the event of an exceptional impact.

For the impact that did happen, however, and in the resultant rubble, a BC-based company provided a robot used to sift through the rubble to locate bodies. It is noteworthy that this was the first such incident in which robotic systems were used as search and rescue tools, according to the website of Inuktun Services, the company that provided the rescue robots.

And our airports would be better served with eye scanners, face recognition

technology, fingerprint scanners and bomb-detection equipment to scrutinize airline passengers at airports, and weed out the ones who may pose a threat to security. Articles in magazines and reports in electronic media have discussed the inventions and applications.

As with the robots, Canada has stepped forward again with state-of-the-art probing technology, used in military surveillance. It is so far unequalled in the world. The Coyote light-armoured vehicle featured in "Sneak and Peak" (page 33) is innovative Canadian engineering, put to use to survey and explore the terrain in the current war in Afghanistan. It can be used to gather information about a site, day or night, and allow safe and effective execution of operations. You can read all about it here.

Also in this issue, and not directly related to the "9/11" events, our associate editor, Dwight Hamilton, looks at academe's efforts to encourage innovation through collaboration. Featured is the work of the Centre for Cellular and Biomolecular Research (CCBR) at the University of Toronto, demonstrating the efforts of academe to encourage innovations with the formation of centres of multidisciplinary research (page 30). We also look at new equipment and techniques devised to meet the standards of new regulations in energy generation and environmental protection.

In these interesting times, innovation brings the promise of safety, security, and maybe even the promise of a better world.

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Managing Editor

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