



**Bruce Van-Lane, P.Eng.**

**T**wo of our stories this issue take us time traveling. Dario Schor's extended "Lift-Off!" column straps us in for a tour of the history and evolution of the 1967 Outer Space Treaty. It wasn't just the standard g-forces space scientists and engineers from that era contended with 50 years ago. The geo-political tensions of the cold war were a catalyst for space exploration, so it's not surprising they are reflected in this seminal document that sought to preserve space as demilitarized, and keep it accessible to all of humankind.

"Letters from Canada" sweeps us back roughly 25 years. But at first glance, you might not know it. Although the industry players are different in some instances, the basic observation made by the German writers is that despite numerous successes across a variety of industries and its research achievements, Canada's image was then one tied in large measure to its traditional resource extraction economy. The relatively low contribution to R&D by Canadian industry is highlighted, acknowledging the struggle to grow a base of Canadian-owned companies large enough to have the resources to invest this way. What's your perspective on this? Could Profs. Heywang and Heimann have written virtually the same piece today? Our thanks to Daryoush Shiri for the translation.

Our third major article is present-day focused, but takes us back to the roots of success in university-level science and technology: proficiency in

math. The Canadian Math Kangaroo Contest is led by Rossitza Marinova, a TISP Canada volunteer with an IEEE Northern Canada Section record of service going back many years. Over the next few issues, we'll be profiling STEM activities led by IEEE Region 7 volunteers. One of the top three recommendations flowing out of last August's IEEE Sections Congress relates to enabling greater local STEM outreach at the Section level.

Still on the topic of education, Contributing Editor Jon Rokne brings us a book review that looks critically at the efficacy of increased use of technology in education.

In Terry Malkinson's columns, I always find several items that particularly pique my interest. In this issue, "Biztech" takes a brief look at Canada's Avro Arrow fighter jet, an example of this country's aerospace prowess that Profs. Heywang and Heimann might well have cited, had the project not been aborted in 1959. In "Engineering Management: What's New in the Literature?" Terry salutes the 55th anniversary of the launch of the Alouette I satellite, a Canadian space technology success story honoured as an IEEE Milestone in 1993; later satellites in that program enjoyed similar success. Terry also reviews coverage of several NASA probes that have been sending back images and data after their long-planned far-flung rendezvous.

All the best to you and yours in 2018. ■