



Advancing Satellite Technology: MEMS in Space

The University of Waterloo and COM DEV International Ltd. are working together with critical support from CMC to build MEMS components and subsystems for a new generation of smaller, lighter and better satellites and wireless devices

"I couldn't imagine Canada without CMC. It provides access to many leading-edge tools, technologies and foundries across Canada and around the world that independent researchers or universities could not afford on their own."

Dr. Raafat Mansour
University of Waterloo
NSERC/COM DEV Industrial Research Chair
on RF Engineering



Dr. Mansour (front row, centre) joins members of his research team from the University of Waterloo and engineers from COM DEV working in collaboration on MEMS-based subsystems for the satellite and wireless markets.

COM DEV expects to hit the market with its first MEMS-based subsystems for the satellite and wireless markets later this decade. The Cambridge, Ontario based company is working closely with Dr. Raafat Mansour and 15 graduate students in the Centre for Integrated RF Engineering at the University of Waterloo to develop new MEMS-based Radio Frequency (RF) filters and switches.

"Partnering with a university allows us to experiment together and better leverage our investment in longer term research," says Dr. Ming Yu, COM DEV's Director of R&D.

COM DEV, the largest Canadian-based designer and manufacturer of space hardware subsystems, has invested \$1.2 million to sponsor the NSERC/COM DEV Industrial Research Chair on RF Engineering, held by Dr. Mansour.

"Having access to our new lab and to the design, fabrication and testing services offered by CMC means that I can perform the same high level of research as those at COM DEV," says Dr. Mansour, who worked at the company for 14 years. "Students who are trained using this infrastructure are as skilled as any engineer in industry." Dr. Yu is hoping many of those students will later join COM DEV. "To stay competitive, it's important to have a steady inflow of bright ideas and experienced engineers like those enabled by CMC." *cmc*

"CMC has proven to be an invaluable resource to Canadian industry for two decades. It is an organization that has consistently delivered high return on investment to the aerospace electronics industry and many other sectors that drive the Canadian economy."

Tony Stajcer
Vice President, Research & Development
COM DEV International Ltd.