



## Graduates with 'CMC Inside' Provide a Competitive Edge to an Emerging Technology Company in Newfoundland

Avalon Microelectronics, Inc. is hiring employees who benefited from tools and technologies provided by CMC Microsystems during their studies at Memorial University of Newfoundland. The hands-on experience acquired by these highly qualified people is helping to accelerate product development at this startup in Newfoundland and Labrador.

*"Many of the engineering courses I teach are supported by CMC. When my students complete their studies and join industry, they have acquired extensive experience using world-class tools and technologies during the entire research cycle—from design to manufacture and test. This creates a compelling value proposition for the companies that hire these graduates."*

**Dr. Cheng Li**  
Assistant Professor, Electrical and Computer  
Engineering  
Memorial University of Newfoundland



As a graduate student at Memorial University, Chuck Rumbolt (right) benefited from access to tools and technologies provided by CMC. He is now applying the skills and experience he acquired in the university lab at Avalon Microelectronics, Inc., a startup company based in Newfoundland and Labrador. He is joined by Wally Haas (left), Founder and President of Avalon.

The decision to locate Avalon Microelectronics, Inc. in the heart of St. John's, Newfoundland was strategic. Founders of the startup aimed to reduce their operational costs, while capitalizing on the microsystems talent emerging from Memorial University of Newfoundland. The company has already hired several graduates from the university, including two students who received extensive training on design and prototyping tools supplied by CMC, while working under the supervision of Dr. Cheng Li, Assistant Professor of Electrical and Computer Engineering.

"Tools and technologies offered by CMC are essential to the engineering courses I offer at Memorial—particularly microelectronic design tools from world-class suppliers such as Cadence and Synopsys. This hands-on experience is fundamental to the training and development of my students. As a professor, it's truly gratifying when graduates have the opportunity to apply the skills and experience acquired in the university lab. My students offer a competitive edge to the companies they join," says Dr. Li.

Highly skilled people with microelectronics expertise are essential to the future growth and success of Avalon. Established in 2005, the company develops high-speed microchips for optical networks that manage high-volume Internet traffic. These networks often support data-intensive video and supercomputing applications. Nortel, Lucent and Cisco are among potential customers that could benefit from these products.

Avalon requires developers who bring knowledge of, and experience with, sophisticated computer-aided design (CAD) tools and FPGA (field-programmable gate array)-based rapid prototyping platforms for system-on-chip design. Chuck Rumbolt is a graduate from Memorial University who is putting these skills to work as a design engineer at Avalon.

"The opportunity to work with high-caliber design tools in the university lab allowed me to tackle real-world problems facing industry," says Mr. Rumbolt. "I am using these same development tools at Avalon to design intellectual property cores and FPGAs. These reprogrammable electronic components will enable telecommunications carriers to deploy their networks more quickly and at a reduced cost. I could not have acquired experience with these tools without CMC." cmc