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## TIMES COLONIST

### B.C. grant program helps keep student talent closer to home

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A provincial grant program designed to get advanced math and science students out of the classroom and into careers closer to home has solved a career question for a UVic student and some vexing mathematical problems for a local company.

A four-month work stint at Carmanah Technologies not only landed Kiran Kumar an extended job contract with the solar lighting and power system company, but also made him realize he doesn't have to leave the country to use his skills in industry and research or be corralled to a career in academia.

Kumar and Carmanah Technologies took advantage of a \$100,000 grant pool from the provincial Advanced Education Ministry that gives math students employment opportunities in B.C.

The grant is administered through **MITACS** -- the Mathematics of Information Technology and Complex Systems, a national research network

that brings together university researchers and companies to solve industry's problems.

Grants are paid to students through professors, and companies match the grant, forming the students' salaries.

"I had never worked in industry before so this was a great opportunity," said Kumar, 24, a master's student in UVic's electrical engineering department and an immigrant from India last year. "It showed me that I can use my skill set in industry -- not just in the classroom."

During his internship, Kumar used numerical simulations and optimization techniques to help Carmanah improve the brightness and uniformity of its solar-based transit and roadway signs. Kumar's research also helped the company bring a new product closer to market.

"I had an opportunity to work with other engineers as well as the company's sales teams and hear from the front-line people what their customers were asking for," added Kumar. "This helped to ensure that the products that we were developing addressed the needs of the marketplace."

Kumar's work was so valued that Carmanah has offered him an extended contract to complete work on a new product.

Don Hargreaves, head of engineering and manufacturing at Carmanah, highly recommends the grant to other businesses. "To tap into that skill set on a day-to-day basis, I couldn't justify it internally," he said. "But this program allowed us to do that -- and we had good results."

- Meanwhile, Carmanah filled a \$767,270 order this week to supply the U.S. Marine Corps with its FP-50 model solar-

#### IMAGES



Ray Smith, Times Colonist  
Simon Bruce-Lockhart, head of  
Glenlyon Norfolk School, and some  
of the students admire Carmanah's  
newly installed flashing school zone  
light.

powered lights for use on airport runways, helicopter landing pads and buildings and walkways at undisclosed Middle East air bases. The order follows a field trial earlier this year of FP-50 units at two Marine bases in the Middle East, where the lights proved durable in extreme heat and sand storms.

The new lights will be shipped and installed by a U.S.-based contractor. The Marines are proving to be one of Carmanah's top customers, with more than 6,000 lights in operation all over the world.

- Already widely used in Europe, the U.S. and Australia, Carmanah's solar-powered school-zone flashing beacon lights debuted in the firm's hometown this week. The company installed the light at a crosswalk on Beach Drive and had kids from Glenlyon Norfolk try it out. The beacon installs on existing signposts and can be programmed over a year in advance to flash on specified hours and days. Carmanah cited a study in Washington state last year that found flashing lights reduce speeding in school zones by 90 per cent.

Illustration:

- Photo: Ray Smith, Times Colonist / Simon Bruce-Lockhart, head of Glenlyon Norfolk School, and some of the students admire Carmanah's newly installed flashing school zone light.

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