

## AFTER HOURS

# University a world leader in innovation

*Fifty years and 130,000 students later, Waterloo celebrates its place as an educational giant*

By Ronald F. Wolf

Could anyone have imagined 50 years ago that someday the University of Waterloo (UW) would be a world leader in education and research?

It all began in the fall of 1957 with 74 engineering students enrolling in the brand new UW. As of the fall of 2006 UW had 21,726 full-time undergraduate students, 2003 part-time undergraduate students, 2,500 full-time graduate students, and 513 part-time graduate students on its 1,000 acre campus. The little university that could operates the largest post-secondary co-op educational program in the world.

One hundred thirty thousand UW alumni can be found in 141 countries around the world.

In the university's 50 years in operation, UW has expanded to create diverse programs and its students have made their mark in everything from technology to medicine to the entertainment field.

With an international reputation, UW attracts Nobel Prize winners and world leaders. Sir Anthony J. Leggett recently held a public lecture explaining that quantum mechanics offers the 'whole truth about the world; at the university's Centre for Environmental and Information Technology.

Leggett, the 2003 Nobel Prize Winner for physics, has accepted a faculty position at UW to educate Nobel Prize winners of tomorrow.

"The Institute for Quantum Computing at the University of Waterloo has already become an international leader in the exploding field of quantum information. I am particularly excited by the potential for fruitful interaction between this field and the more mature area of condensed matter physics in which I have spent much of my career, and I am looking forward enormously to ongoing participation in the activities of the institute," said Leggett in a recent media

release.

Dr. Sushanta K. Mitra graduated UW in 2001 with a Ph.D. in Mechanical Engineering and is currently an assistant professor in Mechanical Engineering at Indian Institute of Technology Bombay, India where he is studying nanotechnology (technology on an atomic or molecular level). UW was a turning point in his development.

"It (UW) provided me (with a) broader perspective of how things work in a global sense and also helped me to become a better overall engineer," said Dr. Mitra.

Part of Mitra's goal is to link nanotechnology researchers. "Recently, I am able to convince Ministry of Research and Innovation, Ontario, to host a joint-Ontario Nanotechnology Workshop at UW so that researchers from India are aware of the momentum on nanotechnology research at UW. This happened during the Premier's (Premier Dalton McGuinty) visit to India in January," said Mitra.

Closer to home is Sandvine Inc. in Waterloo, a company started by UW grads in 2001, and a company that hires UW students and grads.

#### Active graduate role

Brad Siim, COO & VP Engineering at Sandvine is one of three UW grads who take an active role in the management of Sandvine. Siim graduated from computer engineering at UW in 1992. Sandvine is a complex company that makes traveling through the Internet cleaner and safer by developing and marketing network equipment targeted to the ever changing needs of DSL (Digital Subscriber Line), cable, and wireless residential broadband service providers.

Siim boasts that Sandvine has hired 79 "unique names" since 2001. "We're on the high side of the food chain in terms of salaries," said Siim, "and jobs. That's probably the biggest thing - we add economic value to the community."

Over the years Sandvine has contributed to co-op programs, sponsored research at UW and paid for speakers. Recently, Sandvine

employees raised \$5,000 for the Waterloo Food Bank with management matching that amount for a total contribution of \$10,000.

Passion, motivation and intelligence are the three attributes Sandvine looks for in future employees and UW grads fit the bill, said Siim.

One of the university's triumphs is Research In Motion (RIM), the company that created the BlackBerry, that addictive business essential that gives users phone, Internet, email, and organizing options. UW grad Mike Lazaridis, president and co-CEO of RIM, and University of Windsor's Engineering grad Douglas Fregin, RIM VP Operations, invented the gizmo.

RIM was the first wireless technology developer in North America. More than five million BlackBerrys have been sold worldwide since it went public in 1999. Currently, there are more than 15 different BlackBerry models serving customers worldwide.

Just as important are the contributions Lazaridis has made to UW. He is chancellor of the university and has donated more than \$50 million to fund the building of a UW facility that will house the Institute for Quantum Computing and the Nanotechnology Engineering Program and create an endowment to attract the best foreign graduate students to research quantum studies here. And then there's the \$50 million he donated to found the Perimeter Institute of Theoretical Physics.

His co-CEO Jim Balsillie has also made an indelible mark on the research community with his \$30 million contribution to found the Centre for International Governance Innovation in Waterloo.

It's no secret that UW grads give back to their alma mater. In 2005 David Cheriton donated \$25 million in Google stock to create the David R. Cheriton Endowment for Excellence in Computer Science. Cheriton, a computer scientist smart enough to offer seed funding to an unlikely start-up company called Google, made the donation in gratitude for what he termed his 'transformational' student experience at UW.

UW continues to grow in leaps and bounds in an ever-changing and challenging



Brad Siim, COO & VP Engineering, Sandvine (right), and Dr. Sushanta K. Mitra.

world. UW is connecting with other countries and the world is benefiting. For example, one of the first students in the UW's new 2+2 program (a program where two years of study is held in the student's home country and two years at UW) is Jasmine Song. Song completed the first two years towards a Bachelor of Science degree in China but will finish the program in UW.

The Grand River Conservation Authority (GRCA) and the UW is well known in China. In fact, UW and GRCA is working hand in hand with China's Dalian University of Technology and Chinese civil servants to improve environmental protection and water quality in the Biliu River Watershed which provides water to millions of people.

In Sri Lanka, UW environmental studies faculty and students are helping to restore coastal ecosystem and lively hoods ruined by the devastation of the 2004 tsunami.

UW's 50th anniversary events have already started and are scheduled to end on Dec. 11. Friends of the Library Lecture and launch of a 50th anniversary book is scheduled for April 25, convocations will be held in June and October, the famous Homecoming in September, UW President's Golf Tournament in June are just some of the exciting events to look forward to.