

# WHY GRADUATE STUDIES IN COMPUTER SCIENCE AT WATERLOO?



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Discussion among members of the Institute for Quantum Computing, one of six institutes and centres affiliated with the Cheriton School of Computer Science.

## Science Watch Ranking

In the September/October 2005 issue of Science Watch, Waterloo's School of Computer Science ranked first among 46 Canadian universities in terms of the scientific impact of our research as calculated by the average number of citations per paper as well as total citations.

100%

## Waterloo researchers' share of intellectual property

Waterloo researchers own 100% of the intellectual property that they develop, giving them complete freedom to commercialize the fruit of their research. In addition, the university recently launched a technology park to strengthen industrial collaboration and to facilitate technology transfer.

24%

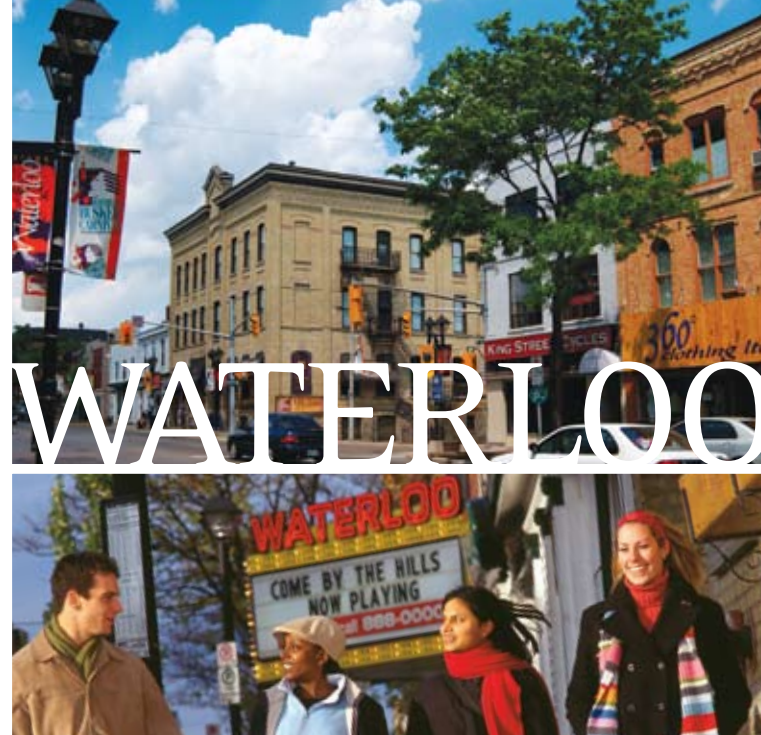
## Percentage of University spin-off companies in Canada that are from Waterloo

Today, Waterloo is the university with the most spin-off companies in Canada. OpenText, Waterloo Maple, and RapidMind are just a few examples.

## Competitive financial support

Graduate students generally receive full financial support. They are funded through a combination of scholarships, teaching assistantships, and research assistantships. Examples of scholarships include the David R. Cheriton Scholarships (currently \$10,000 per year), GO-Bell Scholarships (\$12,000 per year for PhD students), President's Graduate Scholarships (\$10,000 per year), as well as various provincial and federal scholarships.

GRADUATE STUDIES IN  
COMPUTER SCIENCE



## WATERLOO RANKED TOPS IN WORLD FOR ITS HIGH-TECH INTELLIGENCE

Waterloo, Ontario, the city that spawned the BlackBerry and Canada's leading computer science university, has added some new bragging rights.

It is now the world's top intelligent community, according to an international think tank. New York-based Intelligent Communities Forum (ICF) chose Waterloo from among seven finalists for its annual award as the community that best exemplifies the development of a prosperous economy based on broadband and information technology.

- *The Globe and Mail*, May 23, 2007



DAVID R. CHERITON SCHOOL  
OF COMPUTER SCIENCE

University of Waterloo  
Waterloo, Ontario, Canada N2L 3G1

Tel: 519-888-4567, ext. 36468

Fax: 519-885-1208

[www.cs.uwaterloo.ca/grad](http://www.cs.uwaterloo.ca/grad)

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## GRADUATE STUDIES IN COMPUTER SCIENCE

# DAVID R. CHERITON SCHOOL OF COMPUTER SCIENCE

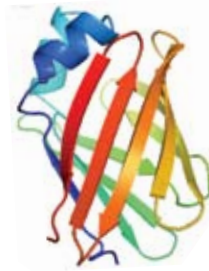


The Traveling Salesman Problem asks for the shortest path linking a set of cities. Here, the cities have been arranged so that the resulting path creates a portrait of Michelangelo's David from a simple closed curve.

## PROGRAMS WE OFFER

The School offers graduate programs leading to the PhD and Masters of Mathematics in Computer Science (MMath) degrees. 60% of our graduate students are pursuing PhD degrees while 40% are pursuing Master's degrees. The Master's program provides research-oriented options involving either a thesis or an essay, and a course-based option where students can complete eight courses either in one year of full-time studies or on a part-time basis over a number of years.

For more information, please see:  
[www.cs.uwaterloo.ca/grad/programs](http://www.cs.uwaterloo.ca/grad/programs)



Protein Structure Prediction Using FALCON

The David R. Cheriton School of Computer Science is a highly research intensive computer science school, with over 70 professors and 300 graduate students.

Our graduate students participate in research projects in a wide variety of topics with internationally acclaimed researchers. They have access to excellent lab facilities with state-of-the-art equipment. Our students present and publish their research results at premier conferences and journals. Our graduates are among the faculty at other top universities, such as M.I.T. and Stanford.

## EXCELLING IN BOTH THEORY AND APPLICATIONS

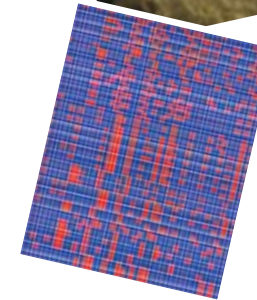
In addition to excelling in basic research, many of our research accomplishments translate into successful commercial enterprises. For example, the award-winning RapidMind Multi-core Development Platform simplifies the development of parallel applications, reducing the cost and timelines of software development when compared to multi-threaded projects, and greatly improves the likelihood of project success. Another example is Maplesoft, a leading developer of interactive mathematical software. Its innovative software harnesses the power of mathematics to provide industry, government and academia with the ultimate set of technical productivity tools.



Bridge at Victoria Park.

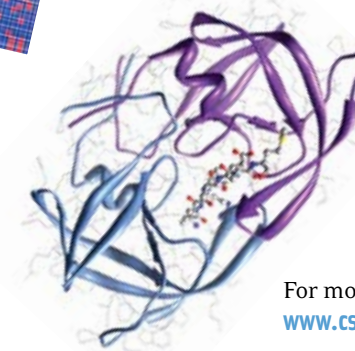


Medical imaging: Professor Jeff Orchard's brain seen through his head.



Haplotype Inference.

Large databases and computation are used in drug design to discover a molecule to inhibit this AIDS virus protease.



## RESEARCH AREAS

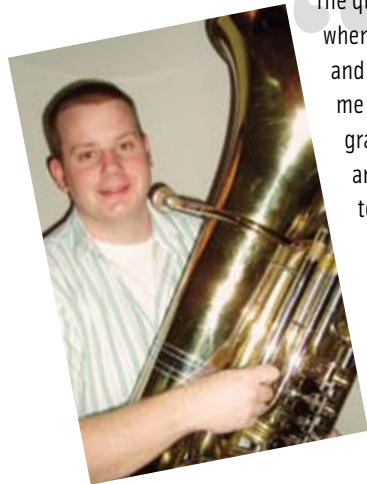
- Algorithms and Complexity
- Artificial Intelligence
- Bioinformatics
- Computational Statistics
- Computer Graphics
- Cryptography, Security and Privacy
- Database Systems
- Formal Methods
- Health Informatics
- Human-Computer Interaction
- Information Retrieval
- Networks and Distributed Systems
- Programming Languages
- Quantum Computing
- Scientific Computation
- Software Engineering
- Symbolic Computation

For more details about these areas, please visit:  
[www.cs.uwaterloo.ca/research](http://www.cs.uwaterloo.ca/research)

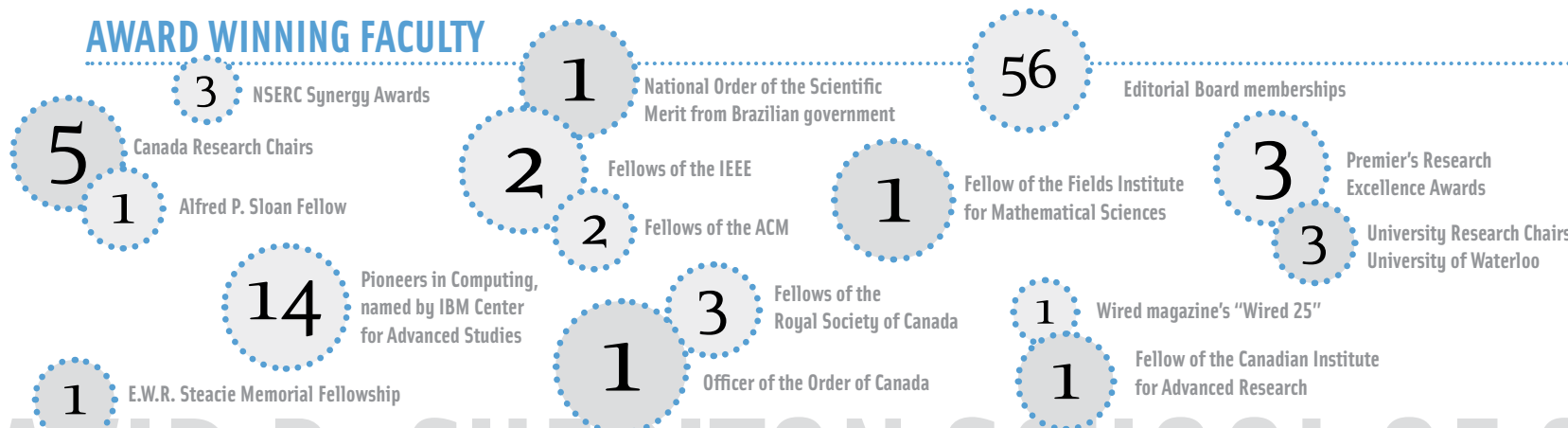
## LIFE IN WATERLOO

“The quality of research and academic rigour I found when coming to Waterloo have been astounding and of course rewarding. But what really surprised me was the rich social environment among CS grad students and numerous artistic outlets around town. For instance, I've been able to perform with the orchestra@uwaterloo (founded by CS faculty member Anna Lubiw) while pursuing my PhD. And plentiful venues in the Kitchener/Waterloo area regularly put on great musical and theatrical performances – which a lot of graduate students enjoy.”

- Dan Roche, Ph.D. student



## AWARD WINNING FACULTY



apply

## APPLICATION DEADLINES ARE

Fall term admission: **December 15**  
Winter term admission: **May 31**  
Spring term admission: **September 30**

All application information is available at  
[www.cs.uwaterloo.ca/grad/admissions/applications](http://www.cs.uwaterloo.ca/grad/admissions/applications)