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**World's elite programming students gather in Waterloo for 22nd international Olympiad**

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WATERLOO, ON, Aug. 11 /CNW/ -- IOI challenges competitors from 81 countries to demonstrate cutting edge problem solving

WATERLOO, ON, Aug. 11 /CNW/ - More than 300 of the most gifted high school students from 81 countries around the world will put their **computing** and problem-solving skills to the test against the very best next week when Canada hosts for the first time an elite programming competition - the 22nd International Olympiad in Informatics (IOI).

The 82 teams (as host country, Canada is allowed two) will spend a week earning the bragging rights that go with bringing home bronze, silver or the coveted gold medals. The full program, which runs from August 14 to 21, also includes a number of sessions to further develop their abilities or to sample and enjoy Canada.

"The students participating really are amongst the next generation of geniuses," said Troy Vasiga, chair of the 2010 IOI organizing committee. "One consequence of the world being digitized is that everything is information. These students are going to be the people that write computer programs that help solve significant problems in disease, health-care, transportation, energy and other disciplines - in many cases problems we haven't even yet anticipated."

Most participants will arrive on Saturday, from countries ranging from Albania to Vietnam, and be greeted by a volunteer speaking their official language. An opening ceremony, open to the public, will take place from 10 a.m. to noon on Sunday at the Waterloo Recreation Complex. The event will feature such guest speakers as David Yach, chief technology officer of software at Research In Motion, and Arturo Cepeda, president of the IOI.

The actual competition takes place on Monday and Wednesday, when participants spend five hours each day solving a total of eight tasks. Those tasks, which are translated into each team's official language the night before, challenge such **computing** skills as problem analysis, design of algorithms and data structures, programming and testing.

Three sample tasks are available online ([www.ioi2010.org/SampleTask.shtml](http://www.ioi2010.org/SampleTask.shtml)) and one of them is called Guess. "In our sample version," explains Gord Cormack, chair of the IOI 2010 host scientific committee, "contestants must write a computer program to assume the role of a child playing the popular guessing game, 'I'm thinking of a number between one and ten, can you guess it?' The object is to identify the number with as few guesses as possible."

Final results of the 2010 IOI, including gold, silver and bronze medal winners, will be announced at closing ceremonies on Friday, from 5 to 9 p.m. at Bingeman's in Kitchener.

In between the opening and closing ceremonies, when they are not practicing or competing, team members, leaders and guests will enjoy a range of fun and/or learning activities.

On Sunday, Monday and Wednesday evenings, Waterloo faculty members and graduate students with Waterloo's David R. Cheriton School of Computer Science will give a total of 10 presentations on a range of topics, including one entitled How to See: the Neuroscience of Vision and another on A Short Introduction to Mind Reading. Four will be in English, with the remaining in Arabic, French, German, Mandarin, Russian and Spanish.

Visitors will experience a few of the sights, sounds and culture of Canada. Planned activities include tours of Waterloo, both the university and the region, as well as visits to Canada's Wonderland and Niagara Falls.

"Students from over 80 countries will shortly be arriving in Waterloo for the 22nd annual International Olympiad in Informatics," said Richard Forster, executive director of the IOI. "Having seen the preparations that have been put in to the contest by the hosts, I am confident that these students will enjoy a successful

event and take away happy memories of Waterloo and Canada."

Most teams include up to four participants, plus two leaders, though interest in Japan is great enough that the team is travelling with its own documentary crew. Team members are competitively selected, in some cases early enough to allow a year's training.

As host, Canada will enter one official (first) team of four competitors and an unofficial (second) team of four competitors. Eight Canadians were selected out of a pool of 21 leading contenders who qualified after writing the Canadian **Computing** Competition, run by the **Centre for Education in Mathematics and Computing** at the University of Waterloo.

Leading Canadian contenders, including two who won silver medals at the 2009 IOI held in Bulgaria, attended a training camp last May in Waterloo to sharpen their skills and enter a six-hour contest. The top eight students in that contest form Canada's two teams at the 2010 IOI.

For more information on the 2010 IOI, including a list of the competing countries, please visit [www.ioi2010.org](http://www.ioi2010.org).

#### About the IOI

The International Olympiad in Informatics, launched in 1989 in Bulgaria, is one of the most recognized secondary school computer science competitions in the world. It was first proposed by UNESCO (United National Educational, Scientific and Cultural Organization). The competition tasks are of an algorithmic nature. The contestants, however, have to show such **computing** skills as problem analysis, design of algorithms and data structures, programming and testing. The IOI participants are some of the best young computer scientists in the world. To learn more, go to [www.ioi2010.org](http://www.ioi2010.org).

#### About the CEMC

Founded in 1995, the **Centre for Education in Mathematics and Computing** has become Canada's largest and most recognized outreach organization for promoting and creating activities and materials in mathematics and computer science. Its activities include a series of highly acclaimed contests, web resources, a large series of publications, and workshops and seminars for students and teachers in elementary and secondary schools across Canada and around the globe. To learn more, visit [www.cemc.uwaterloo.ca](http://www.cemc.uwaterloo.ca).

#### About Waterloo

The University of Waterloo, located at the heart of Canada's Technology Triangle, is one of Canada's leading comprehensive universities. Waterloo is home to 30,000 full- and part-time undergraduate and graduate students who are dedicated to making the future better and brighter. Waterloo, known for the largest post-secondary co-operative education program in the world, supports enterprising partnerships in learning, research and discovery. For more information about Waterloo, visit [www.uwaterloo.ca](http://www.uwaterloo.ca).

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