

# CWSF 2008 - Ottawa, Ontario



## Stephen Portillo

### On the Right Path

**Division:** Earth & Environmental Sciences / Environmental Innovation

**Category:** Senior

**Region:** Edmonton

**City:** Sherwood Park, AB

**School:** Old Scona School

**Abstract:** A Java program was created to simulate commuters using a region's transportation networks to travel to destinations according to the A\*pathfinding algorithm. Then, an experiment was run to test the program, comparing a proposed transit system with an existing one in Sherwood Park. The program predicted that the proposal would increase midday ridership from 5.9% to 8.0%, but also revealed some flaws in the proposal.

### Biography

I am 16 years old and currently am in Grade 12 at Old Scona Academic High School. At school, I serve as the Vice President of the Students' Union and am an active member of: the Speech and Debate team, the Football and Frisbee Club, and a tutoring service named Change for Change. Since Grade 1, I have been a part of my schools' Science Olympics teams, culminating in a 1st place finish in Grade 11 and 3rd place finish this year. I have been programming since I was 8, and have learned BASIC, Visual Basic, HTML, CSS, and Java. Working with students and faculty of the University of Alberta, I participated in the inaugural Cluster Challenge at Supercomputing '08 in Reno, Nevada. My biggest hobby is definitely astronomy, so my family is part of the Royal Astronomical Society and I volunteer at the Telus World of Science Edmonton observatory. I plan to become an astrophysicist, starting with undergrad studies at the University of Alberta.

### Awards

### Value

Workshop on Parallel Computing in Astrophysics Award Sponsor: Canadian Institute for Theoretical Astrophysics and the University of Toronto Department of Astronomy and Astrophysics	\$1 500
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 000
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$3000 Entrance Scholarship Sponsor: University of Ottawa	\$3 000
Silver Medal - Computing & Information Technology - Senior Sponsor: Intel of Canada, Ltd.	\$700
<b>Total</b>	<b>\$10 700</b>