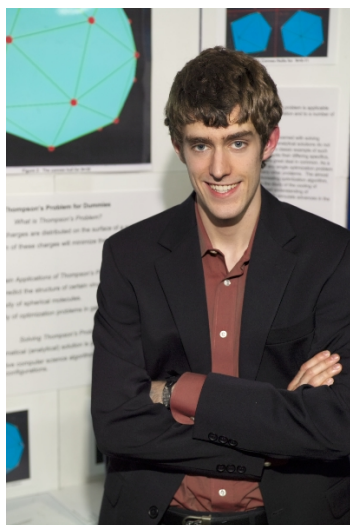


CWSF 2005 - Vancouver, British Columbia



Peter Forsyth

The Attraction of Repulsion

Division: Physical & Mathematical Sciences

Category: Senior

Region: Waterloo-Wellington

City: Waterloo, ON

School: St. Johns-Kilmarnock

Abstract: Thompson's Problem is the problem of distributing N identical point charges on the surface of a sphere so that total Coulomb electric energy is minimized. An original program was written in Java to find solutions to Thompson's Problem and a number of novel methods were used to analyze these solutions.

Awards	Value
Canadian Mathematical Society Award Sponsor: Canadian Mathematical Society	\$1 000
CAP Physics Prize - Senior Sponsor: Canadian Association of Physicists	\$1 000
CAP/TRIUMF World Year of Physics Award Sponsor: Canadian Association of Physicists	\$1 200
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
The University of Western Ontario Scholarship Gold Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Gold Medal - Physical & Mathematical Sciences - Senior Sponsor: Encana Corporation	\$1 500
Total	\$10 700