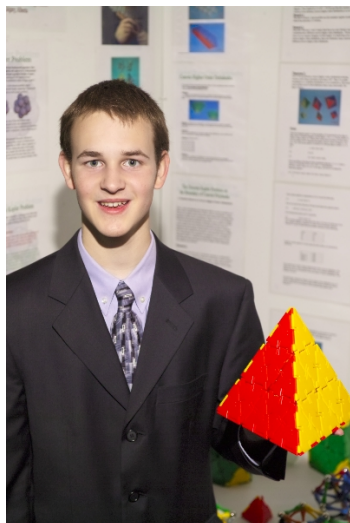


# CWSF 2005 - Vancouver, British Columbia



## Daniel Bezdek

### Kepler's Quest

**Division:** Physical & Mathematical Sciences

**Category:** Intermediate

**Region:** Calgary Youth

**City:** Calgary, AB

**School:** St. Brigid School

**Abstract:** I solve the Discrete Kepler Problem for unit sphere packings when the spheres lie in convex position. Subsequently, I introduce a new class of convex polyhedra and propose a way of classifying them. Finally, I propose a new model for protein folding.

Awards	Value
Discovery Channel Math Award Sponsor: Discovery Channel	\$750
Canadian Mathematical Society Award - Intermediate Sponsor: Canadian Mathematical Society	\$500
Genome Canada Awards - Intermediate - First place Sponsor: Genome Canada	\$2 000
The University of Western Ontario Scholarship Silver Medallist - \$1500 Entrance Scholarship Sponsor: University of Western Ontario	\$1 500
Silver Medal - Physical & Mathematical Sciences - Intermediate Sponsor: Encana Corporation	\$700
Total	\$5 450