





## **Daniel Bezdek**

Set a Light Trap - the Penrose Puzzle

Division:	International
Category:	Intermediate
Region:	Calgary Youth
City:	Calgary, AB
School:	Father Lacombe School
Abstract:	I propose a new approach to the unsolved Penrose problem by introducing the new concept of black holes and stars. Also, I propose studying the fundamental problem of billiards in spherical plane and solve it for the first natural case. Finally, I study the Poincare question about geodesics on the surface of convex higher order deltahedra. This leads me to a new protein folding model.

Awards	Value
Canadian Mathematical Society Award - Intermediate	\$500
Sponsor: Canadian Mathematical Society	
The University of Western Ontario Scholarship	\$2 000
Gold Medallist - \$2000 Entrance Scholarship	
Sponsor: University of Western Ontario	
Gold Medal - Physical & Mathematical Sciences - Intermediate	\$1 500
Sponsor: Encana Corporation	
EnCana Platinum Award - Best Intermediate Project	\$5 000
Sponsor: Encana Corporation	
Total	\$9 000



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