

# CWSF 2008 - Ottawa, Ontario



## Graham Mann

### Some Like It Hot! Using Thermoelectrics to Recover Waste Heat from a Car Engine

**Division:** Health Sciences / Automotive

**Category:** Intermediate

**Region:** South Shore

**City:** Lunenburg, NS

**School:** Park View Education Centre

**Abstract:** This project explores the potential for changing waste heat from a combustion engine into useful electrical energy. A prototype module utilizing thermoelectric generators was designed, constructed, and tested. This module demonstrates considerable promise for energy savings and greenhouse gas reduction if adopted widely in motor vehicles.

#### Biography

My name is Graham Mann, I'm a Grade 10 student at Park View Education Centre on the South Shore of Nova Scotia. This will be the third time that I have competed at the Canada-Wide Science Fair, having gone in 2005 and then again in 2006, when I was awarded a silver medal. I am enrolled in the International Baccalaureate program at PVEC, and I am also a member of the badminton and track teams for the school. This past year I played hockey at the Midget AAA level, and am currently a member of the local Tier 1 soccer club. Other interests include sailing, golf and tennis. In the future, I plan to attend university in a science program and pursue a career in some field of science, although I do not know what that will be yet.

#### Awards

#### Value

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|-------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| The University of Western Ontario Scholarship<br>Silver Medallist - \$1500 Entrance Scholarship<br>Sponsor: University of Western Ontario | \$1 500        |
| The University of Western Ontario Scholarship<br>Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: University of Western Ontario | \$1 000        |
| Bronze Medal - Automotive - Intermediate<br>Sponsor: AUTO21                                                                               | \$300          |
| Silver Medal - Engineering - Intermediate<br>Sponsor: Youth Science Foundation Canada                                                     | \$700          |
| <b>Total</b>                                                                                                                              | <b>\$3 500</b> |