

# CWSF 2005 - Vancouver, British Columbia



## Jaspreet Rayat

### Dynamic Noise Cancellation Using Wave Superpositioning

**Division:** Engineering & Computing Sciences

**Category:** Senior

**Region:** Toronto

**City:** Maple, ON

**School:** Marc Garneau Collegiate Institute

**Abstract:** A set of noise-reducing headphones was constructed using the fundamental principle of wave-superpositioning. The final design included dynamic amplitude compensation and was based upon the manipulation of an integrated circuit. The desired effect was achieved to a reasonable degree, with potential improvements lying in circuit optimization and variable frequency cancellation.

Awards	Value
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
Honourable Mention - Engineering - Senior Sponsor: Youth Science Foundation Canada	\$100
Bronze Medal - Automotive - Senior Sponsor: AUTO21	\$300
<b>Total</b>	<b>\$1 400</b>