

CWSF 2005 - Vancouver, British Columbia



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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 |
| Total | \$1 400 |