



CWSF 2018 - Ottawa, Ontario



Markus Kunej

The Echo Belt: Navigation Technology for the Visually Impaired

Challenge: Innovation Category: Senior Region: Bay Area City: Brantford, ON

Youth Science Canada

Pickering ON L1V 2R4

PO Box 297

416-341-0040

North Park Collegiate & Vocational School:

Abstract: I developed a novel navigation device for the visually impaired which

provides directional haptic feedback of the user's environment in the form of vibrations. Unlike current mobility tools, my device is non-intrusive,

hands-free, and provides 360 degrees of constant obstacle-detection. For persons with visual impairments, the "Echo Belt" can help reduce the stress

related to foot-travel, overall improving their quality of life.

Biography

My name is Markus Kunej and I am currently a grade 12 student at North Park Collegiate in Brantford. I was inspired to create the Echo Belt for my grandmother, who suffers from Glaucoma and is losing her vision. I hope to continue working on making the device more user-friendly. At my school, I am part of the chess and science teams, and student council. I play on the varsity tennis, volleyball, and soccer teams. I have won the Highest Academic Average Award at my school three years in a row. Outside of school, I play competitive soccer for my city and like to listen to music. I plan on studying engineering at a post-secondary school next year. For other students thinking about doing a project, I suggest they find inspiration close to their home. Look for problems affecting yourself or people you know. It will give your project more personal meaning and you will feel that much more enthusiastic about your work.

Awards	Value
Excellence Award - Senior - Gold Medal	
Sponsor: Youth Science Canada	
Carleton University Entrance Award	\$4 000
Senior Gold Medallist - \$4,000 Entrance Award	
Sponsor: Carleton University	
Dalhousie University Faculty of Science Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
UBC Science (Vancouver) Entrance Award	\$4 000
Senior Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: The University of British Columbia (Vancouver)	
University of Manitoba Entrance Scholarship	\$5 000
Senior Gold Medallist - \$5000 Entrance Scholarship	
Sponsor: University of Manitoba	
University of Ottawa Entrance Scholarship	\$4 000
Senior Gold Medallist - \$4,000 Entrance Scholarship	
Sponsor: University of Ottawa	
Western University Scholarship	\$4 000
Gold Medallist - \$4000 Entrance Scholarship	
Sponsor: Western University	
Total	\$26 000





