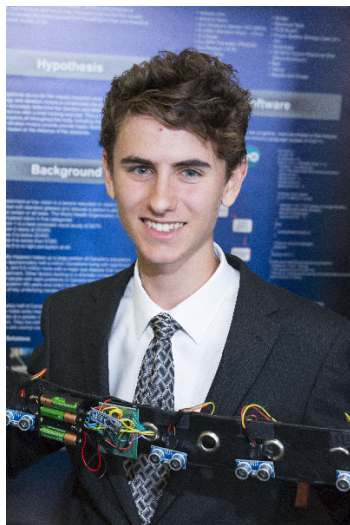


CWSF 2018 - Ottawa, Ontario



Markus Kunej

The Echo Belt: Navigation Technology for the Visually Impaired

Challenge: Innovation

Category: Senior

Region: Bay Area

City: Brantford, ON

School: North Park Collegiate & Vocational

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