

## CWSF 2014 - Windsor, Ontario

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by request.

### Mitra Rajyam, Matthew Reiter

#### The HMSD: A Novel Aid for the Visually Impaired

**Challenge:** Innovation

**Category:** Senior

**Region:** Toronto

**City:** Toronto, ON

**School:** Agincourt C.I.

**Abstract:** Visual impairment affects over 225 million people in middle to low income nations. As a result, a cost-effective hand-mounted sonar device that alerts users to surrounding objects through haptic feedback and edge detection was developed. When tested with 14 volunteers, the haptic glove was proven to be the safest and most reliable method of detecting obstacles in the path of the user.

#### Biographies

Mitra - Bio removed by request.

Matthew - I am a 16 year old student in the eleventh Grade at Agincourt Collegiate Institute. Throughout my school career I have demonstrated commitment, dedication and focus on achieving the highest performance in both academics and athletics. My academic achievements includes being recognized on the "Principal's Scholars list", a prestigious recognition of the highest performing students for each year, where I am consistently at the top of my class, having achieved the highest overall average in Grade 10. In addition, I regularly participate and achieve high standings in University sponsored math and science competitions and my passion for educ...