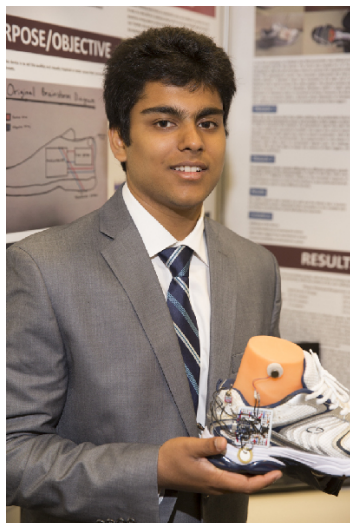


# CWSF 2016 - Montreal, Quebec



## Rohit Sangaraju

### Piezoelectric Vibration-Sensing Shoe

**Challenge:** Innovation

**Category:** Senior

**Region:** Peel

**City:** Mississauga, ON

**School:** Glenforest S.S.

**Abstract:** Inspired by the extremely sensitive environment-sensing capabilities of snakes; this project uses a piezoelectric sensor to detect vibrations produced by moving people/objects in the proximity. A vibration motor is then used to alert the user about any significant threats that need attention. It is a novel and effective method to further aid the audibly and visually impaired to navigate through their surroundings with safety.

#### Biography

I've always loved to solve problems and explore the world around me. This is probably why the fields of mathematics and engineering appeal to me so much. The journey to creating my current project also started in a similar way. My curiosity for the intelligent biological adaptations displayed by certain animals and my passion for technology drove me towards creating a device that could mimic these animals and aid impaired individuals. I wondered that when animals have been able to cope with their changing environments successfully for so long, why can't we learn from them to improve ourselves? My plans for the future would be to pursue a career in engineering and follow my passion for inventing novel devices which can make life even more simpler. I advise anyone who is thinking of doing a science fair project to simply follow their dreams while staying safe. Our universe is a complex place with numerous anomalies yet to be discovered and questions yet to be answered. It is from prolonged curiosity and investigation that we as mankind can progress, and develop into a more diverse and technologically advanced species. Furthermore, our future is contained within the youth, so go for it!

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$8 500</b>