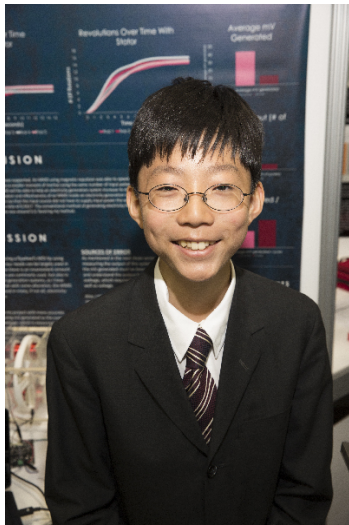


# CWSF 2019 - Fredericton, New Brunswick



## Paul Lee

### Conserving Momentum with MMDs

**Challenge:** Energy

**Category:** Junior

**Region:** Bay Area

**City:** Hamilton, ON

**School:** Dalewood Senior E.S.

**Abstract:** In my project, I aimed to enhance a flywheel energy storage system, which is used in electricity generation systems where there are unpredictable input sources (Wind, Solar), by using magnetic repulsion. I also aimed to utilize this enhanced flywheel (MMD or Magnetic Motive Drive) inside a fully equipped electricity generation system, and see if it could improve the efficiency of the system.

#### Biography

My name is Paul Kyum Lee, and I am a grade 8 student attending Dalewood Middle School in Hamilton, ON. Thanks to my parents' jobs, I have lived in many different countries - Russia, Azerbaijan, Korea, and most recently, Canada. I have been working on my project for a long time, and I am excited to represent all the hard work at CWSF. My project focuses on improving the efficiency and reliability of a flywheel energy storage system by using magnetic repulsion. I am a part of McMaster University's High Performance Basketball camp, and in my spare time I like to read and play basketball.

#### Awards

#### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000