

CWSF 2017 - Regina, Saskatchewan



Rohan Mehta

A Device to Harness Kinetic Energy from Walking ? The Next Generation

Challenge: Energy

Category: Junior

Region: Simcoe County

City: Collingwood, ON

School: Pretty River Academy

Abstract: Using a linear generator, a device was developed to harness kinetic energy from the movement of a human walking. As one walks, electricity is generated. It goes through a series of circuits, then charges a 5V battery. A cellphone app was designed and programmed using Swift and Arduino to read and transmit data, such as the amount of voltage in the device battery.

Biography

My name is Rohan, I am a Grade 7 student at Pretty River Academy. I have attended regional science fairs dreaming of attending a Canada-Wide Science Fair. Science, Art and Gym are my favourite subjects. I am an honours student and have been to provincials for FLL Robotics twice. During the winter I competitively snowboard race in slalom events. The rest of the year I pursue my main passion - road biking, mountain biking, and cyclocross racing in the Ontario circuit. I enjoy skateboarding, running, camping and working on electrical, coding and engineering projects. My interest in DC turbines sparked an idea - I could use the same technology but put it in a tube format so vibrations or movements could produce AC voltage. I was excited to find out that this theory worked. During a jog one day I figured out the movement of our body could generate our cleanest energy source. I plan to make the device more effective to be used in the real world. Rules for a good science fair project: Think of a topic you're interested in, try to solve a problem and if it works the first time, it has already been done!

Awards

Value

Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$250
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$4 250