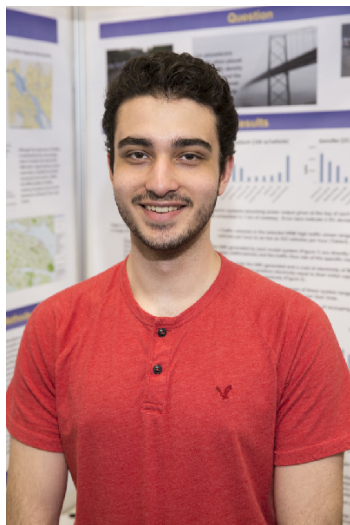


CWSF 2016 - Montreal, Quebec



Alexander Papadopoulos

Piezoelectric Energy Harvesting From High Traffic Areas in the HRM

Challenge: Energy

Category: Senior

Region: Halifax

City: Truro, NS

School: Fountain Academy of the Sacred Heart

Abstract: Piezoelectricity is a relatively new technology to the sustainable energy market. When installed beneath a roadway, piezoelectric materials generate a voltage difference in response to the mechanical stress of a passing vehicle. Studies of piezoelectric energy harvesting have been largely conducted in highly populated areas with large traffic volumes. This study evaluates the efficacy of this technology to a smaller city, such as Halifax.

Biography

Alexander Papadopoulos is a grade 12 student attending Fountain Academy in Halifax, Nova Scotia. He grew up in small town Truro, Nova Scotia and has a love for both city and rural life. He has a passion for scientific research and its applications in both urban and rural environments. He has been involved in the Scouting organization for many years. This has generated his love for the outdoors and also community service. When he first heard about the use of piezoelectric systems in roadways to generate environmentally-friendly electricity, he was fascinated to see how it could be used to improve his community. He hopes to show that this technology can benefit smaller cities, such as Halifax and in the future continue to research other possible applications. To anyone considering doing a science fair project his best advice is to aim to answer a question that resonates within you and to work with other scientists in your community.