CWSF 2019 - Fredericton, New Brunswick

Anika Garg

Developing a Self-Sensing Actuator for Use in Wearable Rehabilitation Devices

Challenge: Innovation
Category: Senior
Region: Thames Valley
City: London, ON
School: A.B. Lucas S.S.

Abstract: This project examined the relationship between temperature, resistance, and strain in twisted and coiled soft actuators (TCA), made from silver-plated nylon fibre. This was done to develop a self-sensing mechanism for viable use of these artificial muscles in biomimetic systems such as robots and powered exoskeletons.

Biography

My name is Anika Garg and I am a grade 11 student at A.B. Lucas Secondary School in London, Ontario. At school, I am involved with DECA, science olympics, reach for the top, and the swim team. I also enjoy music and play piano and clarinet. I have a strong interest in science and plan on pursuing a career in a STEM field. This is my third time participating in the Thames Valley Science and Engineering Fair, and my second time at CWSF. I'm really grateful for this opportunity and would encourage anyone interested in science to try it out!

Awards	Value
Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Ottawa	$1 000
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$2 000