CWSF 2005 - Vancouver, British Columbia

Simon Bild-Enkin

A Medieval Bow in the Twentyfirst Century

Division: Engineering & Computing Sciences
Category: Junior
Region: Vancouver Island
City: Victoria, BC
School: Central Middle School
Abstract: I studied how to make the best English longbow for my size and strength. I used ash, maple, and laminated bows and determined what dimensions I should use for each different material and how the different woods affect the distance shot by the bow.

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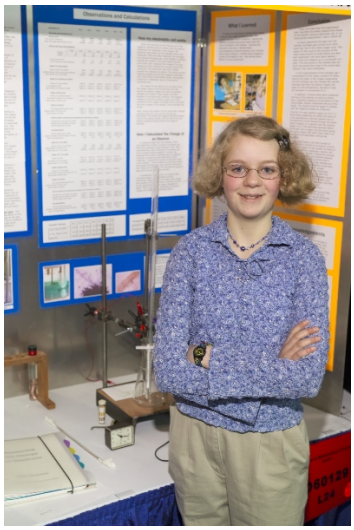

Alice Journel

Measuring the Charge of Electrons

Division: Physical & Mathematical Sciences
Category: Junior
Region: Vancouver Island
City: Duncan, BC
School: George Bonner Middle School
Abstract: An electrolytic cell was used to produce hydrogen gas from an electrolyte and positive copper ions. The volume of the gas produced and the current flow was measured and then calculations using Avogrado's Law, Avogrado's number, and Faraday's Law were done to determine the charge.

Awards	Value
The University of Western Ontario Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Western Ontario	$1 000
Bronze Medal - Physical & Mathematical Sciences - Junior Sponsor: EnCana Corporation	$300
Total	$1 300

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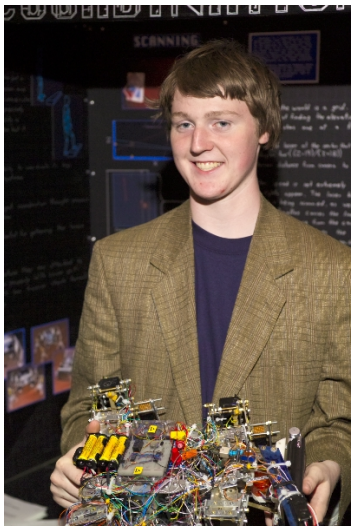

Russell Kramer

Robotic Vision Gait Coordination

Division: Engineering & Computing Sciences
Category: Senior
Region: Vancouver Island
City: Campbell River, BC
School: Carihi High School

Abstract: Humans have the ability to identify obstacles in their path and coordinate their legs to climb over them. It is easy to take this for granted, but it requires much judgment and planning to accomplish. This coordination technology grants walking robots this exceptionally useful ability for the first time.

Awards	Value
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - $2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	$2 000
The University of Western Ontario Scholarship Silver Medallist - $1500 Entrance Scholarship Sponsor: University of Western Ontario	$1 500
Silver Medal - Automotive - Senior Sponsor: AUTO21	$700
Silver Medal - Engineering - Senior Sponsor: Youth Science Foundation Canada	$700
Total	$4 900

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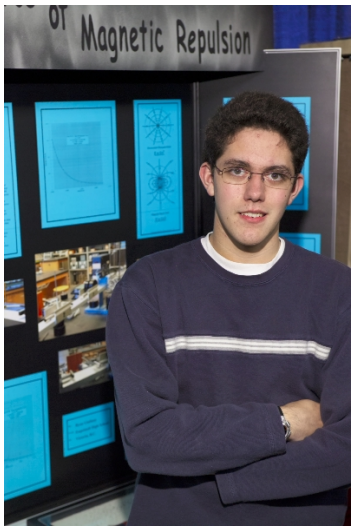

Ryan Giuliany

The Force of Magnetic Repulsion

Division: Physical & Mathematical Sciences
Category: Senior
Region: Vancouver Island
City: Victoria, BC
School: Esquimalt High School

Abstract: I hypothesized that the force between two repelling magnets would mimic electrostatic point charges and that the force of magnetic repulsion would be inversely proportional to the square of the distance separating the magnets. The empirically derived proportionality disproved my hypothesis. The force was inversely proportional to the distance cubed.

Awards	Value
Petro-Canada Peer Innovation Award - Senior - Western Canada Sponsor: Petro-Canada	$200
The University of Western Ontario Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Western Ontario	$1 000
Bronze Medal - Physical & Mathematical Sciences - Senior Sponsor: EnCana Corporation	$300
Total	$1 500

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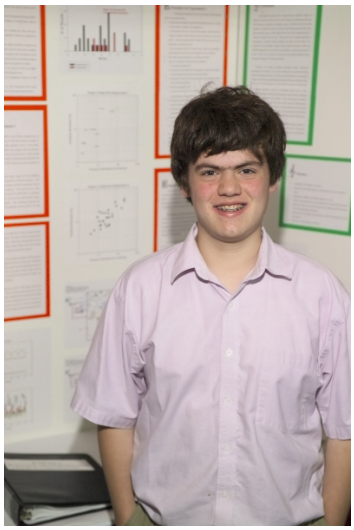

Daniel Bild-Enkin

Vibrato: Quantification of an Aesthetic Feature

Division: Physical & Mathematical Sciences
Category: Intermediate
Region: Vancouver Island
City: Victoria, BC
School: Esquimalt High School

Abstract: Vibrato is the change in sound in a sustained musical note. This project tested the similarities between what musicians play and what listeners prefer in vibrato. Computer tools were deve1oped to quantify several aspects of vibrato. It was shown that produced and received vibrato share many qualities.

Awards	Value
The University of Western Ontario Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Western Ontario	$1 000
Bronze Medal - Physical & Mathematical Sciences - Intermediate Sponsor: EnCana Corporation	$300
Total	$1 300