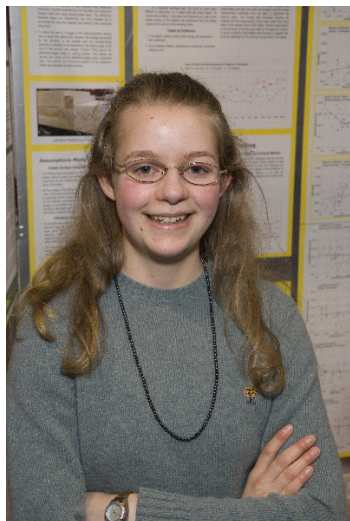


# CWSF 2008 - Ottawa, Ontario



## Alice Jourmel

### Dynamic Testing of Strength and Vibration Properties of Hardwoods

**Division:** International / None

**Category:** Senior

**Region:** Vancouver Island

**City:** Duncan, BC

**School:** Frances Kelsey Secondary

**Abstract:** This project examined the relationships within and between the strength and vibration properties of hardwoods by dynamically testing the modulus of elasticity, impact surface hardness, logarithmic decrement, and speed of sound in four hardwood species. New equipment was designed and constructed by the exhibitor to do the testing, and extensive use was made of mathematics and graphing to correlate and determine the various relationships.

#### Biography

I am in grade 11, and attend a self-paced, public school on Vancouver Island, BC. I have been doing science fair projects since I was in grade 1, and this is my fourth CWSF. I am the treasurer of the Current Global Issues Club at my school, and I am a certified Streamkeeper. I enjoy nearly all subjects at school, but I especially like math and the sciences. As such, I plan to attend university after graduating, where I will get a science degree; I hope to some day receive a doctoral degree. I love to read - comics, blogs, science magazines, non-fiction books, short stories, and novels of all sorts. I also like hiking and running, creating bead jewellery, baking cookies, watching Star Trek (a special treat since we don't have television), and spending time with my family and friends. As well, I enjoy listening to and playing music. Last year I completed my grade 6 RCM examination in cello, this year I wrote the RCM Harmony 3 exam, and I have been a member of the Cowichan Valley Youth Choir, which this year was again selected to compete at the Provincial Music Festival, for six years.

#### Awards

#### Value

CAP Physics Prize - Senior Sponsor: Canadian Association of Physicists	\$1 000
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$4 000
NSERC Undergraduate Student Research Award - Senior Gold Medallist Sponsor: Natural Sciences and Engineering Research Council of Canada (NSERC)	\$5 625
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
The University of Western Ontario Scholarship Gold Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$20,000 Entrance Scholarship (\$5,000 each year for 4 years) Sponsor: University of Ottawa	\$20 000
Gold Medal - Physical & Mathematical Sciences - Senior Sponsor: Encana Corporation	\$1 500
<b>Total</b>	<b>\$38 125</b>