

# CWSF 2010 - Peterborough, Ontario



## Cody Shaw

### Phononic Crystals: Revisited

**Division:** Physical & Mathematical Sciences

**Category:** Senior

**Region:** Manitoba Schools Science Symposium

**City:** Ste. Agathe, MB

**School:** Fort Richmond Collegiate

**Abstract:** This project demonstrates that phononic crystals built to affect ultrasonic sound can be scaled to affect audible sound in a similar manner. As expected, the crystal constructed for audible sound shows similar properties to its smaller counterparts, including band gap and focusing effects. This submission enhances a preliminary attempt by taking a multidisciplinary approach to the measurement and processing of experimental data.

### Biography

My name is Cody Shaw. I was born in Manitoba on June 2, 1993, and lived my life there so far. I have jumped from school to school, ranging from rural schools to my current city high school, Fort Richmond Collegiate. I have a very high standard for school subjects and classes that interest me, including Physics, Calculus, Chemistry and Computer Science. Some activities that I take part in outside of school other than extensive Science Fair work would be being a part of a charity group called "The Speed Gamers", who do lengthy video game marathons for various charities. To date, we have raised over \$130,000. Another one of my large hobbies would be computers. I have built multiple high end "enthusiast" computers over my grade school life, mainly for gaming and entertainment purposes. I also spend a large amount of time following the Large Hadron Collider, as Theoretical Physics is one of my favourite interests. For my post secondary education, I plan on getting a double major in Particle Physics and Electrical Engineering, and then upgrading the EE major to a PhD, so that I can follow my dreams and maybe someday work along side the LHC.

### Awards

### Value

Canadian Acoustical Association Award - Senior Sponsor: Canadian Acoustical Association	\$1 000
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 000
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$3000 Entrance Scholarship Sponsor: University of Ottawa	\$3 000
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Silver Medal - Physical & Mathematical Sciences - Senior Sponsor: Encana Corporation	\$700
<b>Total</b>	<b>\$10 700</b>