

## CWSF 2018 - Ottawa, Ontario



### Patricia Kelly

#### bSEMA: A Novel Approach to Pre-Determining Seismic Activity

**Challenge:** Discovery

**Category:** Intermediate

**Region:** River Valley

**City:** Fredericton, NB

**School:** Fredericton High School

**Abstract:** SEMA(Seismic Electromagnetic Anomalies) are precursors of earthquakes. By observing their pattern, I was able to develop an online (Google) application software(bSEMA) which is based off of a product notation inline formula that I created which forecasts the estimated percentage of a specific magnitude range of an earthquake occurring in a certain time frame. After testing, I(/others) have determined that my formula is 99.99% accurate.

#### Biography

My name is Patricia Kelly and I am in grade 10 at Fredericton High School. I am advanced in Math, and have always been interested in math and science. I have competed in multiple international math and science competitions. In my spare time, I compete provincially in track and field. For my project, I have created a formula which allows individuals to input values based on previous information that they have on earthquakes. My final variable represents the electromagnetic anomalies of an earthquake which is the future of predicting seismic activity. My advice to other pursuing science fairs would be to stay with the topic that you choose in the first place. If you don't find answers, then that's because the answer is waiting for you to find it! Don't let anyone discourage you from your dreams. Like Michael Oher said in the Blind Side, "you should hope for courage and try for honor. And maybe even pray that the people telling you what to do have some too". I am looking forward to being at my first Canada Wide Science Fair and sharing my project at the National level.

#### Awards

#### Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000