



## CWSF 2009 - Winnipeg, Manitoba



## **Ryan Peng**

## **High Speed Flash Exposure with Compact Digital Cameras**

Division: Health Sciences / None

Category: Senior
Region: Saskatoon
City: Saskatoon, SK
School: Centennial Collegiate

**Abstract:** A technique was developed to allow the use of external flash at shutter

speeds higher than the maximum sync speed. A method to use camera to measure flash was developed by using a grey card. A mathematical model for the clipped flash output was developed by integrating flash discharge curve and validated by experimental data. A computer program was created

to calculate correct flash exposure.

## **Biography**

Ryan Peng is a Grade 11 student at Centennial Collegiate. He enjoys participating in science fairs and math competitions. He has been invited to write many national and international math competitions. He has won the national champion title six times. Ryan is the defending champion for four years in a row at the annual Saskatchewan Math Challenge. He actively participates in math clubs and helps other students to achieve their goals. During the summer, he attends math camps to enrich his mathematical knowledge, and volunteers at the annual Sci-Fi science camp to help elementary school students to do hands-on science. Throughout the school year, he is the SMARTS school correspondent which is a national network of youth helping youth in science, technology, engineering, and math. In addition to working on his science projects, he participates in research at the Canadian Light Source. In his spare time, he likes to explore computer programming, play the piano, read books and literature, play table tennis, and hang out with friends. At school, he is involved in science club, debate, model UN, and chess club. Ryan has won several school academic awards, including Top Ten Overall.

Awards	Value
The Manning Innovation Achievement Award	\$500
Sponsor: Ernest C. Manning Awards Foundation	
The Manning Innovation Achievement Award	\$4 000
and \$4000 Manning Young Canadian Innovation Award	
Sponsor: Ernest C. Manning Awards Foundation	
Dalhousie University Faculty of Science Entrance Scholarship	\$2 000
Senior Silver Medallist - \$2000 Entrance Scholarship	
Sponsor: Dalhousie University, Faculty of Science	
The University of Western Ontario Scholarship	\$1 500
Silver Medallist - \$1500 Entrance Scholarship	
Sponsor: University of Western Ontario	
University of Ottawa Entrance Scholarship	\$3 000
Senior Silver Medallist - \$3000 Entrance Scholarship	
Sponsor: University of Ottawa	
Silver Medal - Engineering - Senior	\$700
Sponsor: Youth Science Canada	
Total	\$11 700



