

## CWSF 2014 - Windsor, Ontario



### George Utsin

#### AlgEYE: Automation of Algal Hydrogen Production

**Challenge:** Innovation

**Category:** Senior

**Region:** Waterloo-Wellington

**City:** Waterloo, ON

**School:** Waterloo Collegiate Institute

**Abstract:** AlgEYE is a system that automatically monitors algal growth and controls hydrogen production. Green algae is known to produce hydrogen gas under anaerobic states influenced by sulfur depletion, however this can have negative long term repercussions on the algae. By creating a system that automatically regulates the sulfur levels, hydrogen production is not sacrificed to algal nutrient starvation.

#### Biography

My name is George Utsin and I'm a student at Waterloo Collegiate. I'm interested in computer science but I'm always open to any other field of science. I plan on pursuing software engineering as my post-secondary education. I got a perfect score on the 2014 Junior CCC and I am a published developer on the Google Play Store. The inspiration to this project however started with the Sanofio BioGENEius Challenge, and it was there that I wanted to merge my interest in computer science with biotechnology. I plan on continuing this project by making my system more robust by controlling and automating more variables. The one piece of advice I would give to students is to not give up; there might be difficulties along the way, but don't stop trying because it's these difficulties that separate the average projects from the outstanding ones.

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$300
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
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 - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$8 800</b>