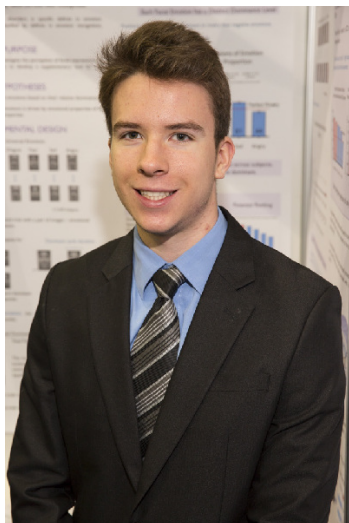


## CWSF 2015 - Fredericton, New Brunswick



### Dan Alferov

#### Using the Perception of Facial Emotions to Aid in Diagnosis of Mood Disorders

**Challenge:** Discovery

**Category:** Senior

**Region:** Thames Valley

**City:** London, ON

**School:** A.B. Lucas S.S.

**Abstract:** Mental illness affects 1.8 billion people globally (WHO, 2013). Yet, 30% of patients are misdiagnosed or underdiagnosed. The goal of this project was to create a novel, objective and efficient diagnostic method for mood disorders, based around disorder-specific facial emotion perception deficits. A universal trend in the perception of facial emotions within binocular rivalry for healthy participants was discovered which can aid in differential diagnosis.

#### Biography

I am a grade 12 student at A.B. Lucas Secondary School; I am heavily involved in volunteer work, research and competitions. I have been doing research as a volunteer at the Brain and Mind Institute at Western University for 4 years. I've always been interested in cognitive psychology and the opportunity to do high level research so early in my high school career has been amazing! This year my project was inspired by the anxiety and minor depression faced by my peers in a challenging final year. Doing research on the diagnosis of mental illness opened my eyes to the challenges faced by clinicians. As a result, I was inspired to use my knowledge of visual perception to try to create a supplementary test which could help to confirm a diagnosis. In the future, I would like to continue testing patients with a variety of mood disorders, in an attempt to investigate disorder specific results. My advice to anyone pursuing science fair would be to follow your passion. To me science fair is much more than a competition it represents my curiosity, fuels my passion and sustains my drive.

#### Awards

#### Value

The Manning Innovation Achievement Award - Senior Sponsor: Ernest C. Manning Awards Foundation	\$500
The Manning Innovation Achievement Award and \$4000 Manning Young Canadian Innovation Award and also receive an additional \$3000 towards their post-secondary education. Sponsor: Ernest C. Manning Awards Foundation	\$4 000
Challenge Award - Discovery - Senior Sponsor: Youth Science Canada	
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$250
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of New Brunswick Canada-Wide Science Fair Scholarship Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of New Brunswick	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$31 750</b>

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