

Toronto CMOS Centre 2022 Education Report

Prepared by:

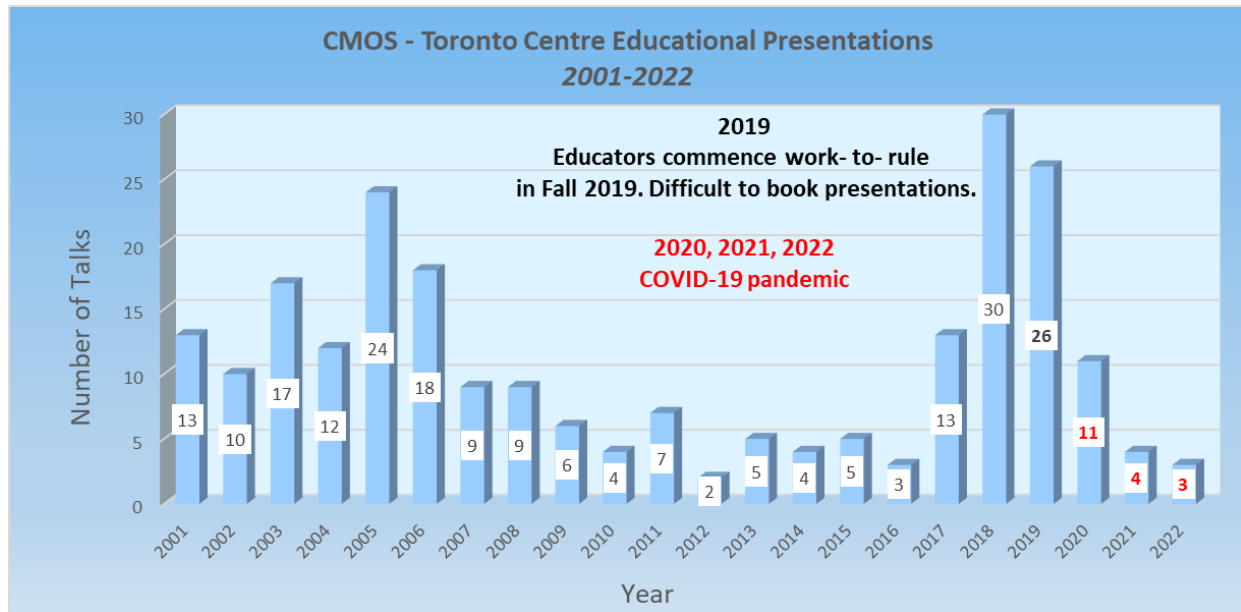
Joan Klaassen

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The global COVID-19 pandemic, which was declared by the World Health Organization in March 2020, continued during 2022. The Toronto CMOS Centre Educational Program was once again impacted.

1. Presentations

Due to the COVID-19 pandemic that continued during 2022, the Toronto CMOS Centre Educational Program delivered only 3 presentations on weather/severe weather. These were given by Geoff Coulson, retired Environment and Climate Change Canada.


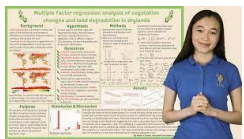





2. Science Fairs


In 2022, the Toronto CMOS Centre continued to support Student Science Fairs in the Greater Toronto Area. These included the Toronto, York Region Science and Technology, and Bay Area Science and Engineering (BASEF) Fairs that were again held virtually in 2022. The Toronto CMOS Centre awarded 1st and 2nd place cash prizes to Grade 7-12 students with the best projects in weather, air quality, climate, climate change, oceans and/or related sciences. Dominique Brunet, Stephen Jacobs and Oscar Koren of the Toronto CMOS Centre Executive judged the BASEF, Toronto Fair and York Region Fair projects, respectively. Information on the 2022 CMOS Award

winning students and their projects is shown in the table below. Artash Nath, 1st place winner of the CMOS Award at the Toronto Science Fair, was also an invited speaker at the Toronto CMOS Centre seminar series. Toronto Centre awarded him an honorarium (\$100) for his virtual presentation that he gave on July 7, 2022. The presentation is available on the CMOS YouTube Channel: <https://www.youtube.com/watch?v=MF7NAyR-rU>

Congratulations to all of the CMOS Award winning students on their achievements.

Greater Toronto Area Science Fair	CMOS Award: Student Winner	CMOS Award: Student Project	Additional Science Fair/Other Project Awards
Bay Area Science and Engineering Fair  https://www.basef.ca/	1 st Place Maria Chzhen Grade 11 	<i>Multiple factor regression analysis of vegetation changes and land degradation in drylands</i> https://www.basef.ca/fair/project-view.php?PN=D04&ProjectID=12471	BASEF: 10 other awards, including Gold Merit Award and 1 of 5 projects to represent BASEF at Regeneron International Science and Engineering Fair
	2 nd Place Zacharaya Araya Grade 8 	<i>Using machine learning to predict the effects of nitrous oxide in relation to hypoxic zones</i>	BASEF: 5 other awards, including Silver Merit Award https://www.basef.ca/past-fairs/basef2022/2022-award-winners/ https://oakvillenews.org/oakville-community-news/oakville-students-sweep-bay-area-science-engineering-fair/
Toronto Science Fair	1 st Place Artash Nath Grade 10	<i>The Silence of Global Oceans</i>	Toronto Science Fair Toronto Science Fair Gold Medal

 <p>https://www.torontoscienc efair.ca/</p>	<p>2nd Place Rowan Hansen Grade 8</p>	<p>https://projectboard.world/ ysc/project/77259</p> <p><i>Cloudy Mysteries</i></p> <p>https://projectboard.world/ ysc/project/74049</p>	<p>1 of 10 projects selected to represent Team Canada at 2022 Regeneron International Science and Engineering Fair</p> <p>(NOTE: ineligible for 2022 Canada Wide Science Fair, as selected for the International Fair)</p> <p>Team Canada</p>  <p>2022 Regeneron International Science and Engineering Fair Second Award – Earth and environmental sciences, George D. Yancopoulos Innovator Award</p> <p>EU Youth4Ocean Award</p> <p>Shortlisted for EU4Ocean in Action Award. https://webgate.ec.europa.eu/maritimeforum/en/node/7179</p> <p>Project has been featured by the UN's "Generation Ocean" campaign: https://genocean.org/community/reducing-acoustic-pollution/</p> <p>Toronto Science Fair: Toronto Science Fair Silver Medal</p>
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<p>York Region Science and Technology Fair</p>  <p>https://yrstf.info.yorku.ca/</p>	<p>1st Place Xavier Leung Grade 7/8</p> <p>2nd Place Jordan Colclough Grade 11/12</p>	<p><i>The Coolest Way to Warm the Ice</i></p> <p>https://projectboard.world/ysc/project/the-coolest-way-to-warm-the-ice-mnrnb</p> <p><i>The Effects of Vaping on Aquatic Life</i></p> <p>https://projectboard.world/ysc/project/the-effects-of-nicotine-on-aquatic-invertebrates-and-their-environment</p>	<p>No additional award information is available</p>
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3. School and Public Education Committee (SPEC)

Joan Klaassen continued to participate as a member of the National CMOS School and Public Education Committee (SPEC). The Committee continued in its role of promoting, encouraging and fostering an interest in meteorology and oceanography amongst young people at the primary and secondary school levels and the general public. Key SPEC activities this year included:

- Selected candidate to participate in the 2022 *Project Atmosphere Teacher Summer Workshop* (virtual)
- Selected candidate to participate in the 2022 *Project Ocean Teacher Summer Workshop* (virtual)

4. Toronto CMOS Centre Graduate Scholarship (*New: to be offered for 2023-24*)

The Toronto CMOS Centre approved the Chair's (Amir Shabbar's) proposal to create an Graduate Scholarship for a deserving student within the Centre's jurisdiction. In her role as Education Coordinator, Joan Klaassen, developed the award information and application form, as well as created a reference document with relevant University Department and Faculty contacts. Using this information, Amir Shabbar subsequently advertised the scholarship offering in December 2022. The first award will be given to an undergraduate student entering graduate studies in fall 2023 or to a student continuing his/her graduate studies in fall 2023. Students must be enrolled at an **Ontario**¹ University graduate program in atmospheric science, climatology, oceanography,

¹ With the exception of Universities/Colleges in Ottawa and Kingston that fall within the Ottawa CMOS Centre membership area.

or related math, engineering, environmental science disciplines (exclusive of biological science). **Students do not need to be a member of CMOS to apply for or receive the scholarship.** The Centre will have an ongoing review of its finances to determine if the scholarship will be awarded in subsequent years.