Congratulations / Félicitations!

2019 Student Prize Winners / Gagnants des prix pour les étudiant(e)s 2019

2019 University Prize Exam Results / Résultats de l'examen du prix universitaire 2019

The 2019 examination was coordinated by the University Prize Exam Committee, chaired by Christine Kraus, Laurentian University. The exam was written by 66 students from 15 universities/colleges.

Cette année, 66 étudiants de 15 universités ont participé au concours universitaire et qui était administré par le commité d'examen du prix universitaire, présidé par Christine Kraus, Université Laurentienne.

First prize/Premier prix	**Jonathan Zhang**	**University of British Columbia**
Second prize/Deuxième prix	**Matthew Gerry**	**University of Toronto**
Third prize/Troisième prix	**Jonathan Corbett**	**Queen's University**

4. Pedram Amani, University of British Columbia
5. Pierre-Antoine Bernard, Université de Montréal
6. Emilie Hertig, University of British Columbia
7. Jonathan Boretsky – McGill University
8. Twesh Upadhyaya, University of Toronto
9. Mathew Schneider, Simon Fraser University
10. Benjamin Lamoureux, University of Alberta

2019 CAP High School-Cégep Prize Exam National Winners / L'examen du secondaire ou collégial de l'ACP – Gagnants à l'échelle nationale 2019

First prize/Premier prix	**Li Zhening**	**Sir John A. Macdonald Secondary, ON**
Second prize/Deuxième prix	**Xu Yuheng (Jack)**	**Unionville High School, ON**
Third prize/Troisième prix	**David Tang**	**University of Toronto Schools, ON**

2019 Canada-Wide Science Fair Prizes / Prix de l'expo-sciences pancanadienne 2019

The 2019 Canada-wide Science Fair was held from May 15-17 in Fredericton, NB. This year the CAP sponsored prizes at each of the "senior", "intermediate" and "junior" categories:

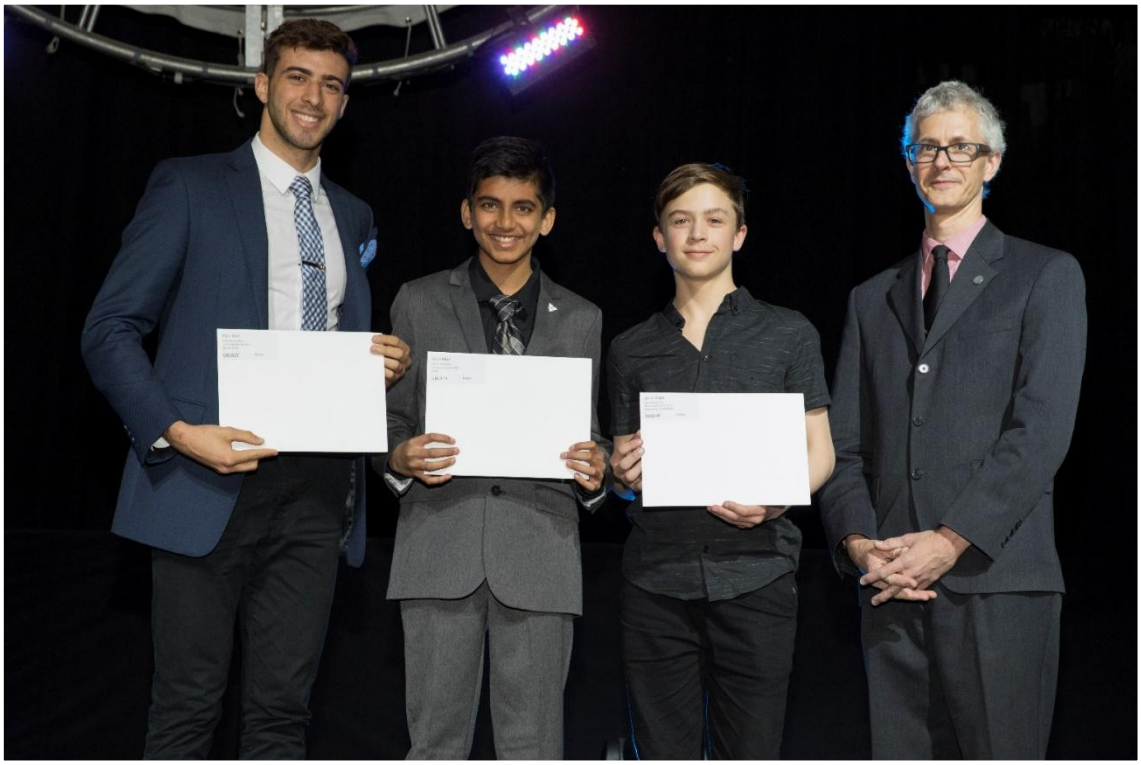

Figure 1. 2019 CWSF prize winners (from left to right): Cyril Mani (senior), Jarek Osika (intermediate), and Krish Modi (junior) with Ben Newling (UNB), the CAP's Director of Student Affairs.

Senior CAP Physics Prize – Cyril Maini, QC

Project: Democratizing Aerospace Technologies: A Novel Approach to Space R&D

Biography: Animé par la philosophie qu'il y a quelque chose à apprendre de toute situation, expérience et personne, je m'applique sans relâche et avec détermination à rencontrer, explorer et développer des opportunités pour me dépasser et devenir. Pour ce faire, je participe à une panoplie d'activités tel que le débat oratoire en tant que capitaine de l'équipe de mon école. J'ai aussi fondé ma propre startup sociale, au nom de Micreau, qui s'occupe de stimuler l'ingéniosité des jeunes par l'entremise de projets innovants dans les écoles du Québec. Mon chemin pour l'instant me dirige vers le génie aérospatial puis un possible MBA pour poursuivre dans l'administration scientifique, car je ne pourrais vivre dans un quotidien qui ne côtoie pas l'innovation. Je suis lauréat de la bourse avenir de l'Ordre des Ingénieurs du Québec et du prix de l'Ordre des Géologues du Québec. Souvent perdu dans la lune, mon rêve a toujours été et reste de travailler à l'agence spatiale canadienne comme astronaute pour une ventuelle colonisation de Mars et si je ne peux être la personne a y mettre le pied, je veux être part du projet. Jechante du Elvis Presley en cuisinant avec mon père pour relaxer.

Abstract: Mon projet cherche à démocratiser la recherche et développement des technologies aérospatiales en offrant un exemple de comment tous et chacun peuvent s'y intéresser et y apporter leurs innovations. Avec un budget et des ressources limitées, j'ai intégralement conçu, prototypé et produit une fusée multi-étage autonome dans mon garage (carburant, moteur, système aéronautique, fuselage, bouclier thermique, etc) avec des matériaux et procédés accessibles à tous.

Intermediate CAP Physics Prize – Jarek Osika, Flin Flon, MB

Project: Radio Eyes? Blackhole Hunter

Biography: Hello! My name is Jarek Osika, I am a grade 9 student at Hapnot Collegiate School in Flin Flon Manitoba and I am 15 years old. I like science, computers and anything outdoors. I have a whole YouTube channel focused on science and projects. It is called Itz Jarek! My science fair project is on radio telescope interferometer tuned to 2.4 GHz to detect a black hole object called Cygnus A. My radio telescope is made for sensing radio waves from outer space and graphing them on a computer using a Lime Software defined radio processor board along with some other components. I have been very interested and astounded by astronomy ever since I was little so I thought this project would be the right choice for me as I have been taking it farther each year. I am planning to keep going with this project as the years go by, I have been improving it every year to make it better and make it be able to detect more things farther away. If you are entering the science fair, I encourage you to research and make a project on a topic you are interested in.

Abstract: My project is building a software defined radio telescope interferometer to detect the black-hole object Cygnus A in the Swan constellation 600,000,000 light years away from Earth from my backyard. I am using two 33 inch microwave dishes tuned to 2.4 GHz with homemade bi-quad feeds made from copper wire, brass plating and coax cable.

Junior CAP Physics Prize – Krish Modi, Sarnia, ON

Project: 'No to Photo'? My Photo Consent

Biography: My name is Krish Modi and I am in eighth grade and attend Rosedale Public School in Sarnia, Ontario. I enjoy participating in a variety of extracurricular activities from academics to sports. I have been an Air-Cadet for two years. In Air-Cadets, we learn leadership, marketing, teamwork, and survival skills, all of which have helped me a lot. I aspire to participate in STEM-related activities and competitions. Some of which include: Mathletics, Math Kangaroo, Caribou Math, and of course the Science Fair. I have also been the lead programmer on my FLL Robotics team. Playing soccer, swimming, and coding are some of my hobbies. This thirst for STEM-related knowledge has driven me to participate in the Lambton County Science Fair for the sixth time. This year, I have explored the negative effects that photos taken without consent, have on an individual. I have devised a wearable device which when worn will distort any photo or video taken by any camera. A multitude of mathematical, physical, and hypothetical experiments were conducted which suggest that this is a plausible solution. I have been fortunate enough that my regional science fair selected me to participate in my first Canada-Wide Science Fair.

Abstract: Photos taken without consent and used for cyber-shaming have damaging effects on individuals. A wearable device is developed which emits a powerful, invisible, pulsing light in a wide angle using an efficient optics arrangement to distort an image taken by any camera. No such device or mechanism is available till date. A working prototype created using information gathered from various experiments is a plausible solution.