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HONORARY CHAIR

61ST EDITION OF THE HYDRO-QUÉBEC SCIENCE FAIR

CLAUDINE BOUCHARD

Executive Vice President – TransÉnergie and Construction **Hydro-Québec**

It's a pleasure to join you this year for the 61st edition of Expo-sciences Hydro-Québec. These science fairs have represented an important milestone in the academic paths of so many Quebecers since they were launched in 1960. I am certain that positive experiences help young people discover who they are and what motivates them, while cultivating a drive to innovate.

The current global pandemic has changed our lives and our vision of the world. It has presented huge challenges but also many opportunities to reinvent ourselves and build a better future for our society.

I would like to congratulate all participants for their curiosity, creativity and perseverance. I hope your experience is both enriching and stimulating.

I would also like to acknowledge the parents, friends, teachers and all those who have invested time and energy in helping these young people reach their full potential.

I hope you enjoy the Expo-sciences Hydro-Québec finals!

CLAUDINE BOUCHARD



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PREMIER PARTNER

61ST EDITION OF HYDRO-QUÉBEC SCIENCE FAIR

PIERRE FITZGIBBON

Minister of Economy and Innovation

Research and innovation are invaluable assets that help us meet the challenges of society and stimulate the economy. This is the reason why the Québec government places a high priority on the next scientific generation.

We are proud to encourage the holding of Expo-sciences Hydro-Québec, Défi génie inventif, Défi apprenti génie, and Odyssée de l'objet. These initiatives, along with the other activities of Réseau TechnoScience, showcase the creativity and determination of Québec's young scientists.

I wish to thank the network's team and its regional members for their great ability to adapt in organizing this year's virtual editions.

Thank you to the teaching staff and parents who are helping young people along their path of discovery. Promoting science and fostering an interest in science is a collective mission. I am pleased to see that we are all working together to achieve these goals. Québec needs talented people in technology, engineering and mathematics to build the society of tomorrow and to change the world.

To all the participants, I wish you friendly competitions that provide the opportunity to explore new horizons. I hope that this experience inspires you to pursue the road to scientific knowledge, achieve your dreams and aspire to a long and successful career!

PIERRE FITZGIBBON





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SPOKESMAN

61ST EDITION OF HYDRO-QUÉBEC SCIENCE FAIR

LUC LANGEVIN

Illusionist

I'm happy to welcome you to the virtual Regional Finals of the Hydro-Québec Science Fair! As you will surely agree with me, the past year has been full of challenges and we've all had to be ingenious to adapt. I invite you to discover in the next days the projects of young science and technology enthusiasts who have taken up this challenge brilliantly. The 61st edition of the Hydro-Québec Science Fair will certainly be different from the previous ones, but it will still be a golden opportunity to exchange with the other participants, the judges, and visitors from across Quebec.

Dear exhibitors, be proud of yourselves and your accomplishments! Having visited several finals in recent years, I know your projects result from a great deal of hard work, and this is particularly true in the current context. You took a simple idea and transformed it into a unique project. You impress, surprise and reassure us: With such inspired young people, our future is in good hands!

I know that for many of you, the Hydro-Québec Science Fair has been an adventure requiring support from persons around you. Teachers, educational advisers, school personnel, partners, mentors, volunteers, parents and friends: many thanks to you! It's partly due to your commitment that these young people have been able to carry out their projects successfully and that the Science Fairs have been possible for more than 60 years.

On behalf of the Réseau Technoscience and on my own behalf, bravo to the participants! You've taken up the challenge of science with flying colours!

LUC LANGEVIN





BOARD OF DIRECTORS

2021 Edition

HYDRO-QUÉBEC MONTREAL REGIONAL SCIENCE AND TECHNOLOGY FAIR

MR. AGOSTINO PORCHETTA

PRESIDENT - EAST

Dear Participants,

In a year where life has been challenging and difficult, you chose to DARE SCIENCE and participate in the first ever Virtual Montreal Regional Science and Technology Fair. Science and Technology are more important than ever, and we are delighted to be able to host this event for you. We know that you will change the world with your curiosity, determination and intelligence.

The Educational Alliance for Science and Technology (EAST) is a non-profit organization that promotes science and technology to young Quebecers through its numerous annual activities, such as the Montreal Regional Science & Technology Fair, the CRC Robotics competition and the Junior Robotics competition.

Thanks to our major partners and sponsors, our volunteer-based organization will continue to "INSPIRE", "ENCOURAGE" and "ENABLE" young minds in Quebec for years to come.

To find out more about our events, follow us on Facebook @aesteast and visit our website (www.sciencetech.ca).

Congratulations to all participants!

EAST Board of Directors 2020-2021

Agostino Porchetta, President Christie Brown, Executive Director Carole Charlebois, Treasurer Ken Elliott, Secretary Thomas Davis Mike Downey

Cindy Finn Rocco Iafigliola Wilson Wong, Vice-President





CHIEF JUDGE

2021 EDITION

Hydro Québec Montreal Regional Science and Technology Fair

DR. HEATHER MCPHERSON

CHIEF JUDGE- Sir Wilfrid Laurier School Board

Welcome to the virtual 2021 edition of the Hydro-Québec Montreal Regional Science and Technology Fair. Over the next three days, you will have rich and rewarding opportunities to explore scientific and technological innovations with students from the Greater Montreal Region. I know how much time and energy that all of you have invested into planning, developing and innovating your projects. I hope that this experience will you lead on the path to future scientific inquiries and technological innovations.

Enjoy and celebrate your achievements as you share your journey with other participants at the MRSTF. Congratulations on being chosen to participate in the 2021 MRSTF!

We wish you the best at this competition.

HEATHER MCPHERSON

Amilleson)

Chief Judge MRSTF-2021

SCHEDULE - HYDRO-QUÉBEC MRSTF 2021

SUNDAY, MARCH 28	FROM	TO
XHIBITORS & TEACHERS		
Ppening Ceremony	12:30	13:30
Overview of the event (via Zoom)		
Questions & Answers		
UBLIC VIEWING Connexion.TV	13:30	15:00
Students will be live at their "table" to present their projects Connexion.TV		
Friends, family and the public at large can <u>Click here to register at the Connexion.TV</u>		
Website (a confirmation email with a link to the event will follow) A detailed schedule is available on our website https://sciencetech.ca/montreal-regional-		
science-technology-fair/		
EACHERS		
eachers Briefing (will be held on Zoom, link sent by email)	14:30	15:15
MONDAY, MARCH 29	FROM	TO
JDGES		
Judges briefing for project evaluation (via Zoom)	8:15	9:00
Project Judging	9:00	12:30
CHIBITORS		
Exhibitor's Check-In (Zoom)	8:45	
Project Judging (Zoom)	9:00	12:30
Exhibitors presentations for public viewing via Connexion.TV	13:00	15:00
PUBLIC VIEWING		
Students will be live at their "table" to present their projects	13:00	15:00
Friends, family and the public at large can <u>Click here to register at the Connexion.TV</u> Website (a confirmation email with a link to the event will follow)		
A detailed schedule is available on our website		
https://sciencetech.ca/montreal-regional-science-technology-fair/		
JESDAY, MARCH 30	FROM	TO
KHIBITORS		
Live public viewing on Connexion.TV	9:00	12:00
Students are scheduled to present their project live)		
Friends, family and the public at large can <u>Click here to register at the Connexion.TV</u> Website (a confirmation email with a link to the event will follow).		
A detailed schedule of student presentations is found on our website		
https://sciencetech.ca/montreal-regional-science-technology-fair/		
WARDS CEREMONY		
Exhibitors will join in live on Zoom (join between 15:15 and 15:30)	15:15	
The Awards Ceremony will take place this year on Connexion.TV	16:00	17:00
The state of the s		

PUBLIC VIEWING - REGISTER HERE

DETAILS

- This year, all Public Viewing as well as the Award Ceremony will be held on a platform called <u>Connexion.TV</u>. This platform will allow you to browse and interact with students virtually
- Friends, family and the general public are invited to visit our student projects on the Connexion.TV platform.
 - o You may browse student "booths" (called tables in the platform) and watch their videos
 - There is a detailed schedule provides you with the list of LIVE presentations by students at their tables each day
- Visitors must REGISTER in order to access the site
- Once registered, you will receive an email with a link to the site. There is a FAQ document if you need support
- From the LOBBY you should click on "EXHIBITORS" to be brought to the Student Projects (Tables)
 - o Click on the "INFO" button to learn more about a project to join a table.
 - o You will be brought to the project video, a project description, and the list of times that they are presenting
 - o If you wish to join the LIVE PRESENTATION, click "JOIN TABLE" (Top Right)
 - Each "Table" has a maximum of 8 people at a time who can join a LIVE presentation
- NOTE: When you join a table, you will be asked to activate your microphone and camera. This is a LIVE interaction. You will also have the option of turning off your camera and microphone. At the table, there is also a CHAT feature where you can leave positive messages for the students.

PUBLIC VIEWING LIVE PRESENTATION SCHEDULE:

DATE	TIME	FEATURED PROJECTS
SUNDAY MARCH 28	13:30	101/103/105/107/109/111/113/115
	13:45	102/104/106/108/110/112/114
	14:00	101/103/105/107/109/111/113/115/117/119/121/123/125/127/131
	14:15	102/104/106/108/110/112/114/116/118/120/122/124/126/128/130
	14:30	117/119/121/123/125/127/131
	14:45	116/118/120/122/124/126/128/130
MONDAY MARCH 29	13:00	101/103/105/107/109/111/113/115
	13:15	102/104/106/108/110/112/114
	13:30	101/103/105/107/109/111/113/115
	13:45	102/104/106/108/110/112/114
	14:00	116/118/120/122/124/126/128/130
	14:15	117/119/121/123/125/127/131
	14:30	116/118/120/122/124/126/128/130
	14:45	117/119/121/123/125/127/131
TUESDAY MARCH 30	9:00	101/103/105/107/109/111/113/115
	9:15	102/104/106/108/110/112/114
	9:30	101/103/105/107/109/111/113/115/132
	9:45	102/104/106/108/110/112/114/129
	10:00	101/103/105/107/109/111/113/115/132
	10:15	102/104/106/108/110/112/114/129
	10:30	116/118/120/122/124/126/128/130/132
	10:45	117/119/121/123/125/127/129/131
	11:00	116/118/120/122/124/126/128/130/132
	11:15	117/119/121/123/125/127/129/131
	11:30	116/118/120/122/124/126/128/130/132
	11:45	117/119/121/123/125/127/129/131

Public Viewing: You need to <u>Click Here to Register</u> in order to view the projects A confirmation email, with a link to the event will be sent to you automatically.

NATIONAL PARTNERS



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Many thanks to our regional partners for their year-long support:













NATIONAL PRIZES



EXCELLENCE AWARDS

HYDRO-QUÉBEC BEST OVERALL PROJECT AWARD

Cash prize and trophy

PARTICIPATION IN 40TH SUPER EXPO-SCIENCES HYDRO-QUÉBEC, QUÉBEC FINAL

From April 22nd to 25th 2021

MEDALS FROM THE RÉSEAU TECHNOSCIENCE

Gold, Silver & Bronze per class

PRESTIGE AWARDS

- » Jeunes Talents Award
- » Hydro-Québec Energy Award
- » Ordre des chimistes du Québec Award
- » Prix du Ministère des Transports
- » Canadian Meteorological and Oceanographic Society Award
- Jeunesse en TI Award from the Réseau ACTION TI Secondary Level
- Jeunesse en TI Award from the Réseau ACTION TI Cegep Level
- » Jeune innovateur ADRIQ Award
- » Ted Rogers Award
- » Sanofi Biogenius Canada Award

DISTINCTION AWARDS

- » Antidote Award
- » Curium Award
- » Regroupement QuébecOiseaux Award
- » Cercle des Jeunes Naturalistes Award

REGIONAL PRIZES





Many Thanks to our Regional Prize Sponsors





Faculty of Faculté Science















EXHIBITORS LIST

BOOTH	FIRST NAME	LAST NAME	PROJECT TITLE	SCHOOL	GRADE
			INTERMEDATE PROJECTS		
101	Aditi	Pathak	Antioxidant Potential of Vit. C	Laval Senior High School	Secondary 3
101	Sophi	Ioannidis	Antioxidant Potential of Vit. C	Laval Senior High School	Secondary 3
102	Ines	Rebei	Composting at Home	Kells Academy	Secondary 3
103	Newsha	Vakil Azad	Corn-Made Ethanol	Kells Academy	Secondary 3
104	Briela	Shpendi	COVID-19 Affecting Adolescents	Laval Senior High School	Secondary 3
104	Brianna	Shpendi	COVID-19 Affecting Adolescents	Laval Senior High School	Secondary 3
105	Gia	De Rosa	E-Bike Experience	West Island College	Secondary 3
106	Maya	Samore	Future of the Mealworm Farm	Laval Senior High School	Secondary 3
107	Maria	Bayder	Hide and Seek Help	West Island College	Secondary 3
108	Geneva	Pham	Hugo	The Study	Secondary 3
108	Yian	Wυ	Hugo	The Study	Secondary 3
109	Hong Minh	Le	Magic Plastic!	Kells Academy	Secondary 3
110	Evan	Cecere	Orange is the New Green	Kuper Academy	Secondary 3
111	Nicholas	Aravanis	Rc Car	Laval Senior High School	Secondary 3
111	Adriano	Ferraro	Rc Car	Laval Senior High School	Secondary 3
112	Sarah	Pishdadi	Refugee camp H2O filter design	Laval Senior High School	Secondary 3
113	Antoine	Frappier- Temcheff	School Motivation and Stress	Loyola High School	Secondary 3
114	Victoria	Alexakis	Solving the Money Problem	Laval Senior High School	Secondary 3
114	Pina	Cammisano	Solving the Money Problem	Laval Senior High School	Secondary 3
115	Malek	Haddad	The Green Air Conditioner	Kells Academy	Secondary 3
116	Nicolas	Capolicchio	To Kill or Not to Kill	Selwyn House School	Secondary 2
117	William	Birks	Which lace wins the race?	Selwyn House School	Secondary 2
			SENIOR PROJECTS		
118	Jixin	Chen	A Green Cup	Kuper Academy	Secondary 5
118	Artimes	Fallah	A Green Cup	Kuper Academy	Secondary 5
119	Ava	Surette	Battling Cancer	Royal West Academy	Secondary 4
119	Siena	O'Neill	Battling Cancer	Royal West Academy	Secondary 4
120	Shivaani	Mohanraj	Colouring Is Deceptive	Kells Academy	Secondary 4
121	Mehnu	Mahapatuna	From the Ground Up	Kuper Academy	Secondary 5
121	Nihari	Senaratne	From the Ground Up	Kuper Academy	Secondary 5
122	Yufei	Li	Mask: Usage / Bacterial Growth	Kells Academy	Secondary 5
122	Shenglei	Sun	Mask: Usage / Bacterial Growth	Kells Academy	Secondary 5
123	Alejandro	Suarez Serrano	NFC Magnetic Door Lock	Kells Academy	Secondary 5
124	Logan	Meehan Mansi	Rocket Fuel	Kells Academy	Secondary 4
125	Justin	Clerk	Squirrel Traps and Baits	Kells Academy	Secondary 4
126	Aziz	Kitana	Wargaming Bot	Kells Academy	Secondary 4
127	Elias	Rebei	What a Picture!	Kells Academy	Secondary 5

EXHIBITORS LIST & STATISTICS

воотн	FIRST NAME	LAST NAME	PROJECT TITLE	SCHOOL	GRADE	
	COLLEGIAL PROJECTS					
128	Joyce	Li	Bacterial Resistance Reversal	Marianopolis College	Collegial 1	
128	Angelina	Volny	Bacterial Resistance Reversal	Marianopolis College	Collegial 1	
129	Jordan	Levett	MediGraph	Vanier College	Collegial 1	
130	Laurence	Liang	miRNA Discovery for COVID-19	Marianopolis College	Collegial 1	
131	Allison	Engo	Saved on the Fly	Marianopolis College	Collegial 1	
132	Adam	Elkaim	The Stem Cure	Marianopolis College	Collegial 1	

EVENT STATISTICS

PROJECT TYPE			
Design	13		
Experimentation	17		
Study	2		
Total	32		

PROJECT & STUDENT DATA			
PROJECT CATEGORY			
Biological & Health Sciences	11		
Social Sciences & Social Networks	2		
Environment and Ecosystems	8		
Pure Sciences	1		
Engineering, computer science, robotics applications	10		
STUDENT DATA			
Female	17		
Male	15		
Solo Projects	22		
Duo Projects	10		

LIST OF PARTICIPATING SCHOOLS		
Kells Academy	Royal West Academy	
Kuper Academy	Selwyn House School	
Laval Senior High School	The Study	
Loyola High School	Vanier College	
Marianopolis College	West Island College	

AWARDS CEREMONY - REGISTER HERE

AWARD CEREMONY - TUESDAY MARCH 30 - 16:00

- Visitors must **REGISTER** for the event (the link is the same as public viewing)
- Students will be on Zoom and join in live should they win a prize
- Friends, family and the General Public are invited to take part.
- From the Lobby, click on the "CEREMONIES" box. Then, please select our Event (AWARDS CEREMONY, MRSTF) to join
- You must "join a table" to see the event. You can choose to sit with others, or you can choose a "Solo Table" if you wish to be at your own table (top left button, "solo table")
- During the ceremony can use the CHAT FEATURE to cheer on our students

2021 Hydro-Québec Montreal Regional Science & Technology Fair Organizing Committee

Educational Alliance for Science & Technology

Paige Fairlie

2021 MRSTF Coordinator

Christie Brown

Executive Director, EAST

Barry Hannah

Consultant

Lester B. Pearson School Board

Dr. Heather McPherson

2021 MRSTF Regional Chief Judge

Agostino Porchetta

President, EAST

Wilson Wong

Vice-President, EAST

SRC Committee (Regeneron ISEF competition)

Maurice J. Chacron

Associate Professor, Department of Physiology McGill University

Mariana Frank

Professor, Department of Physics Concordia University

Raffaat Ghanem

2021 SRC Chair Science Department Kells Academy

Many thanks to all of our judges who helped to evaluate the student projects.

We hope to see you in person next year.

MONTREAL REGIONAL SCIENCE AND TECHNOLOGY FAIR 2022

LAVAL SENIOR HIGH SCHOOL (Or Virtual if Necessary)

MARCH 27TH – MARCH 29TH 2022

DISTINGUISHED SERVICE AWARDS

Presented by: Youth Science Canada To be officially presented in May 2021



MR. AGOSTINO PORCHETTA President, *EAST*

Agostino "Gus" Porchetta has been the President of the EAST organization for as long as anyone can remember. He has promoted and directed our region's endeavors towards promoting science and technology fairs at the local, regional, provincial, national and international levels for over twenty-one years.

Gus acted as Science and Technology Fair Director (MRSTF) for many years and he has been instrumental in developing the relationships that have made the MRSTF, and all other programs at EAST such a success story. As President, Gus encouraged the Montreal hosting bid for the 2016 Canada-Wide Science Fair, a milestone in EAST's history.

People will remember Gus for his love of an espresso and his strong passion for science literacy. Under his leadership, we will always be grateful for his steadfast determination to remain financially sound but, at the same time, providing premier events for students in the Greater Montreal Area.

After many years of service, and a long career as an educator, Gus is hoping to retire (although we keep asking him to stay on for "one more year"). We thank Gus for his illustrious career in science and technology, and his unwavering support.

We are so delighted that he has been selected to receive this award from Youth Science Canada.



MR. WILSON WONG Vice-President, EAST

Wilson Wong is the longest, continuously serving, volunteer in our organization. He has clocked-in over 31 years towards promoting and organizing science fairs at the local, regional, provincial, national and international levels. In addition, Wilson has either organized or supported EAST's two-robotics programs (CRC-Robotics & RoboJunior) for over twenty years, and on a completely volunteer basis.

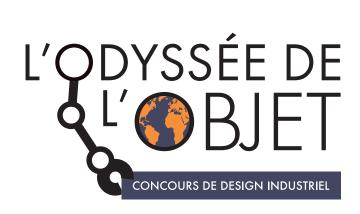
Without his enthusiasm, the Montreal Regional Science & Technology Fair would not have achieved such high records of enrolment, nor have been so successful. He was a Local Host Co-Chair for the Canada-Wide Science Fair in 2016, here in Montreal.

He has supported numerous science and robotics students who have consistently won awards at all levels. Wilson has also played several roles with the Canada-Wide Science Fair over the years. He has been everything from a Chaperone, to a Chief Judge as well as a member of the CJAP (Judging) teams.

Wilson has been EAST's Vice-President since 2001, and continues to be involved in the organization of EAST events. Not to mention, he is EAST's official caterer and will tell you "it's no big deal" to prepare meals for over 30 people at once!

For his unwavering service and support we are so pleased he has been selected to receive this award from Youth Science Canada.

CONGRATULATIONS GUS & WILSON



GRANDE FINALE

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Du 1er au 16 mai 2021



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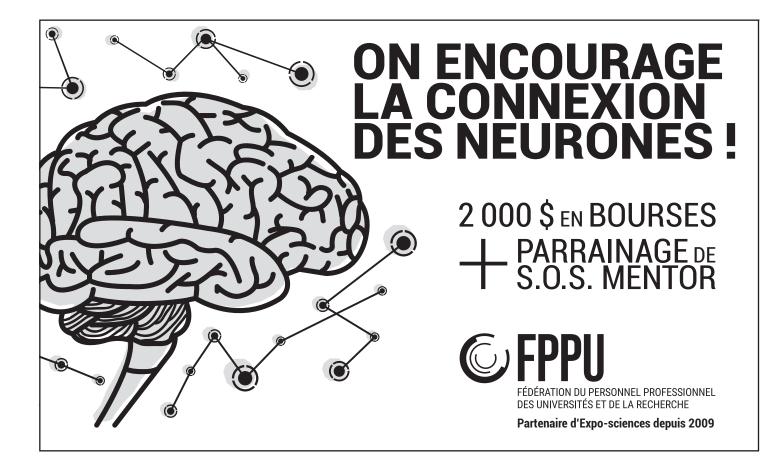
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