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## Overview

SFU Applied Sciences Outreach offers fun, engaging workshops and resources that encourage youths to explore topics in Science, Technology, Engineering, Arts and design, and Mathematics (STEAM). We aim to not only enhance STEAM literacy among youths in BC, but also foster an appreciation of how science can be used to make sense of the world we live in and improve how we do things.

### About STEM Speaker Series

“What should I study in university?”

“What are my career options if I’m interested in STEM?”

“What is university like?”

If you are a Grade 8-12 student and these questions are on your mind, then perhaps this is the right event for you! The Science, Technology, Engineering, and Mathematics (STEM) Speaker Series provides secondary school students with the opportunity to meet and interact with university students, faculty members, and/or working professionals in STEM fields.

During this event, our guest speakers will present and discuss their research and/or the work they do in their profession. They will also talk about their career path and what made them pursue the field they are in. Finally, there will be a Q&A session for students to ask questions and interact with our guest speakers. This speaker series is also open to the public as we want to encourage parents, guardians, and teachers to join us in supporting youths who are interested in pursuing post-secondary studies in these disciplines.

Meet our speaker: Saby Mathavarajah



I am currently a PhD student at Dalhousie University (Halifax, Nova Scotia) in my final year. After graduation, I am starting as a postdoctoral fellow at Harvard Medical School (Boston, USA) in the fall. Our lab has been studying cancer for the past 5 years using model organisms ranging from zebrafish, axolotl, mice and even amoeba. Studying diseases through these models has been an exciting and rewarding time so far in my career and it all started in undergrad when my supervisor introduced me to the social amoeba, which I still use today. If you're interested in learning more about our friendly amoeba and how they're helping us answer important questions in medicine, come check out my talk!

**Presentation title: How soil amoeba are improving our understanding of cancer**

Cancer is a disease that will affect 40% of all Canadians in their lifetime. While we have made significant progress towards understanding cancer, there are several types of cancer lacking good treatment options (e.g., lung and prostate). To target these cancers for therapy, our lab (the Dellaire lab) has focused on studying the genetics of cancer cells through the lens of important genes that help prevent cancer. While some of these genes are desirable when it comes to therapy, we previously could not crack the code on what functions these genes perform. One issue being that the gene of interest was essential to the survival of human cells. As a novel strategy, we used a model organism from deep within the soil, the social amoeba, to successfully study these genes. Using the amoeba, we were able to study how the gene safeguards cells from the fate of becoming cancer cells. In addition, the amoeba has now provided a unique screening tool for testing novel drugs which could then be translated into the clinical setting. The incorporation of the social amoeba has vastly improved how we study cancer in our lab owing to its unique life cycle, ease of use, and its simplicity.

## Schedule

Date: Feb 25, 2023 (Saturday)

Time: 1:00-2:00 pm

Grade: 8-12

### **Sign-up link:**

<http://websurvey.sfu.ca/survey/441703633>

The meeting link will be opened 5-10 minutes before the talk starts for students to test their setup (e.g. is your audio working?). The deadline to sign up is Feb 20 (Monday) at 11:59 pm. A confirmation email with more details (e.g., Zoom link) will be sent out by Feb 21 (Tuesday) at 5:00 pm.

## Contact

If you have questions, please do not hesitate to contact the APSC Youth Committee at [saadmin6@sfu.ca](mailto:saadmin6@sfu.ca).

## Virtual Community Guidelines

Welcome to the STEM Speaker Series! This speaker series provides secondary school students with the opportunity to meet and interact with role models in STEM fields. This speaker series is also open to the public as we want to encourage parents, guardians, and teachers to join us in supporting youths who are interested in pursuing post-secondary studies in these disciplines. Before you join us, there are some guidelines we need everyone to follow to maintain the safety of everyone involved. See below for our Virtual Community Guidelines.

**Personal Safety:** We take safety seriously. If harm is disclosed or discussed (harm to self, or harming others) then we will take the appropriate steps to ensure your continued safety and the safety of those around you. Threats about others personal safety will not be tolerated.

**Respect:** Treat those online as you would treat them in-person that is with respect, dignity, and care.

**No Hate Speech or Bullying:** Bullying, discrimination, and harassment of any kind will not be tolerated.

**Communication:** Communication is encouraged in this workshop. Communicate with respect and listen to others when they speak or share ideas, which includes when sharing ideas out loud or via the chat function. Mute your microphone when not speaking and only turn your video on if you feel comfortable to do so.

**Privacy:** Respect the privacy and personal information of those in the shared virtual space by not sharing information that is not your own. Respect your own privacy by not sharing any personal information with those you do not know. Sharing of the Zoom link with those outside of the specific intended group is strictly prohibited.

**Copyright:** There will be no recording of anything that happens in this space, which includes participants and instructors taking pictures, recording parts of the workshop or recording their screen during any part of the workshop.

By joining our STEM Speaker Series, you are considered to be in agreement with the above community guidelines. We will take the appropriate actions if any of the above guidelines are violated. Depending on the situation, this may result in revoking participation in the remaining events/workshops. Thank you in advance for your commitment for keeping our virtual events and workshops engaging, safe and of course, fun!