

SECOND EDITION

DEC/JAN | 2021

# THE FREQUENCY

A MCMASTER ENGINEERING SOCIETY PUBLICATION

# 20

MONTHS OF  
THE PANDEMIC

*Students have mixed  
feelings about the return  
to in-person classes*

# Fall Co-Op Feature

*Learn all about Sam Bovey's placement  
at Mesomat Inc.*

**PLUS**

How to get a  
research position  
this summer!



# Letter from the Editors

Hello Fireball Family!

It has been a busy fall season filled with many exciting moments and memories. We wanted to thank you for keeping the engineering spirit running high despite the many uncertainties we are currently facing due to COVID-19. We hope that the Frequency continues to inspire and motivate you through exam season and the upcoming Winter term!

As the Winter break inches closer every day, we urge you to plan some time to truly take a break and detach - perhaps with some light reading of the Frequency! Listen to music, drink some hot cocoa, read a book, or get outside!

Wishing you all a safe and festive holiday season and sending our best wishes for the New Year and new semester! Happy reading!

Adrienne Scott & Tiffany Tjong  
McMaster Engineering Society  
Frequency Editors



# The Return to "Normalcy"

Elyssa Proulx

It has been 20 months since the world went into lockdown after COVID-19 was recognized as a global pandemic. As a result, what society recognizes as "normal" has evolved dramatically. One of the most significant adjustments for students has been the abrupt transition from in-person school to virtual learning. Some students have grown to appreciate the ease of attending school from anywhere, but there are undoubtedly benefits to live interaction as opposed to computer anonymity. Now that the prospects of being back in-person in the winter term are higher than ever, there has been a divide between those who are thrilled to return to school and those who are reluctant to abandon this virtual environment. Several factors play a role in how students feel about the shift in routine; issues such as the ease of recorded lectures, in-person exams, and the scramble to find housing have put many on the fence about whether to be excited or apprehensive about this change.



A common concern amongst students is the loss of the many advantages that come with attending class online. Online classes mean being able to wake up later, commute a shorter distance, and the comfort of knowing that any missed class is recorded and available for viewing later. On the flip side, however, some students have expressed that they would feel more compelled to attend class if it wasn't recorded, and others believe this would encourage them to go to sleep earlier.



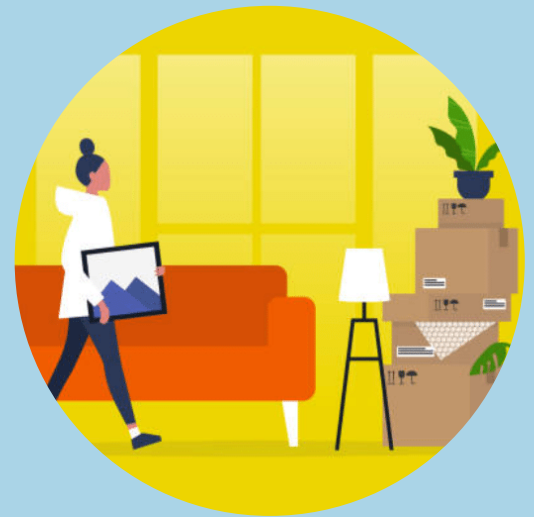




First-years and second-years have never experienced in-person exams at university. For third-years, they were around for a mere few months. Even for upper-year students, they have become a foreign concept over the past year and a half. Some argue that writing exams remotely provides a certain level of comfort as they can write it from the security of their home, often with an open book. Their opponents argue that proctors cause far more anxiety than in-person exams, and that writing in a lecture hall is part of the university experience.



Another cause for divide is the housing predicament that has become widespread for since students suddenly found out that school may return to in-person. Many placed bets earlier in the year on whether or not school would be online in the winter, and those who believed it would be did not search for housing in the summer. As a result, many of these students have found themselves in a mad scramble to find housing that responds to their needs, especially within a certain proximity to the university.



Whether we return to in-person classes next semester or not, it is clear that society is capable of adjusting to considerable changes. If students have been in-person in the past, there's no reason why we shouldn't be able to be now!



# The Road to Undergraduate Research

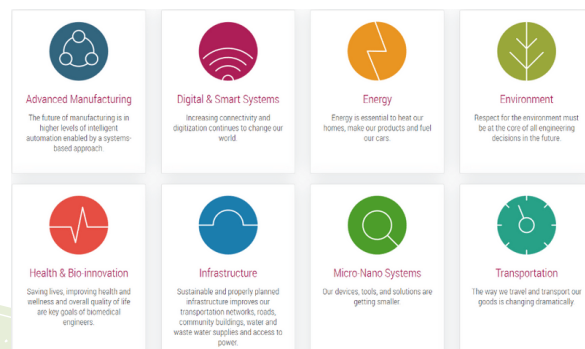
Sarah Arnold

On Wednesday November 24th, the McMaster Society for Engineering Research (MacSER), hosted their 6th Annual Research and Entrepreneurship Fair. This event, hosted virtually for the second year in a row due to the pandemic, serves as an opportunity for undergraduate students to learn more about different possibilities in research and innovation at the university. The evening began with an informative presentation given by the Associate Dean of Engineering, Dr. John Preston, as well as the President and Vice-President of the society. Afterwards, participants had the opportunity to explore booths from different research labs, spanning across multiple faculties.

The journey to finding a research position can be a long, tedious, and often frustrating task. Undergraduate students who are new to university are not always sure how to begin. Presented below is a breakdown of what is often considered the “go to formula” for approaching this process.

## Step 1: Identify the type of research opportunity you are interested in

- Check OSCARplus or LinkedIn for any research related job posts.
- Explore the research clusters, which are broken down on the Faculty of Engineering’s webpage.
  - There are 8 clusters. You can explore the different clusters and the type of research that is being done in the field
- At this time, also ask yourself if you would be willing to work as a volunteer.



## Step 2: Identify the professors you are interested in contacting



- Within each research cluster, you can search the related faculty who are currently conducting research in the field.
- Look closely at their research, explore their labs, and make notes about which topics intrigue you most.
- Create a list of professors that you are most interested in working with.

## Step 3: Preparing to reach out

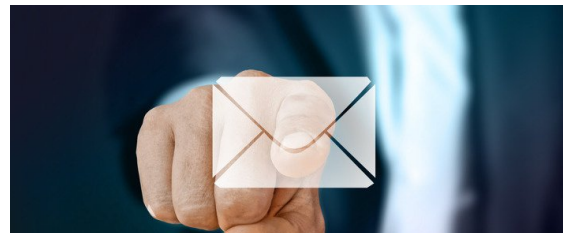


- Before you send off the email, make sure you have familiarized yourself with the professor’s work.
- Ensure your resume is up to date and organized.
- You should also try to have a professional looking and current LinkedIn page.
  - Did you know that you can customize your LinkedIn URL? You can shorten it and include it in the header of your resume.
- Resume and LinkedIn critiques can be booked on OSCARplus. These are amazing resources!



## Step 4: Sending the email

- Okay... this is the daunting part! Drafting a formal and well-written email is a difficult, yet an important part of the process. Below is a typical template that can be followed:



Hello Dr. \_\_\_\_\_,

**Intro:** Introduce yourself, your program, and express your interest in potential research experience. Discuss what interests you about their work. It is important to customize this section for the professor.

**Body:** This is where you can talk about your strengths and abilities. This section can be either bullet point or paragraph form. Describe different leadership, volunteer, and other extra curricular experiences you have had that have helped you develop your skills. However, do not make this too lengthy. Mention that you have attached your resume for reference (make sure to include it as a PDF).

**Closing:** Mention your interest in meeting, if possible. This is where you can include that you would also be happy with exploring any volunteer opportunities (if applicable).

**Ending sentiment,**  
Your Name



## Step 5: The response (or lack thereof)

- Professors are very busy and it may take a fair amount of time to hear a response.
  - You may not hear back at all - and that is okay! While it may be discouraging, please remember that it's truly nothing personal.
- A professor may respond saying that their lab is full or that they are unable to take on any more students.
- If a professor is interested, they may invite you for an interview.
- Expect to discuss your abilities and interest in their projects. Also expect to discuss potential grants they will want you to apply for.
  - Most often, professors will hire students with external funding (eg. NSERC)
  - Grants such as these will typically have deadlines in the first-half of second semester

It's important to remember that not everyone will be able to secure a research position, and that's okay! There are still several great co-op or educational enrichment opportunities out there if you are interested. It is still a great accomplishment to put yourself out there and try to seek out an opportunity.

**Best of luck!**



# FALL CO-OP FEATURE

By Adrienne Scott

As first semester comes to a close, you might be thinking about applying to co-op positions for next summer, or starting a year-long co-op. I asked my friend Sam Bovey a few questions to give us some insight into what it's like being on co-op, and how he secured his position!

## What program are you in? Where are you doing your co-op term?

I'm currently in my 4th year of Engineering Physics, doing an 8-month co-op placement at Mesomat Inc.



Mesomat is located at McMaster's Innovation Park  
[Image: MIP]

## How did you find your co-op position? What advice do you have for students looking to secure co-op positions?

So I found my co-op position through word of mouth (and maybe a bit oscar plus but I refuse to give that platform more than 10% of the credit). The posting was available on the website and a friend then told me to apply, so I did. The rest of the interview process went pretty quickly from there. As for advice on finding a co-op, the biggest thing to do is just get as many applications out there as possible. Check oscarplus as well as non-McMaster sites for positions, and try to get your resume out there. A lot of engineering positions are filled with premade connections, but that's not something that everyone has the luxury of. Networking events through your program are also a good way to get at least an interview at a company, so check those out as well. I'm sure there's other stuff like resume building activities and tips for cover letters, but those are the big ones for me.







### **Are you working in-person or from home? Which do you prefer?**

I've been able to work in person from the start of the position in September. I think everyone has their own preferences with at-home vs in person, but I much prefer coming in to work. It makes it way easier to engage with people and get hands-on experience, which is extra valuable to me because of online school.

### **What connections have you been able to make between your co-op and your degree?**

There's definitely a connection between my position and EngPhys. EngPhys is sort of a mix of a few different streams, and so it's up to you to apply your background knowledge to whatever position you're filling. Since Mesomat is a newer startup, I get the chance to try my hand in a few different areas, so it's a good fit. We have courses on electronics design, which I've had to use for new PCB designs, and other courses have more emphasis on coding and computer interfacing with external circuits, which is also a big part of what I do here. I've definitely referenced old course notes since I've been here.

### **What has been the most interesting part of your co-op so far?**

I'm not sure exactly what the most interesting part of my co-op would be. I'd say generally just the freedom I've had in my projects to learn about a variety of topics - like it's not just coding or circuit design or CAD work, it's practice in a bunch of new areas. If I had to pick something specific though, we produce our fibers in-house which is a pretty cool process to see, that would be my pick.



# EXAM PREP 101

By Eileen Cornejo

With exam season upon us, everything seems to get more chaotic. Whether these are your first exams or your last, we can all agree that this time of year is not fun. However, it doesn't have to be horrible. We want to present you with some studying strategies that can hopefully help you through this time.

## Set goals

First of all, planify your time. Although it sounds cliché, setting your tasks and goals for the day, or even for the week, can be extremely beneficial for your peace of mind. Set attainable goals for the day and do not overcrowd your list. Remember to include study breaks (and to actually take them!).



## Set your soundscape

Our second tip is that you should find the perfect study playlist. Different people study with different sounds (or no sounds at all!). Try new playlists or different ambient noises and find the best match for you! It could be tunes that you know by heart, or some unique whale songs. Maybe classical music, or perhaps some rock. Don't be afraid to try new music, genres, or artists. Tip: sources (Twitter) claim that listening to the Super Mario theme song helps you concentrate and work faster. Try it out for yourself!



## Set your location

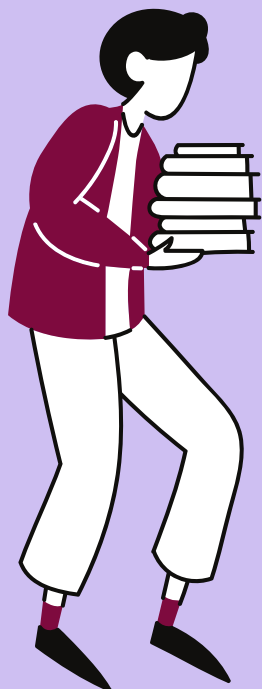
Sometimes it can be hard to concentrate for hours and hours on end. Especially if you are studying in your room, where you can see your cozy, comfy bed right next to you... A new location might help you concentrate and get more studying done. Check out our article "Title", to find your new study space.



## Take care of yourself

Finally, take care of yourself!!!! Studying for long periods of time can be hard on your body and mind. Take breaks, eat nourishing foods, drink enough water, move your body, and get enough sleep. These all sound like basic things, but amongst all the chaos that exams bring, we can often forget them. Remember that if your body is feeling tired, you won't be able to study effectively, so take care of it. Your body does so many wonderful things for you—show it some love.

Don't be surprised if you're feeling more stressed and overwhelmed than usual during exam season, but don't let it get the better of you. Be prepared, reach out to family, friends, or some of the resources at Mac for emotional and academic support. We're all in this together! And remember that you are not defined by your grades, you are a whole person capable of wonderful things.







# STUDY SPACES

By Eileen Cornejo

As students, we know that a study space can make or break a study session. Some of us like complete silence, some of us like to have background noise, or maybe you like both? Whatever your preference is, we are sure that by now you have discovered your favourite study spot. However, we would like to propose some new study spaces for you so that hopefully you can find your new favorite!

Of course, number one on the list are all the amazing libraries at Mac. From Thode to Mills, the different libraries at Mac have a lot to offer. You can find quiet study floors, collaborative spaces, and everything in between. Make sure to check out their hours on the Library's website.

Another study spot on campus that might not be on your radar is the Peter George Center for Living and Learning (PGCLL). Apart from being the newest rez on campus, PG includes multiple study spaces, like the study room on the mezzanine level and the multiple tables and benches found throughout the building.

Last but not least, you are always welcome at Hatch. Here, you can book study rooms through the MES website if you are looking to organize a group study session. Alternatively, you can find a table at The second floor Junction, where your fellow engineering students will most likely be studying as well.



Thode Library



Peter George Center for Living and Learning



Inside PGCLL



As much as we all love campus, sometimes we need a change of scenery. Just a short walk away from campus, you can get to Westdale, home to coffee shops and local restaurants. What is better than enjoying a hot (or cold) cup of coffee while studying for a test? Maybe even add a delicious dessert to go with it! This could be you, if you decide to study in Westdale. Although it sounds like a really good time, please be mindful of the time you spend inside a location. With limited in-store dining, small shops might have to put a time limit to your visit, so please respect them and keep supporting local businesses.



Westdale

To close off this article, we wanted to bring attention to the limited study spaces that McMaster has to offer during the weekends. With exam season looming over us, more and more students will feel the need to use the libraries at Mac to catch up on their tasks. However, please be aware that Mills Library Commons, the only library open during the weekend, is also known as the only “quiet” space you won’t be shushed in. Feel free to explore and find your own silent study space, if Commons isn’t for you!



First Floor, Mills



Silent Study spaces, Mills



HG Thode Library



Mills Learning Commons







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