

University of Saskatchewan

1. What is your vision for the conference?

Our vision for CUMC 2018 is to provide an opportunity for undergraduates to meet and share ideas with their peers from across the country, to introduce them to the research process and to new and exciting topics in math, and to inspire them to persist in their pursuit of mathematics. We want to give attendees a glimpse into mathematics as it is practiced professionally in both academia and industry, with an emphasis on emerging viewpoints and cutting-edge applications. Our hope is that by sharing this knowledge through established keynote speakers and students alike, the attendees will be both inspired and motivated to seek out mathematics beyond the curriculum and to undertake research and find new applications of their own. We want to be able to bring together passionate math students from across the country and foster connections and friendships that will support them long after the conference is over as they pursue their academic and professional goals. Our hope is that CUMC 2018 will give young researchers the chance to share their accomplishments and that their interest in mathematics will be reinvigorated. Finally, we hope that by hosting CUMC 2018 at the University of Saskatchewan, we will awaken a new and stronger interest in mathematics in the Canadian Prairies.

2. Which aspects of the CUMC do you think work particularly well and would continue to be included in your iteration of the conference?

We have noticed numerous aspects of the CUMC that make the conference amazing, and we applaud the organizing committees of all the previous conferences who have implemented them. We plan to include as many of these aspects as possible.

To foster socialization among attendees from different universities, we will include a program of social activities that will give participants a chance to explore our campus and city. Also, for our opening banquet, we plan to either randomize seating for a formal banquet or have an informal opening BBQ to encourage the participants to meet and learn about one another. The treasure hunt at CUMC 2017 was a great way to promote the participants working together, and we would like to implement something similar. We also want to continue the idea of roundtable discussions with varied topics, which will give attendees the chance to learn and participate in a comfortable, supportive environment.

On the logistics side, we will continue to provide name tags as well as notebooks and pens in the conference packages. We will also provide volunteers and organizing committee members with brightly colored t-shirts so they are easily identifiable by attendees. We will hold all talks in wheelchair accessible locations, and provide all announcements, signs, and the conference program in both French and English. We would like to continue the practice of having no more than three talks at one time to keep attendance high in as many talks as possible. We also want to continue having a 'talk prerequisite' or 'suggested background' for every abstract to help participants decide which talk they should attend at a given time.

Some other CUMC mainstays that we would like to implement are the recruitment fair, the LaTeX workshop, the showing of a math-related film, the gender diversity in math panel, and the great closing banquet. The recruitment fair will help undergraduates learn more about the various career doors that a mathematics degree can open, and the LaTeX workshop will give a gentle introduction to students who might not be familiar with the incredibly useful system. The film, which we intend to show at the historic Broadway

Theatre, will be a good way for students to relax and discover a popular Saskatoon venue, and the panel will encourage diversity in mathematics, provide inspiration, and assess the many challenges that remain. Finally, a memorable closing banquet will leave a lasting impression on participants, which will promote high attendance for future years.

3. Which aspects of the CUMC would you improve upon and how? Are there any new ideas that you would like to bring to the conference?

One thing we noticed after attending CUMC 2017 was that the talks were more heavily weighted on some days more than others. We feel that this can cause attendees to become burned out on the days with a lot of talks, and the days with fewer talks may be less interesting. We will plan to distribute the talks as evenly as possible to avoid this problem.

We have also spent time looking at the bids and programs of previous CUMCs, and noted other areas for improvement. We want to emphasize the French aspect of the conference as much as possible, so we will aim for at least one French-speaking keynote. Our main faculty contact who was on the organizing committee of CUMC 2005 suggested having a bilingual keynote who alternates between speaking English with French slides and speaking French with English slides. He pointed out this was done to great success at CUMC 2005 and we believe this help to represent both languages at CUMC 2018 as well.

To improve logistics, we will ensure every participant has a clear map of the campus in their program, and that we have numerous signs on display to direct attendees. We will also make our immediate contact information available (email and cellphone numbers) so we can provide any necessary assistance. We also want to offer as much help as possible to those giving talks, so we will provide tips and information about how to present, especially since many of the attendees may never have presented mathematics before.

We also have some ideas for new additions to the CUMC. We'd like to have at least one keynote who is employed in industry rather than academia, and to supplement this, also have a panel discussion of both academic and industry professionals. This gives students the chance to first have an introduction to working in industry, and then to discuss the different options and ask questions to professionals in both fields. Also, we would like to include a workshop based on scientific computing, as we recognize the growth of big data and numerical analysis in mathematics and its applications. A potential topic of the workshop is Jupyter, an open source software that combines the programming languages Julia, Python, and R. This was done with immense success at PIMS YRC 2017.

Finally, we propose implementing a poster session in addition to the usual program of student talks. We believe that a poster option will put less pressure on undergraduates who may be nervous to give a talk, but will also serve as an effective introduction to communicating mathematical research while at the same time giving their work exposure.

4. What are your proposed dates for the conference and why?

One of the dates we are considering is June 20th -24th . One of the most popular events in Saskatoon in the summer is the SaskTel Saskatchewan Jazz Festival, held for 10 days every June, of which will most likely include this proposed date next year. Besides hosting world class artists at the mainstage, the festival also offers a free stage in the beautiful Kiwanis Park. Many talented artists from a wide range of genres perform each year, and we believe this is the perfect way to unwind at the end of the day while also connecting with

other attendees in a non-mathematics environment. Besides the Jazz Festival, this date works logistically because it is at the very end of the University of Saskatchewan spring term, before the summer term starts, so it will be easier to book the top choice lecture halls for our talks and workshops. As well, we will hopefully be able to get as many attendees as possible if our term schedule is similar to those of other universities.

A second possible date that we have chosen is July 11th -15th. This is because another one of our popular summer events is 'A Taste of Saskatchewan', which is held in the heart of downtown each year at this time. In this event, more than 30 of Saskatoon's best restaurants feature a few dishes of their choosing. It is a great way to test out a restaurant you haven't visited before, and often there will be something unusual offered; for example, some of the most popular items offered this year were triple-dipped cheesecake on a stick, wild caught gator, seasoned baby octopus, and the deep fried Mars bar, along with more traditional favorites like poutine, specialty burgers, and ice cream. Besides the food, over 50 local bands perform throughout the day, so there is always amazing entertainment whenever you go. We think this is a great way for attendees to really get the full Saskatoon and Saskatchewan experience, and strengthen the connections they have made so far in the conference. Also, this date is late enough in the summer that it provides participants who are working on summer research to have some results to present and to discuss it confidently, or at least to better appreciate the different mathematical topics and research methods presented during the conference.

Although we have proposed two possible dates here, we are flexible and are happy to take into consideration possible conflicts that may arise as well as input from the CMS Student Committee before we set a final date.

5. What are the unique aspects of your proposed conference location (institution, city, etc), that would add to the conference experience and why?

The University of Saskatchewan is an ideal location for CUMC 2018. It is one of Canada's top research universities and is also home to the only Synchrotron in the country, which resides in the Canadian Light Source, a world-class scientific facility that employs physicists, chemists, computer scientists, and applied mathematicians. Participants would be able to tour the facility at no charge. The U of S also has a beautiful and historic campus with aesthetic architecture and lush greenspace. The campus itself is located all in one area, and is small enough that attendees won't get lost when moving between sessions. However, there is still a lot to explore on campus: several art galleries, a sculpture garden, the Museum of Natural Sciences (which has life-size dinosaur models!), an Observatory that is open to the public on some evenings, and many culinary options all within walking distance. Our residence accommodations are also based on campus, so there won't be any transit fees necessary to attend the conference sessions. As well, the University of Saskatchewan campus is incredibly close to the popular hotspots of Saskatoon: the South Saskatchewan River runs nearby, Downtown is just across the bridge, and the ever-popular Broadway Avenue, where numerous summer festivals take place, is only blocks away. If participants want to explore other areas of the city, there are several buses that stop at the University Terminal and the fare is only three dollars. Logistically, the campus will work well since it is wheelchair accessible, and we also have a variety of small and large lecture halls in which to hold presentations.

Besides being home to the University of Saskatchewan, Saskatoon offers many other exciting activities and beautiful areas. The city has several museums, art galleries (one of

which is opening this fall, the Remai Modern Art Gallery), live theatre, repertory cinemas, and restaurants with live entertainment to provide cultural and artistic enrichment. Saskatoon also hosts numerous events every summer, such as the Pride Festival, the Fringe Festival, the Jazz Festival, Folkfest, 'A Taste of Saskatchewan', and our 'Shakespeare on the Saskatchewan' performances. The city boasts an impressive number of high-quality dining venues, featuring cuisines from all around the world. Of note is that Chef Dale Mackay, winner of the first season of Top Chef Canada, owns three restaurants in the city, which are all very popular. In addition, there are many independent cafés, pubs, patios, and ice cream shops within walking distance of the campus and the Downtown.

A few other notable places in Saskatoon are the Berry Barn, the Western Development Museum, the Forestry Farm, the Saskatchewan Railway Museum, the Farmer's Market, and the Delta Bessborough Hotel, a castle-like historical landmark which is said to be home to a few otherworldly spirits. Saskatoon summers are beautiful, with temperatures in the 20-30°C range and gorgeous sunsets. There are also many trails and parks to discover, as well as a riverboat cruise on the Prairie Lily.

Last but not least, it's important to mention that the University of Saskatchewan's home is on the Prairies, a sight that attendees from other provinces may never have had the opportunity to take in. Saskatchewan really is the Land of the Living Skies, where the fields give way to a gigantic, clear blue midday sky filled with the fluffiest clouds, which, as the sun goes down, turns to nearly every color of the rainbow, producing the famous Prairie sunset that has to be seen to be believed. If attendees are lucky, they may even see the Northern Lights dance across the skyline at night! Saskatchewan may not be the first place you think of for exploring and sightseeing, but it's definitely unforgettable. In the province that gets the most sun per year and has an abundance of excellent beaches, we advise all attendees not to forget their sunscreen!

6. How will you do your best to ensure the conference attracts as many attendees as in the past or more?

We believe the best way to attract attendees is to provide an experience that is both eye-opening and enjoyable. We also want to inspire participants by hosting accomplished researchers who will engage and motivate with their keynote speeches in a broad range of topics. At the same time, we want to offer a wide variety of social activities that encourage the participants to establish connections and, put simply, just have a great time.

The second aspect of attracting attendees is by having the information widely available to undergraduates across the country. We plan to achieve this by updating the website regularly and by running several different social media pages for the event (e.g. Facebook, Instagram, Twitter), as we believe this is one of the best ways to have widespread reach in the information-driven world that we live in. We also plan to contact other universities about the event, but to really make sure we access the interested students, we will reach out directly to different departments within the universities. We believe this conference is intended for all undergraduates who have a passion and curiosity about mathematics, or a use for it in their everyday pursuits. Therefore, we propose to contact not only departments in mathematics and statistics, but also those in physics, computer science, engineering, other natural sciences like chemistry and biology, and even social sciences like economics, since all these fields traditionally, or are increasingly incorporating, mathematics into their primary activities.

Finally, after we inform the potential attendees about the conference, we need a way to keep them interested and excited about the upcoming conference. To accomplish this,

we will be asking for feedback on what participants would like to see at CUMC 2018, as well as providing contact information so we can answer all queries and concerns from the potential participants. We will also be offering a decreased registration rate for early registration to encourage people to attend.