May 22, 2020

McGill | Faculty of Medicine

Annual Report of Activities and Outcomes

Please respect the page limits, where indicated, or the report will be returned.
(The accepted font is Times New Roman or Calibri regular 11 pts)

1. Name of the Unit: Centre for Applied Mathematics in Bioscience and Medicine (CAMBAM)

2. Director's contact information: Anmar Khadra and Fred Guichard

3. If the Unit is **a Senate-approved** McGill Research Centre, indicate date of approval: November 16, 2011

4. Mission Statement of the Unit:

   The mission of the CAMBAM is to be a leading institution in the application of mathematical and computational sciences to address challenges in physiology and medicine through partnership with industry, government and other stakeholders in society. CAMBAM meets its objectives by promoting and fostering research, teaching and training in applications of quantitative biology at all levels ranging from the molecular/genetic through single cell and whole organ physiology and biology to population dynamics and broader ecological questions, on time scales from the present to the evolutionary; honing the talents of students at all levels through unique training opportunities in academic and non-academic settings; and conducting applied research of the highest scientific rigor, meeting existent industry and societal demands in clinical and public health settings.

5. Number of Unit members:

   CAMBAM has 146 full members and 10 associate members (see Appendix 1 for a list of members obtained from the listserv).

6. Number of members affiliated with McGill's Faculty of Medicine:

   Close to 50% of CAMBAM members belong to the Faculty of Medicine.

7. **Unit's website**:

   URL: http://www.crm.umontreal.ca/labo/cambam/en/

   As requested, we are currently incorporating the logo of the Faculty of Medicine into the website as well as the annual reports. We are also in the processes of asking CAMBAM members to update their profiles.

8. Summary of past year's **goals and objectives** of the Unit. (**limit: ½ page**)

- Maintain international leadership in the emerging field of quantitative biosciences. To accomplish this, CAMBAM has become a partner in an FQRNT-funded multi-center grant headed by the Centre de recherches mathématiques (CRM).
- Connect researchers and students across faculties and institutions by creating interdisciplinary research teams and a framework for scientific and social interactions. That includes bridging complementary research programs together to establish multidisciplinary teams in the quantitative and life sciences. To accomplish this, we organize workshops and retreats and invite known speakers and
- Support and prepare students and postdoctoral trainees for the expanding career opportunities in quantitative biosciences in both industry and academia.
- Establish stronger connections with industry. MITACS will connect us with their industry partners to accomplish this. The research programs and expertise of each CAMBAM member will be highlighted/updated on the CAMBAM website to facilitate this process. Furthermore, internships supported by MITACS and CRM is currently negotiated to help trainees get the opportunity to have an industry exposure.
- Due to COVID-19 some activities had to be canceled. The CAMBAM retreats scheduled for May 1 was canceled and the CAMBAM/QLS seminar series was also discontinued in the Winter 2020.
- Erik Cook resigned from his position as CAMBAM co-director and was replaced by Anmar Khadra.

9. **Major achievements** enabled by the support obtained from the Faculty. **(limit: 1 page)**

(see Appendix for suggested metrics)

Note: We care to evaluate how the Unit is doing as a whole greater than the sum of its talents. For this reason, do not list achievements from a single PI member of the Unit. Instead, please report only the achievements from the coordinated efforts of at least two PI members of the Unit.

- **SMB Annual Meeting:** CAMBAM took a leadership role in organizing the most well-known international conference in mathematical biosciences, namely, the annual meeting of the Society for Mathematical Biology held in Montreal between July 22-26. The two current co-directors of CAMBAM, Anmar Khadra and Fred Guichard, were local co-organizers (see Appendix 2).
- **Membership in the CRM:** CAMBAM continues to be part of the CRM (www.crm.umontreal.ca), a network of 12 research centres across Quebec and Ontario. This collaboration brings quantitative bioscience to the CRM and connects CAMBAM to the larger community of mathematical and computational researchers. CRM now provides additional funding to CAMBAM (~$12,000 per year).
- **Seminar Series:** Our partnership with the Quantitative Life Sciences program, the McGill Initiative in Computational Medicine (MiCM) and the Ludmer Centre in co-organizing a seminar series is still ongoing (18 talks) during 2018/19. Talks were held in McIntyre and the MNI and attendance ranged from 35 to over 100 (see Appendix 3 for a list of speakers). Because of the funds available to CAMBAM, and the contributions from our partners, we were able to invite 10 speakers from outside McGill. Unfortunately, due to COVID 19 crisis, the seminar series was interrupted in the middle of the Winter term. Our member Erik Cook took the lead in organizing it when it was still running.
- **Zoominar Series/Zoomposium:** Due to the fact that this seminar series is a critical part of CAMBAM's networking environment, CAMBAM took the initiative to revive its own seminar series over the summer by doing it online through Zoom. The online series consists of 17 talks

and a one-day minisymposium comprised of six talks. This “zoominar series” has been quite successful so far, done in collaboration with the Fields institute in Toronto and the University of Waterloo. It attracts around 50-60 attendees on a weekly basis. We expect the same type of success with the one-day “zoomposium”. The co-director Anmar Khadra is organizing both events. See Appendix 4 for the list of speakers lined-up for this summer.

- **Fellowships (Appendix 5):** This year, CAMBAM awarded 6 fellowships to research groups for trainees (a total of $42K). Students and PDFs in CAMBAM affiliated labs were asked to submit their research descriptions, interest in qualitative bioscience and discuss past participation in CAMBAM events. In the coming year, we plan to provide roughly an equal number of fellowships.
- **Summer School:** CAMBAM and the Fields Institute co-organized an international summer school on nonlinear dynamics in life sciences, held in Toronto between July 15-19 (http://www.fields.utoronto.ca/activities/19-20/nonlinear-dynamics). CAMBAM co-director Anmar Khadra applied for funding from the Fields institute and secured $20,000 to organize this event. Six CAMBAM members participated in teaching in this summer school (see Appendix 6). CAMBAM further contributed $8,000 for the summer school. There were 41 trainees that participated in this successful event. These participants received funding for travel and lodging. This effort highlights the continued tradition of CAMBAM in organizing such events and the leading role it takes in the field of mathematical biosciences.
- **Fluid Dynamics of Disease Transmission Workshop (Appendix 7).** CAMBAM teamed up with associate member Lydia Bourouiba (MIT) to help organize and support this meeting and summer school. CAMBAM sponsored one student to attend this event (see the expense report in Appendix 8).
- **Public Outreach.** CAMBAM will continue to be a major organizer and supporter of the Cutting Edge Lectures in Science series (CAMBAM members Cook, Mackey and Guichard are part of the Cutting Edge organizing committee). These public lectures, held at the McGill’s Redpath Museum, feature some of McGill’s most prominent researchers.
- **Online Workshops:** Due to COVID 19 and university closure, CAMBAM took the initiative to organize online workshops run by CAMBAM trainees. These half-day workshop will involve multiple speakers with the appropriate expertise and will focus on methodologies (mathematical, statistical, computational) to address biological problems. The plan is to have around 6 of these workshops. We have applied for funding from the CRM to financially support such an initiative (see the proposal in Appendix 9). Our CAMBAM member, Fred Guichard took the lead in suggesting these workshops and in recruiting trainees to run them through Zoom.
- **2021 Summer School.** Two members of CAMBAM, Anmar Khadra (CAMBAM co-director) and Caroline Palmer (the director of the NSERC-CREATE in Complex Dynamics Program), will be applying for external funding from the Estes fund - Psychonomic Society, to organize a summer school on nonlinear dynamics with applications to neuroscience. These two team members secured this funding from the same organization in 2018 to organize a similar summer school. If successful, the funding will be used to provide lodging and per diem to 40 trainees participating in the summer school. Three travel awards sponsored by CAMBAM will be also offered to outstanding candidates.
- **CMS 2020 Winter Meeting (Appendix 10).** Two members of CAMBAM, Anmar Khadra and Claire Guerrier will organize an entire session at the Canadian Mathematical Society (CMS) Winter Meeting to be held in Montreal between December 4-7, 2020. Session title will be “Mathematical Modeling of Biological Systems”. Many members of CAMBAM will give talks in this session to showcase their research work. International researchers will be also invited to participate in this session. CAMBAM partners, McGill and CRM, are co-sponsors of the event.

10. **New Members** who joined the Unit in the past year and their **institutional affiliation(s)**.

Name **Last, First**	**Title** **PI, Staff or Trainee [Graduate student (GS) or post-doctoral fellow (PDF)]**	**Type of Membership** **Full, Associate**	**Affiliation(s)**
Palmer, Caroline	Professor	Full	Psychology, McGill
Krishna, Suresh	Assistant professor	Full	Physiology, McGill
Wang, Wendy	Graduate student	Full	Mathematics, McGill
Mahmoud, Lamees	PDF	Full	Physiology, McGill
Alsibaai, Shaza	Graduate student	Full	Mathematics, McGill
Brake, Niklas	Graduate student	Full	QLS, McGill
Guerrier, Claire	Assistant professor	Associate	Université Côte d'Azur
Ahmed, Sameed	PDF	Associate	University of Waterloo
Lafitte , Olivier	Professor/director	Associate	director of the UMI-CRM

11. Members who have **left the Unit** over the reported year.

Name **Last, First**	**Title** **PI, Staff or Trainee [Graduate student (GS) or post-doctoral fellow (PDF)]**	**Type of Membership** **Full, Associate**	**Affiliation(s)**

12. State how the current and forecasted activities of your Unit align with the Education or Research mission (Strategic Research Plan) of the Faculty of Medicine and/or other Faculties at McGill (**limit: ½ page**):

CAMBAM contributes to the Faculty's research mission by developing mathematical and computational tools for understanding how complex biological systems function - from molecular to organismal levels. CAMBAM's contribution was specifically mentioned in the 2017 McGill Faculties of Medicine and Dentistry Strategic Research Plan. In addition, CAMBAM has close ties with the newly created Initiative in Computational Medicine (MiCM). In partnership with the MiCM, CAMBAM plans to co-organize online workshops focused on mathematical and statistical methodologies.

Bioscience and health research is quickly expanding from being an exclusively data collection endeavor to one that embraces the development of new technologies and quantitative methods. For example, much of the field of genetics is now driven by statistical and computational algorithms. To meet these changing needs, our researchers actively prepare students for life in both academic research and industry with the goal of bridging the "training gap" that exists between students in bioscience and those from mathematics, physics

and engineering. Importantly, CAMBAM's interdisciplinary mission directly supports McGill's Strategic Research Plan to create a "convergence of life sciences, natural sciences, and engineering".

During the next few years, CAMBAM will continue its leadership role in Quantitative Biology at McGill, within Quebec and internationally. **CAMBAM has regularly organized summer schools on the applications of mathematical sciences to physiology and medicine and helped sponsor several workshops, one of which focused on infectious disease transmission, an urgent topic in this international health crisis of COVID-19 pandemic.** We will continue to sponsor and promote interdisciplinary seminars, workshops, events and summer schools to bring together researchers from across faculties and institutions to solve critical problems in bioscience and medicine.

13. Explain why support from the Faculty of Medicine continues to be crucial to the operations of the Unit (**limit: ½ page**):

Faculty of Medicine support has allowed CAMBAM to pursue and achieve many of its current programs. Recognizing the fundamental importance of interdisciplinary research, CAMBAM has taken leadership role in promoting collaborations between members from across faculties and disciplines, and established track record of successful Canadian (Fields, CAPnet) and international partnerships (MBI, NIMBios and MIT). With Faculty of Medicine funding, CAMBAM has accomplished all of its important objectives and maintains a level of activity (both local and international) that compares favorably with other McGill research centers. Continuing support from the Faculty of Medicine will promote our interdisciplinary support of quantitative bioscience at McGill as well as allow us to maintain our international presence and collaborations with other centers. It is important to emphasize that many CAMBAM members are also members in the Society for Mathematical Biology and took leadership roles in that activities of this society (for example, the annual meeting that took place in Montreal in 2019).

14. List action items that the Unit has taken or will consider taking in the next year towards growth and sustainability of its operations (**limit: ½ page)**

- In collaboration with MITACS and CRM, CAMBAM is currently establishing an internship program for trainees valued at $6,000 per trainee. This internship program (2 in total) is meant to support selective research programs run by CAMBAM members. There is currently a general agreement between the three organization about these 2 internships but the details have not been finalized yet.
- As stated above, two CAMBAM members Anmar Khadra and Caroline Palmer will submit a US$30,000 grant to the Estes fund - Psychonomic Society to organize a summer school in 2021.
- CAMBAM will continue to establish new collaborations with international organization that support research programs in mathematical biosciences. That includes the Society for Mathematical Biology (SMB), Canadian Mathematical Society (CMS) and the Canadian Applied and Industrial Mathematics Society (CAIMS).
- Over the next year, CAMBAM will begin working with the CRM to prepare for its renewal of its current NSERC grant. Being part of the funded CRM network reduces CAMBAM's dependence on Faculty of Medicine support and has allowed us to be much more active.
- With the recruitment of the several new AI faculty recruits during the next year (including that in the Department of Physiology), CAMBAM will continue to develop and promote this new aspect of quantitative bioscience. The new AI-physiology recruit Pouya Bashivan has expressed interest in joining our center upon joining McGill. He can take the lead in organizing workshops focused on topics related to AI.
- CAMBAM will continue to develop its new partnership with the Fields Institute for Research in Mathematical Sciences. Specifically, the Fields contributed $20K to help run our joint 2019 summer school on Nonlinear Dynamics in Life Science. Having partners that contribute to our activities frees up financial support for our trainees.

- Continue our partnerships with QLS, MiCM, and the Ludmer to run the very successful McGill-wide seminar series in Quantitative Life Sciences and Medicine. This partnership in organizing this event is important for maintaining CAMBAM's larger presence in the McGill community. For next year, CAMBAM plans to invite 6 out-of-town speakers in total.

15. Provide suggestions about how the Faculty could do better to support the Unit and research efforts in general (e.g., centralized data repositories, institutional data management plans, support for software developments, guidance for adopting open-science practices, simplification of administrative procedures, etc.) (**no page limit but please be specific and unleash your creativity!**)

With COVID-19 pandemic, many members of CAMBAM are directly or indirectly involved in COVID-19 research (e.g., Jacques Belair and David Buckeridge). The faculty of medicine can benefit heavily from the expertise of these CAMBAM members. One member of CAMBAM, Paul Francois, has suggested that CAMBAM can take the lead in promoting public awareness and guide decision making at the University level. Faculty of medicine can provide the platform to accomplish this.

16. End of year financial report

The financial report and budget for next year is attached in Appendix 11. Note that 100% of CAMBAM funds go to CAMBAM activities and trainee fellowships (no administrative salaries). Due to the exchange of CAMBAM co-directorship, the financial report from last year provided in Appendix 11 is an estimate of all incomes and expenditures.

In the past year, CAMBAM was funded by the Faculty of Medicine at $15,000. CAMBAM has secured $11,600 through our membership with CRM, plus we have made the additional efforts to raise money through other activities such as our recent 2019 international summer schools ($20,000 in outside funding from the Fields Institute).

Appendix 1-CAMBAM members

LISTSERV Command Interface (CAMBAM_SEMINARS)

CAMBAM_SEMINARS Home

Select List: CAMBAM_SEMINARS CAMBAM_Seminars - Department of Physiology Update

lamees.mahmoud@MCGILL.CA	(No Name Available)
alireza.aghighi@UMONTREAL.CA	Alireza Aghighi
martin.aguilar@MAIL.MCGILL.CA	Martin Aguilar
sameed.ahmed@UWATERLOO.CA	Sameed Ahmed
sofia.alfonso@MAIL.MCGILL.CA	Sofia Alfonso
derry.alison@UQAM.CA	Derry ALISON
shaza.alsibaai@MAIL.MCGILL.CA	Shaza Alsibaai
juliatherton@GMAIL.COM	Juli Atherton
m.berrada@BAVARIA-MEDIZIN.DE	No Name Available
hortecgg@CIENCIAS.UNAM.MX	No Name Available
li@CRM.UMONTREAL.CA	No Name Available
doedel@CSE.CONCORDIA.CA	No Name Available
lfarley@CVLF.CA	No Name Available
andyliu1987@GMAIL.COM	No Name Available
feng.xiongca@GMAIL.COM	No Name Available
fglacoste@GMAIL.COM	No Name Available
jinzhi.lei@GMAIL.COM	No Name Available
krouchen@GMAIL.COM	No Name Available
patrick.mineault@GMAIL.COM	No Name Available
shahedrz@GMAIL.COM	No Name Available
steven.sanche@GMAIL.COM	No Name Available
vilaiwan@GMAIL.COM	No Name Available
alexis.dale@MAIL.MCGILL.CA	No Name Available
amandine.bemmo@MAIL.MCGILL.CA	No Name Available
anais.lacoursiere-roussel@MAIL.MCGILL.CA	No Name Available
ashkan.golzar@MAIL.MCGILL.CA	No Name Available
costas.karatzas@MAIL.MCGILL.CA	No Name Available
diana.mitchell@MAIL.MCGILL.CA	No Name Available
ghoncheh.rasoulitezangi@MAIL.MCGILL.CA	No Name Available
jessica.brooks@MAIL.MCGILL.CA	No Name Available
megha.kodancha@MAIL.MCGILL.CA	No Name Available
moeed.shahamat@MAIL.MCGILL.CA	No Name Available
mojdeh.golmohammadi@MAIL.MCGILL.CA	No Name Available
Volker.hofmann@MAIL.MCGILL.CA	No Name Available
yogesh.murugesan@MAIL.MCGILL.CA	No Name Available
zibo.wang@MAIL.MCGILL.CA	No Name Available
calleja@MATH.MCGILL.CA	No Name Available
lafitte@MATH.UNIV-PARIS13.FR	No Name Available
steven_xanthoudakis@MERCK.COM	No Name Available
jvh@MITACS.CA	No Name Available
patrice.roy@PFIZER.COM	No Name Available
adams@PHYSICS.MCGILL.CA	No Name Available
quenelgt@PLATTSBURGH.EDU	No Name Available
andrea.green@UMONTREAL.CA	No Name Available
paul.cisek@UMONTREAL.CA	No Name Available
abrav103@UOTTAWA.CA	No Name Available
romain.yvinec@WANADOO.FR	No Name Available
belair@CRM.UMONTREAL.CA	Jacques Belair
mathieu.blanchette@MCGILL.CA	Mathieu Blanchette
fx.brajot@MAIL.MCGILL.CA	Francois-Xavier Brajot
niklas.brake@MAIL.MCGILL.CA	Niklas Brake
grace.brooks@MAIL.MCGILL.CA	Kyla Brooks
claire.brown@MCGILL.CA	Claire Brown, Dr.
gil.bub@MCGILL.CA	Gil Bub
david.buckeridge@MCGILL.CA	David Buckeridge
lucas.santos@MAIL.MCGILL.CA	Lucas Campanari
tyler.cassidy@MAIL.MCGILL.CA	Tyler Cassidy
maurice.chacron@MCGILL.CA	Maurice Chacron
philippe.comtois@UMONTREAL.CA	Philippe Comtois
erik.cook@MCGILL.CA	Erik Cook
coordinator.qls@MCGILL.CA	QLS Coordinator
morgan.craig@UMONTREAL.CA	Morgan Craig
danielcamaradesouza@YAHOO.COM.BR	Daniel Câmara
felipe.dargent@MAIL.MCGILL.CA	Felipe Dargent

nikolaos.dimitriou@MAIL.MCGILL.CA	Nikolaos Dimitriou
sean.duffy@MAIL.MCGILL.CA	Sean Duffy
alan@BIC.MNI.MCGILL.CA	Alan Evans
saeed.farjami@MCGILL.CA	Saeed Farjami
Frederique.Fenneteau@CERTARA.COM	Frederique Fenneteau
frederique.fenneteau@HIBE.COM	Frederique Fenneteau
paulf@PHYSICS.MCGILL.CA	Paul Francois
fred.guichard@MCGILL.CA	Frédéric Guichard
gregor.fussmann@MCGILL.CA	Prof. Gregor Fussmann
elias.gedamu@MAIL.MCGILL.CA	Elias Gedamu
lefebvre.gen@UQAM.CA	GeneviÃ¨ve Lefebvre
navid.sadeghighandehari@MAIL.MCGILL.CA	Navid Sadeghi Ghandehari
glass@CND.MCGILL.CA	Leon Glass
mladen.glavinovic@MCGILL.CA	MladenI Glavinovic
celia.greenwood@MCGILL.CA	Celia Greenwood
tamara.gregg@MAIL.MCGILL.CA	Tamara Gregg
claire.guerrier@UNIV-COTEDAZUR.FR	Claire Guerrier
michael.guevara@MCGILL.CA	Michael Guevara
ben.haller@MAIL.MCGILL.CA	Ben Haller
ian.hatton@MAIL.MCGILL.CA	Ian Hatton
bing@INAME.COM	Bing Huang
tony.humphries@MCGILL.CA	AntonyRaymond Humphries
vincent.jacquemet@UMONTREAL.CA	Vincent Jacquemet
hassan.jamaleddine@MAIL.MCGILL.CA	Hassan Jamaleddine
mohsen.jamali@MAIL.MCGILL.CA	Mohsen Jamali
anmar.khadra@MCGILL.CA	Anmar Khadra
bo-ra.kim@MAIL.MCGILL.CA	Chelsea Kim
claudia.kleinman@MCGILL.CA	Claudia Kleinman
svetlana.komarova@MCGILL.CA	Svetlana Komarova
caolan.kovach-orr@MAIL.MCGILL.CA	Caolan Kovach-Orr
suresh.krishna@MCGILL.CA	Suresh Krishna
darya.kryzskaya@MAIL.MCGILL.CA	Darya Kryzskaya
grigoris.kylafis@MAIL.MCGILL.CA	Grigoris Kylafis
lajoie@DMS.UMONTREAL.CA	Guillaume Lajoie
allen.larocque@GMAIL.COM	Allen Larocque
jonas.lehnert@MAIL.MCGILL.CA	Jonas Lehnert
jzlei@MAIL.TSINGHUA.EDU.CN	Jinzhi Lei
vincent514@GMAIL.COM	Vincent Lemaire
joshua.leon@DAL.CA	Joshua Leon
dr.claudialerma@GMAIL.COM	Claudia Lerma
sabrina.leslie@MCGILL.CA	Leslie, Sabrina
brian.leung2@MCGILL.CA	Brian Leung
juan.y.li@MAIL.MCGILL.CA	juan Yao Li
nicole.li@MCGILL.CA	Nicole Li
alongtin@UOTTAWA.CA	Andre Longtin
etienne.low-decarie@MAIL.MCGILL.CA	Etienne Low-Decarie
flutsche@UOTTAWA.CA	Frithjof Lutscher
jessica.lyda@MAIL.MCGILL.CA	Jessica Lyda
metapfhor@GMAIL.COM	Laurent Mackay
michael.mackey@MCGILL.CA	MichaelC Mackey
jacek.majewski@MCGILL.CA	Jacek Majewski
judith.mandl@MCGILL.CA	Judith Mandl
justin.marleau@MAIL.MCGILL.CA	Justin Marleau
geoffrey.mcgregor@MAIL.MCGILL.CA	Geoffrey McGregor
mahtab.nazari@MAIL.MCGILL.CA	Mahtab Nazari
fahima.nekka@UMONTREAL.CA	Fahima Nekka
laurentiu.oprea@MAIL.MCGILL.CA	Laurentiu Oprea
christopher.pack@MCGILL.CA	Christopher Pack
caroline.palmer@MCGILL.CA	Caroline Palmer
michael.pedruski@MAIL.MCGILL.CA	Michael Pedruski
perkins@MCB.MCGILL.CA	Theodore Perkins
khoren.ponsin@MAIL.MCGILL.CA	Khoren Ponsin
lpopovic@MATHSTAT.CONCORDIA.CA	Lea Popovic
felix.proulx-giraldeau@MAIL.MCGILL.CA	Felix Proulx-Giraldeau
thomas.rademaker@MAIL.MCGILL.CA	Thomas Rademaker
alejandro.rey@MCGILL.CA	Alejandro Rey
alfredo.ribeirodasilva@MCGILL.CA	Alfredo Ribeiro-da-Silva
moises.santillan@ME.COM	SantillÃ¡n ZerÃ³n MoisÃ©s
kushagra.sareen@MAIL.MCGILL.CA	Kusha Sareen
amir.shmuel@MCGILL.CA	Amir Schmuel
alan.schoen@MAIL.MCGILL.CA	Alan Schoen
julian.self@MAIL.MCGILL.CA	Julian Self
pabelshahrear@YAHOO.COM	Pabel Shahrear
bruce.shepherd@MCGILL.CA	Bruce Shepherd
jesper.sjostrom@MCGILL.CA	Per Jesper Sjostrom
benjamin.m.smith@MCGILL.CA	Benjamin McDonald Smith
Rhalena.thomas@MAIL.MCGILL.CA	Rhalena Thomas
mtyran@US.EDU.PL	Marta Tyran
younes.valibeigi@MAIL.MCGILL.CA	younes Valibeigi
vassil.dimitrov@MAIL.MCGILL.CA	Dimitrov Vassil
alain.vinet@UMONTREAL.CA	Alain Vinet
florence.veronneau-veilleux@UMONTREAL.CA	Véronneau-Veilleux Florence
zhao.wang3@MAIL.MCGILL.CA	Wendy Wang
brian.wilhelm@UMONTREAL.CA	Brian Wilhelm
kennyw@VIDEOTRON.CA	Ken Woffenden
tek.wa.wong@MAIL.MCGILL.CA	Edward Wong
brandon.xia@MCGILL.CA	Brandon Xia
zhunping.xue@MAIL.MCGILL.CA	Julian Xue

```
qianyi.zhang@MAIL.MCGILL.CA             Qianyi Zhang
zhugechj@GMAIL.COM                      Changjing Zhuge
yujing.zou@MAIL.MCGILL.CA               Yujing Zou
dani.zysman@GMAIL.COM                   Daniel Zysman [concealed]
*
* Total number of "concealed" subscribers:          1
* Total number of users subscribed to the list:   156
* Total number of local host users on the list:     0
*
```

CAMBAM_SEMINARS

(Clear Command)
New Command: REVIEW CAMBAM_SEMINARS (NOH MSG ALL TOPICS BY NAME Enter Command

---

Useful Commands:
Review CAMBAM_SEMINARS | Query CAMBAM_SEMINARS | Confirm CAMBAM_SEMINARS | Free CAMBAM_SEMINARS | Hold CAMBAM_SEMINARS | Count Subscribers | Count by Country | Count by Topic | Reindex CAMBAM_SEMINARS Archives

Send over Email:
Info about CAMBAM_SEMINARS | List of CAMBAM_SEMINARS Subscribers

LISTS.MCGILL.CA

ORGANIZERS

Jacques Bélair
(Université de Montréal)

Frédéric Guichard
(McGill University)

Anmar Khadra
(McGill University)

SCIENTIFIC COMMITTEE

Alexander RA Anderson
(H. Lee Moffitt Cancer Research Institute)

Julien Arino
(University of Manitoba)

Jacques Bélair
(Université de Montréal)

Daniel Coombs
(University of British Columbia)

Frédéric Guichard
(McGill University)

Jane Heffernan
(York University)

Thomas Hillen
(University of Alberta)

Anmar Khadra
(McGill University)

Stéohanie Portet
(University of Manitoba)

Ami Radunskaya
(Pomona College)

James Watmough
(University of New Brunswick)

Huaiping Zhu
(York University)

Overview

[Français]

The 2019 Annual Meeting and Conference of the Society for Mathematical Biology (SMB) from July 21-26, 2019. The conference theme is From genome to biome. The conference is organize hématiques (CRM) and will be held on the campus of the Université de Montréal.

The program with abstracts is now available here.

The program without abstracts is now available here.

Program - Monday

Program - Tuesday

Program - Wednesday

Program - Thursday

Program - Friday

PLENARY SPEAKERS

See list

CONTRIBUTED PAPER AND POSTER

Submit your request

MINISYMPOSIUM PROPOSALS

Submit your request

Fall 2019

QLS is joining efforts with the Centre for Applied Mathematics in Bioscience and Medicine (CAMBAM), the McGill initiative in Computational Medicine (MiCM) and the Ludmer Center to offer weekly interdisciplinary seminars.

All seminars are held in the McIntyre Medical Sciences Building (http://maps.mcgill.ca/?campus=DWT&txt=EN&id=McIntyre), room 1034, from 12:00 to 1:00.

Fall 2019	Speaker	Topic
Sep. 10	Brian Leung (McGill University) Sponsored by QLS	"Predictive socio-ecological models for invasive species and sustainability" (http://mcgill.ca/qls/channels/event/qls-seminar-series-brian-leung-300182)
Sep. 17	Sara Mostafavi (University of British Columbia) Sponsored by the Ludmer Centre	"Combining genomics data to predict function of the non-coding genome" (http://mcgill.ca/qls/channels/event/qls-seminar-series-300180)
Sep. 24	Erik Cook (McGill University) Sponsored by CAMBAM	"Predicting visually-guided behavior from fluctuations and correlations in neural activity" (http://mcgill.ca/qls/channels/event/qls-seminar-series-erik-cook-300777)
Oct. 1	Flavie Lavoie-Cardinal (University of Laval) Sponsored by CAMBAM	"Machine-learning-assisted microscopy : from smart scanning approaches to the generation of synthetic super-resolution images" (http://mcgill.ca/qls/channels/event/qls-seminar-series-flavie-lavoie-cardinal-300788)
Oct. 8	Quaid Morris (University of Toronto) Sponsored by MiCM	"Human somatic evolution: cancer and otherwise" (http://mcgill.ca/qls/channels/event/qls-seminar-series-quaid-morris-301218)
Oct. 15	Rahul Satija (NY Genome) Sponsored by QLS	"Integrated analysis of single-cell data across technologies and modalities" (http://mcgill.ca/qls/channels/event/qls-seminar-series-rahul-satija-300852)

Fall 2019	Speaker	Topic
Oct. 22	Karen Kopciuk (University of Calgary) Sponsored by MiCM	"Learning from data" (http://mcgill.ca/qls/channels/event/qls-seminar-series-karen-kopciuk-301470)
Oct. 29	Saurabh Sinha (Urbana-Champaign) Sponsored by QLS	"Transcriptional mechanisms of phenotypic variation from multi-omics data" (//www.mcgill.ca/qls/channels/event/qls-seminar-saurabh-sinha-301702)
Nov. 5	Jaya Satagopan (Rutgers) Sponsored by QLS	"Evaluation of interactions in clinical and molecular epidemiology studies" (http://mcgill.ca/qls/channels/event/qls-seminar-jaya-satagopan-301550)
Nov. 12	Rumi Chunara (New York University) Sponsored by MiCM	"Data and machine learning in population and public health" (http://mcgill.ca/qls/channels/event/qls-seminar-series-rumi-chunara-302068)
Nov. 19	Michael Mackey (McGill University) Sponsored by CAMBAM	"Biology, Mathematics & Physics: Interactions and Interdependence" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-michael-mackey-302497)
Nov. 26	Morgan Craig (University of Montreal) Sponsored by CAMBAM	"Quantitative approaches addressing intratumour heterogeneity and its impact on therapeutic outcomes" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-morgan-craig-302455)

QLS would like to thank Dr. Mathieu Blanchette, Dr. Erik Cook, Dr. Celia Greenwood, Lindsay Dayton, and Joanne Clark for their help with organizing the seminars.

McGill Seminar Series in Quantitative Life Sciences and Medicine

Please note the McGill Seminar Series in Quantitative Life Sciences and Medicine has been cancelled for the Winter of 2020.

QLS is joining efforts with the Centre for Applied Mathematics in Bioscience and Medicine (CAMBAM), the McGill initiative in Computational Medicine (MiCM) and the Ludmer Center to offer weekly interdisciplinary seminars. Seminars featured by QLS are indicated in **bold**.

All seminars are held in the Montreal Neurological Institute (https://www.mcgill.ca/neuro/contact/find-us), deGrandpre Communications Centre (https://neuromedia.mcgill.ca/mnibooking/facdirections/dgccdir.htm), from 12:00 to 1:00.

Winter 2020	**Speaker**	**Topic**
Jan. 14	**John Marko (Northwestern University) Sponsored by QLS**	"Mechanics, topology and geometry of mammalian chromosomes and nuclei and their epigenetic modulation" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-john-marko-303509)
Jan. 21	Thomas Nichols (Oxford University) Sponsored by the Ludmer Centre	"Population Neuroimaging" (http://mcgill.ca/qls/channels/event/qls-seminar-thomas-nichols-303941)
Jan. 28	Jesper Sjostrom (McGill University) Sponsored by CAMBAM	"Unconventional NMDA Receptor Signalling in Neocortical Plasticity." (http://mcgill.ca/qls/channels/event/qls-seminar-jesper-sjostrom-303832)
Feb. 4	Eric Pedersen (Concordia University) Sponsored by CAMBAM	"Quantifying rapid change in ecological communities" (http://mcgill.ca/qls/channels/event/qls-seminar-eric-pedersen-305503)

Winter 2020	Speaker	Topic
Feb. 11	**Mallar Chakravarty (McGill University) Sponsored by QLS**	"Translational neuroimaging strategies to better understand the pathways towards neurodegenerative disorders: human and mouse MRI studies" (http://mcgill.ca/qls/channels/event/qls-seminar-mallar-chakravarty-303875)
Feb. 18	Claire Guerrier (Université Côte d'Azur) Sponsored by CAMBAM	"Modeling axon-myelin relationships: insights on signal propagation and modulation (http://mcgill.ca/qls/channels/event/qls-seminar-claire-guerrier-319670)"
Feb. 25	Timothee Poisot (University of Montreal) Sponsored by CAMBAM	"Revisiting the link-species scaling relationship in ecological networks" (//www.mcgill.ca/qls/channels/event/qls-seminar-timothee-poisot-319591)
Mar. 3	Reading Week	No Seminar
Mar. 10	**Michael Baym (Harvard University) Sponsored by QLS**	"Evolutionary Approaches to Antibiotic Resistance" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-michael-baym-320466)
Mar. 17	**Paul Francois (McGill University) Sponsored by QLS**	"Information in cytokine dynamics : robotic mapping and machine learning" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-paul-francois-320955)
Mar. 24	Claire Brown (McGill University) Sponsored by CAMBAM	"Lipoma Preferred Partner (LPP) Regulates Breast Cancer Cell Migration and Invasion" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-claire-brown-320989)
Mar. 31	Adrian Serohijos (University of Montreal) Sponsored by MiCM	"Integrating protein biophysics and population dynamics to predict microbial evolution" (//www.mcgill.ca/qls/channels/event/qls-seminar-series-adrian-serohijos-320853)
Apr. 7	**Vladimir Reinharz (UQAM) Sponsored by QLS**	TBD
Apr.14	Arjun Krishnaswamy (McGill University) Sponsored by CAMBAM	TBD

Winter 2020	Speaker	Topic
Apr. 23 (Thursday)	Candice Odgers (Duke University) Sponsored by MiCM	TBD
Apr. 28	Roger Peng (Johns Hopkins) Sponsored by MiCM	TBD

(https://www.mcgill.ca)

Appendix 4-Zoominar series/Zoomposium

Date	Speaker	Webpage	Title
May 1	Claire Guerrier	https://math.unice.fr/~guerrier/	
May 8	Roeland Merks	https://www.universiteitleiden.nl/en/staffmembers/roeland-merks#tab-1	
May 15	Pouya Bashivan	https://scholar.google.com/citations?user=B0rM8BcAAAAJ&hl=en	
May 22	Mathieu Desroche	https://www-sop.inria.fr/members/Mathieu.Desroches/	
May 29	Yoichiro Mori	https://www.amcs.upenn.edu/people/yoichiro-mori	
June 5	Minisymposium: Session 1: Krasimira Tsaneva-Atanasova Jonathan Touboul Elif Koksal Ersoz Session 2 Marcello Codianni Yangyang Wang Saeed Farjami	 https://emps.exeter.ac.uk/mathematics/staff/kt298 https://www.brandeis.edu/facultyguide/person.html?emplid=8cb81567ab262202223ac427c8e768ea4efad6b0 http://www-sop.inria.fr/members/Elif.Koksal/ https://www.mathematics.pitt.edu/people/marcello-codianni https://math.uiowa.edu/people/yangyang-wang https://ca.linkedin.com/in/saeed-farjami-6bb4466b	
June 12	Andre Longtin	https://mysite.science.uottawa.ca/alongtin/	
June 19	James Sneyd	https://www.math.auckland.ac.nz/~sneyd/	
June 26	Thomas Hillen	http://www.math.ualberta.ca/~thillen/	
Junly 3	Carson Chow	https://www.niddk.nih.gov/about-niddk/staff-directory/biography/chow-carson	
July 10	Jose A. Carrillo	https://www.maths.ox.ac.uk/people/jose.carrillodelaplata	
July 17	Sue Ann Campbell	http://www.math.uwaterloo.ca/~sacampbe/	
July 24	Frithjof Lutscher	https://mysite.science.uottawa.ca/flutsche/	
July 31			
August 7	Jonathan Robin	http://www.math.pitt.edu/~rubin/	
August 14			
August 21	Mark Lewis	http://www.math.ualberta.ca/~mlewis/	
August 28	Arjun Krishnaswamy	https://www.swamylab.com/	

Scientific activities

seminars to come (1)

past workshops and conferences (4)

past seminars (49)

Seminars (to come)

Friday, May 22, 2020 – 12:30 – 13:30

Seminar CAMBAM Seminar Series

SVP contacter l'organisateur / Please contact the organizer: anmar.khadra@mcgill.ca

Slow-fast analysis of neural bursters: old and new

Mathieu Desroches, Inria, Sophia Antipolis – Méditerranée Research Centre (Vidéoconférence)

Workshops and Conferences (Past)

Click on the column title

to sort the array differently

Show 10 ▼ entries

Search:

Date	Title	Venue	Participants
2019/07/15 – 2019/07/19	Summer School on Nonlinear Dynamics in Life Sciences (http://www.fields.utoronto.ca/activities/19-20/nonlinear-dynamics/)	Fields Institute	
2018/06/18 – 2018/06/29	The Joint CAMBAM/NSERC-CREATE in Complex Dynamics Summer School (http://www.medicine.mcgill.ca/physio/khadralab/public_html/)	McGill University	58
2017/06/12 – 2017/06/14	Translational-Oriented Quantitative Theurapeutic Approaches: A Concerted Effort (http://www.ugopharm.umontreal.ca/Site/utilisateur/documents/WS_2017/)	Université de Montréal	9
2015/06/01 – 2015/06/12	The Joint 2015 CAMBAM-MBI-NIMBioS Summer School / Nonlinear Dynamics in Biological Systems (http://www.medicine.mcgill.ca/physio/khadralab/public_html/)	McGill University	50

Showing 1 to 4 of 4 entries
Previous1Next

Seminars (Past)

Click on the column title to sort the array differently

Show 10 ▼ entries

Search:

Date	Speaker	Title	Type
2020/05/15	Pouya Bashivan, Université de Montréal, MILA (Vidéoconférence)	Analyze, Predict & Control: A Pragmatic Approach to Understanding the Visual Brain	Séminaire CAMBAM Seminar Series
2020/05/08	Roeland Merks, Mathematical Institute and Institute of Biology, Leiden University, The Netherlands (Vidéoconférence)	Collective Cell Behavior and Cell Migration	Séminaire CAMBAM Seminar Series

Date	Speaker	Title	Type
2020/05/01	Claire Guerrier, Université Côte d'Azur (Vidéoconférence)	Modeling axon-myelin relationships: insights on signal propagation and modulation	Séminaire CAMBAM Seminar Series
2019/01/22	Pierre-Andre Menard, Computer Research Institute of Montreal	TBD	Séminaire CAMBAM Seminar Series
2019/01/15	Sabrina Leslie, McGill University	TBD	Séminaire CAMBAM Seminar Series
2019/01/08	Ed Bullmore, Cambridge University	TBD	Séminaire CAMBAM Seminar Series
2016/12/15	Farzan Nadim, NJIT	TBA	Séminaire CAMBAM
2016/12/08	Patricio Artusa, McGill University	The role of T-cell repertoire diversity in CD4+T cell responses	Séminaire CAMBAM
2016/12/01	Allen Ehrlicher, McGill University	Actin and the mechanical cell	Séminaire CAMBAM
2016/11/24	Lucas Campanari, McGill University	Patterns of activities in excitable media with channels	Séminaire CAMBAM

Showing 1 to 10 of 49 entries

Previous12345Next

(http://www.mcgill.ca)

Appendix 5-CAMBAM fellowships

CAMBAM Winter 2020 Fellowship Application
Due 1 May 2020

Please include this form plus trainee's CV in a single PDF document to Frederic.guichard@mcgill.ca

Fellowships/amounts are awarded/determined based on the quality of the applicant, past participation in CAMBAM, past CAMBAM support received by applicant, funds available, number of applications received by CAMBAM, and number of applicants from the same lab.

Name and level of trainee (MSc, PhD or PDF):

Name of supervisor(s) and department:

List previous CAMBAM fellowships received by applicant (if any):

Brief statement (short paragraph) about the interdisciplinary nature of the trainee's research across biology, mathematics and computation:

Brief description of the trainee's and/or supervisor's participation in CAMBAM sponsored events during the last year:

Recipients of CAMBAM's 2019 fellowships ($7,000 to each group that applied).

CAMBAM group: Morgan Craig (Mathématiques et de statistique, Université de Montréal; Physiology, McGill)
Trainee: Justin Le Sauteur-Robitaille

CAMBAM group: Claire Brown (Physiology, McGill University)
Trainee: Brian Treacy (PhD)

CAMBAM group: Gil Bub and Leon Glass (Physiology, McGill University)
Trainees: Thomas Bury (PDF)

CAMBAM group: Anmar Khadra (Physiology, McGill)
Trainee: Khoren Ponsin (PhD)

CAMBAM group: Tony Humphries (Math & Stats and Physiology, McGill)
Trainees: Zhao Wendy Wang (PhD)

CAMBAM group: Fred Guichard (Biology, McGill)
Trainee: Justin Marleau (PhD)

Summer School on Nonlinear Dynamics in Life Sciences

Organizing Committee:

Anmar Khadra - McGill University

Siv Sivaloganathan - The Fields Institute and University of Waterloo

July 15 - 19, 2019, The Fields Institute

Location: Fields Institute, Stewart Library

Fields Contact: Duduzile Chinyenze

Quick Links:

Housing Resources

Reimbursement Policies

Description

Living systems are typical examples of dynamical systems with many interrelated parts or subsystems, from small-scale cellular relationships to large-scale population relationships. Nonlinear dynamics arise when the behaviour of one subsystem, with its own dynamics, becomes the input for another subsystem, imposing certain constraints on its dynamics.

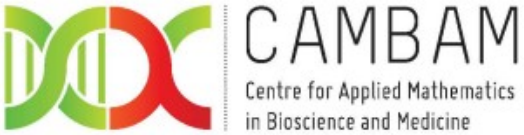
Mathematics, physics, and biological sciences have contributed important theoretical developments to the understanding of how nonlinear dynamics explain behaviour in a wide range of disciplines in natural sciences, social sciences, and life sciences, based on common principles arising from differential equations. Nonlinear dynamics underlie the developmental trajectory of living organisms; the spread of information in neural networks and disease in populations; and the prediction of evolving ecosystems in changing environments.

While different challenges arise in each research area, the required quantitative models are shared across areas. These models, accompanied by statistical and computational tools, provide young scientists with a platform to understand the dynamics of their systems and to guide new experiments. As a result, the fields of mathematical and computational modeling have had significant impact across the natural and life sciences, including neuroscience, physiology, immunology, computer science, ecology, and evolutionary biology.

Summer School Schedule

Please click here.

Co-Sponsor



222 College Street · Toronto, Ontario · M5T 3J1 · Canada

APPENDIX 7 - FLUID DYNAMICS OF DISEASE TRANSMISSION

Appendix 8-Expense report

PAYMENT REQUEST FORM

Request date: 2019-09-19

Please forward signed form to **Accounts Payable**, Financial Services, 3465 Durocher St., 2nd floor, Montreal, Quebec, H2X 0A8. Accounts Payable will not process a Payment Request until the duly signed paper form and supporting documentation is received. Please ensure that invoices are addressed to McGill University. Payment Requests ONLY permitted for payments to public/health institutions, government offices, life insurance, McGill student societies, participant fees, living allowances, refunds, payments made on behalf of Trust Funds.

PAYEE INFORMATION

Pay To: Université de Montréal à
Dép. de mathématiques et de statistiques projet FN404057

Address: Lise Imbeault - Technicienne en administration
Université de Montréal
Pavillon André-Aisenstadt - bureau 5153
C.P 6128, Succursale Centre-Ville

City: Montreal

Province/State: QC (Quebec)

If not Canada or USA then fill in Postal/Zip and the Country

Postal/Zip: H3C 3J7 *Country:* Canada

PAYMENT REQUEST DETAILS

If payable to an individual, please select one:

☐ Refund ☐ Participant Fee ☐ Allowance ☐ Other

Other - Please specify:

Purpose (Indicate the purpose of the cheque): Invoice #09-11-2019-1 for travel of Justin Le Sauteur to Fluids and Health school.

Currency: ☒ CAD$ ☐ USD$

Other Currency - Please specify:

Ensure banking information is on invoice or complete Wire Transfer Request Form

Additional information may be entered on Page 2.

EXPENSE FOAPAL

At least one FOAPAL and Amount is required.

**GST and/or QST if applicable*

	Fund	Org	Acct	Prog	Actv	Locn	Amount	GST*	QST*
1	271482	00253	700512	5200	000000	000000	$3,196.36		
2									
3									
4									
5									

TOTAL: $3,196.36

AUTHORIZATION - FUND FINANCIAL MANAGER (S) OR DELEGATE

Date

Print name and sign (wet signature ONLY): ***If signed by a delegate, provide:* *FFM McGill ID* *Delegate McGill ID*

REQUESTED BY

Name: Kathy Chasles-Belec *Unit:* AEC 10 - Pharmacology

Email: aec10-finance.med@mcgill.ca *Telephone:* 514-398-4616

Print Form

v.2019.04.05

RESERVED FOR FINANCIAL SERVICES USE:

Fund Admin approval & date:	Supervisor approval & date:
AP approval & date:	Manager approval & date:

Additional Information (optional):

Invoice #09-11-2019-1 from Université de Montréal. Dr. Morgan Craig's student, Justin Le Sauteur Robitaille, attended the Fluids in Health summer school in Cargese, Corse, France this summer, financed by CAMBAM.

Please send check to the attention of:
Lise Imbeault - Technicienne en administration
Université de Montréal
Département de mathématiques et statistique
Pavillon André-Aisenstadt, bureau 5153
C.P. 6128, Succ. Centre-ville
Montréal, Qc H3C 3J7

Appendix 9-CRM proposal

Joint MITACS-CRM internships for all CRM labs

MITACS will be offering 20 internships valued at $6000 per trainees ($3000 from MITACS and $3000 from CRM) that can be offered to undergrad/grad students as well as PDFs. Based on the discussion we had with the director of CRM and the representative from MITACS, it seems that we all have an agreement regarding these internships that will be available to all CRM labs. As co-directors of CAMBAM, we would be happy to connect CRM with the MITACS representative to finalize this program. This will cost CRM $60,000 in total.

Profile updates

Members of CAMBAM will be asked to update their profiles on the CAMBAM homepage hosted by CRM in order to help MITACS develop collaborations between their industry partners and CAMBAM members. I think this should be also done in other CRM labs. An email will be sent to ask members to do so. A member of CAMBAM has volunteered to help with this.

Mini-workshops in Mathematical Biology

CAMBAM will send a call for proposals to its members, open to profs, postdocs and graduate students.

Each workshop would focus on a methodology (mathematical, statistical, computational) to address biological problems.

Format

Frequency and duration: Each workshop would be run online (Zoom). The frequency and format would be open. We would likely limit each workshop to a half-day (seems reasonable for an online event).

Activities: They could be team-led and involve multiple speakers. They could involve a combination of a lecture and more interactive sessions with participants (break-out rooms, software tutorials, problem solving, discussions)

Rationale:

Many events such as conferences and summer schools were canceled. Same situation for other research-related travel plans for this summer (internships, field work, collaborations). A number of students will also have limited ability to conduct their on-campus research. Our goals with this series are to:

1. Offer opportunities to students and postdocs to share their quantitative expertise, and to learn new methods that will benefit their research when we return at full capacity.

2. Offer a platform to its members for sharing ideas and building a sense of community during the confinement period.
3. Offer a source of income to students and postdocs who are facing potential financial implications of lost time resulting from the confinement.

Funding:

- CAMBAM would apply for funding to CRM to offer an honorarium/salary to students and postdocs. This is important, the goal is to alleviate the negative financial impacts of delayed research for students and postdocs, not to exploit the situation.
- We would also ask for technical assistance to host the events remotely. Organizers would at least need to have proper access to the remote platform to serve as hosts. It would also be good to have a (free) registration process to help manage participants (e.g. forming groups).
- The workshop series would also benefit from increased visibility and a formal registration portal if the CAMBAM web site can be improved and updated. That would likely require funding (hiring of web designer)

Generally speaking, the cost will consist of a $360 payment per student/postdoc involved. TA salary is $30/h, so that's about 12h of work= running the workshop (4h) and preparing it (8h). We could allow for 1-2 students/postdocs to be involved and hope to run 6 workshops over the summer. That would require a $2,400 budget from CRM.

Canadian Mathematical Society
Société mathématique du Canada

Home

The Canadian Mathematical Society (CMS) invites the mathematical community to the 2020 CMS Winter Meeting in Montreal, Quebec from December 4-7. All meeting activities are taking place at the Sheraton Montreal. Four days of awards, mini courses, prize lectures, plenary speakers, and scientific sessions.

196 DAYS : 15 HOURS : 46 MINUTES : 02 SECONDS

Registration

Early Bird Registration ends October 31st. Registration closes November 15

NEW: You are now required to register for the meeting before you can submit an abstract.

Coming Soon

Abstract Submission

CMS invites all speakers to submit an abstract for their session or contributed paper.

New: You are now required to register for the meeting before you can submit an abstract.

Coming Soon

Student Funding

Grants are available to partially fund the travel and accommodation costs for bona fide graduate students who are CMS Members at a Canadian or other university

Click here

FRIDAY DECEMBER 6TH | 5:30pm - 6:30pm
Complimentary Admission

1201 Boulevard Rene-Levesque West,

Montreal, Quebec H3B 2L7 Canada

Alicia Carriquiry
IOWA STATE

Plenary Speakers

Nicolas Bergeron
ÉCOLE NORMALE SUPÉRIEURE

Irene Fonseca
CARNEGIE MELLON'S CENTER FOR NONLINEAR ANALYSIS (CNA)

Yvan Saint Aubin
UNIVERSITÉ DE MONTRÉAL

Prize Speakers

Coming Soon
TBD
ADRIEN POULIOT PRIZE

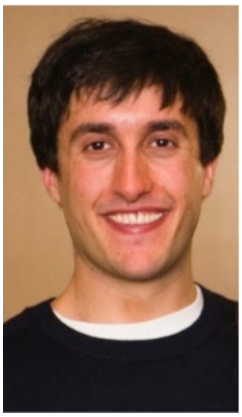
Duncan Dauvergne
PRINCETON
DOCTORAL PRIZE

Dr. Jacopo De Simoi
UNIVERSITY OF TORONTO
COXETER JAMES PRIZE

Scientific Directors

Brent Pym (McGill)

Michael Lipnowski (McGill)



Scientific Organizing Committee

Jacques Hurtubise (McGill)

Dimitris Koukoulopoulos (Montréal)

Nilima Nigam (Simon Fraser)

Brendan Pass (Alberta)

Steph van Willigenburg (UBC)

Sponsors

McGill

Atlantic Association for Research in the Mathematical Sciences

CENTRE DE RECHERCHES MATHÉMATIQUES

FIELDS

Pacific Institute *for the* Mathematical Sciences

McGill | Faculty of Medicine

Year-End Financial Statement for May 1st 2019 to April 30th 2020

Research Centre, Core Facility, Network Name:	CAMBAM
Director and Administrator (Names and Contact information):	Anmar Khadra (anmar.khadra@mcgill.ca) and Fred Guichard (red.guichard@mcgill.ca)

Sources of Income / Revenue:

	Cash	In-kind
From Faculty of Medicine	**15,000**	
Other sources *List all sources (add rows as needed):* ***FRQNT/CRM ($12,500), VPR office ($35,000) and the Fields Institute($20,000)***	67,500	
User Fees		
TOTAL INCOME / REVENUE:	82,500	

Expenditures:

Where applicable, provide details of items of expenditure as indicated below, e.g. salary components should be listed by individual, the cost of each workshop, individual working group, or other meetings should be given, as well as any research project funds expended

Description	**Faculty of Medicine funds**	**Contributing Organization contributions**	
		Cash	**In-kind**
Personnel Salaries and related costs, for example:			
The Centre coordinator			
Research Associates, professional officers, technicians, laboratory attendants, administrators, organizers			

Specialist professional staff located within major facilities and other appropriate settings			
Student and trainee salaries			
Shared Research Resources, for example:			
Specialized equipment purchase or upgrade / repair			
Software tools			
Databases			
Bringing People Together, for example:			
Workshops **(summer school-Fields and CAMBAM)**		28,000	
Meetings **(Fluid Dynamics of Disease Transmission)**		3,200	
Seminars (**CAMBAM/QLS)**		2,700	
Conferences			
Planning, co-ordination activities			
Travel			
Accommodation			
Purchase of specific Assets or Intellectual Property			
Other expenditure:			
Any other expenditure not falling under the specified expenditure headings above (give details): **Six fellowships of $7,000 each (total $42,000), and over-expenditure from last year ($6,600).**	15,000	33,600	
TOTAL EXPENDITURES	15,000	67,500	
Carryover amount: Please note that a carryover balance is not permitted for some accounts (to clarify accounts affected, please consult Financial Affairs)			
Provide the reason for **carryover*** if permitted: *It is essential that reasons be provided by carryover requests*			

*It is the responsibility of the Centre, Core Facility, Network to ensure that the carryover amount requested in this document has been discussed with the Financial Affairs Office of the Faculty of Medicine

Director of Research Centre, Core Facility or Network or his/her Delegate:

Signature:	
Date: 21/5/2020	

Budget plan for May 1st 2020 to April 30th 2021

Total request from Faculty of Medicine for 2020-21:

Sources of Income / Revenue:

	Cash	**In-kind**
From Faculty of Medicine	**20,000**	
Other sources *List all sources (add rows as needed):* ***FRQNT/CRM ($8,800), Faculty of Science ($2,800) and VPR office ($35,000).***	46,600	
User Fees		
TOTAL INCOME / REVENUE:	66,600	

Expenditures:

Where applicable, provide details of items of expenditure as indicated below, e.g. salary components should be listed by individual, the cost of each workshop, individual working group, or other meetings should be given, as well as any research project funds expended

Description	**Faculty of Medicine**	**Contributing Organization contributions**

	funds	Cash	In-kind
Personnel Salaries and related costs, for example:			
The Centre coordinator			
Research Associates, professional officers, technicians, laboratory attendants, administrators, organizers			
Specialist professional staff located within major facilities and other appropriate settings			
Student and trainee salaries			
Shared Research Resources, for example:			
Specialized equipment purchase or upgrade / repair			
Software tools			
Databases			
Bringing People Together, for example:			
Workshops **(Online workshops)**		2,400	
Meetings **(CAMBAM Retreat)**		$2,200	
Seminars **(CAMBAM/QLS)**		6,000	
Conferences			
Planning, co-ordination activities			
Travel			
Accommodation			
Purchase of specific Assets or Intellectual Property			
Other expenditure:			
Any other expenditure not falling under the specified expenditure headings above: **Seven fellowships of $8,000 each.**	20,000	36,000	
TOTAL EXPENDITURES	20,000	46,600	