Physics Department Orientation For Graduate Students

V. Zazubovits

• Introduction to Our Department
• *Break: Group Discussion: managing your research, teaching and courses; communicating, getting to know each other, department and campus*
• Rules of our Graduate Program and Available Resources
Please turn on your video

Click on upward arrow to change settings, e.g. background

Mute/unmute

Send questions and comments through chat

In case of losing connection / exiting by mistake, please rejoin our meeting via link provided in the e-mail.

For exercise we will assign you to breakout rooms. Exit breakout room brings one back to general meeting. Exit Meeting takes one out of the whole meeting.

In the end of the exercise everyone will be returned from the breakout rooms
Valter Zazubovits  
Graduate Program Director  
514-848-2424, ext. 5050  
Office: L-SP 365-8  
valter.zazubovits@concordia.ca  
Online student/office hours on Tuesday and Thursday 9-11AM at  
https://concordia-ca.zoom.us/j/3592021294

Marie-Anne Cheong Youne  
Assistant to the Chair and Graduate Program Assistant  
514-848-2424, ext. 3270  
Office: L-SP 365.02  
marie-anne.cheongyoune@concordia.ca

Alexandre Champagne, Department Chair  
514-848-2424 ext. 3264  
Office: L-SP 367.03  
A.Champagne@concordia.ca
Other Important Events

Teaching Assistant Training and Orientation,
Friday September 4,
11:00 am- 12:00 pm;
https://concordia-ca.zoom.us/j/93460875770

Department-Wide Get-Together and Mini Research Colloquium,
Wednesday September 9, 3:00 - 4:00 pm, https://concordia-ca.zoom.us/j/91469927042 password: Fall2020. Speaker: Dr. Rachael Mansbach.

Colloquia will occur every week, same time, same place.
Our Department of Physics at Concordia University is a rapidly diversifying environment. Everyone who dedicates their time and passion to physics belongs here and deserves to feel equally valued and respected no matter their gender, sexual orientation, ethnicity, religion, country of origin, age or disability.
Montreal

- Concordia located in Montreal
- Two campuses
Science Pavilion – Home of (most of) Physics Department

Inside and outside of SP building
Physics Department Spaces

**SP Building 2\(^{nd}\) Floor (West Broadway side)**
- Physics Teaching Labs

**SP Building 3\(^{rd}\) Floor**
- Offices of Chair, GPD, UPD, Graduate Program assistant
- Offices for (most of) Physics Faculty and TAs
- Physics Department Kitchen

**SP Building 5\(^{rd}\) Floor**
- Offices for some TAs, faculty and visitors

**Research Labs**
- Basement, 3\(^{rd}\) & 5\(^{th}\) floor, PERFORM
(see faculty webpages)
Mid-Sized and Close-Knit Department…
...in a Big Multidisciplinary University

~180 undergraduate physics students
- Physics Major
- Biophysics specialization
- Physics specialization
- Honours program
- Biophysics minor

~2000 students in service courses and elective courses

~45 graduate students
- MSc in Physics
- PhD in Physics
- Masters in Nanoscience and Nanotechnology (starting)
Research:
• Condensed Matter Physics / Nano (Theory and Experiment)
• Photonics
• Theoretical Particle Physics
• Physics Education
• Biomedical Physics
• Molecular Biophysics
• Computational Physics

http://www.concordia.ca/artsci/physics.html

Dr. Tabassom Hamidfar, PhD 2019
Postdoctoral Fellow
Northwestern University

Dr. Joshua Island, MSc 2011
Assistant Professor
University of Nevada, Las Vegas
Equipment and Facilities

Medical MRI equipment (PERFORM)

Laser spectroscopy and photonics equipment

Cryostat for transport measurements

UV-VIS-NIR spectrometer
Research Topics: Physics

Nanoscale mechanical break junctions

Graphene and other 2D materials © graphenomenon.com

Particle Physics – CMS experiment © CERN

Whispering Gallery modes in optical micro-resonators © M. Gomilsek
Research Topics: Biophysics and Medical Physics

- Brain imaging
- Charge transfer in Photosynthetic Reaction Centers of purple bacteria
- Ultrasound-driven microbubbles (Helfield et al. PNAS 113(36) 2016)
- Imaging and spectroscopy of single (bio)molecules and complexes
- Protein energy landscapes
Questions?
Group Exercise

Let’s discuss the following:

- Strategies for managing your research, TA, courses and the rest of your life.
- Strategies for making connections with other students and colleagues despite COVID-related limitations.
- Have you been to campus? What do you expect?

https://forms.gle/7xfWKSdzxcJkfuir7
Please discuss the choice of your courses with your supervisor.
Please register for courses as soon as possible. You can register for courses for both Fall and Winter semesters right now (Winter students – from September 9). Registration instructions
Three 3-credit courses required while being in either MSc or PhD programs.
At least one of the three courses has to be from our department.
To get authorization for taking courses at other universities please use AEHE: https://www.bci-qc.ca/en/students/aehe/
One “bonus” / free course.
If you drop a course after DNE (Did Not Enter) deadline (Sept 21 this semester) the course will be counted for financial purposes.
Research and Teaching

- Your primary contact on matters related to your research is your supervisor.
- Submit to the GPD a brief (one page) summary of your research project.
- Form (together with supervisor) a supervisory committee.
- Seek feedback also from your supervisory committee members and from other faculty members who may know something useful.
- Research Assistantship (RA) versus Bursary
- On matters pertaining to Teaching Assistantships (TA) please contact the professor teaching the course, then Laszlo Kalman or Valter Zazubovits.
Key Department/Program Rules: Links

- Our Graduate Program Policies
- Graduate Calendar (general)
- Graduate Calendar (Physics PhD)
- Graduate Calendar (physics MSc)
- School of Graduate Studies
• International tuition fee waiver will be applied towards the tuition fees of the student as per normal.
• Scholarships or fellowships will be deposited in the student’s internal account. The student will be able to withdraw the balance once arrived in Montreal.
• Teaching Assistantships (salary for teaching duties) and Bursaries (from supervisor’s grant) will be deposited into your internal university account. You will get access to these funds after you physically arrive to Montreal.
• TA contracts for online international students will be prepared later (on separate forms)
• COVID-19 FAQ for International Students
• International students starting in the Winter semester: At the moment all regulations are implying that next semester is going to be “real”. This may change, but at the moment we do not know.
• Apply for necessary documents (Quebec Acceptance Certificate and Canadian Study Permit) as soon as possible.
• COVID-19 FAQ for International Students
Useful Resources and Links

Administrative:
- International Students Office (ISO)
- Student Accounts
- Office of Rights and Responsibilities
- Birks Student Service Centre

Library and Bookstore:
- Concordia Library
- Concordia Book Stop (Bookstore)

Physical and mental health:
- Health Services
- Counselling and Psychological Services

Student association:
- Physics Graduate Student Association
More Useful Resources and Links

- Access Centre for Students with Disabilities
- Campus Security and Emergency Services
- Career and Planning Services (CAPS)
- Concordia Student Union Off-Campus Housing (data bank)
- French courses, etc: Réussir en français (Département d’études françaises)
- Graduate Awards Office
- GradProSkills (useful professional development workshops)
- LIVE Centre (volunteering)
- Multi-faith and Spirituality Centre
- Navigator Program / Welcome Crew (help for new students)
- Ombuds Office
- Recreation and Athletics
- Services for New Students
- Sexual Assault Resource Centre
- Student Advocacy Office
- Student Learning Services
- TRAC (TA/RA labour union, for the purposes of work conditions, salaries, etc)
- 4TH SPACE
GradProSkills – Free Workshops for Graduate Students

SUCCESS IN GRADUATE SCHOOL

Craft a strong research scholarship application
- GPLL466 - Funding Opportunities for Graduate Students in Thesis-based Programs
- GPLL436 - Crafting a Competitive Doctoral Scholarship Application for Social Science & Humanities
- GPLL434 - Crafting a Competitive Doctoral Scholarship Application for Natural Sciences, Engineering & Health
- GPLL430 - Crafting a Competitive Master’s Scholarship Application for Natural Sciences, Engineering, & Health
- GPLL432 - Crafting a Competitive Master’s Scholarship Application for Social Science & Humanities

COMMUNICATION

Communicate with confidence
- GPCSC482 - English Grammar 1: Subject-verb agreement, dangling modifiers, articles, and voice
- GPLD157 - Virtual Teams and Tools
- GPCSC415 - Professional and Effective Email Writing
- GPLT319 - Speaking with Skill: English pronunciation and conversation

TEACHING

Master pedagogical strategies for successful teaching
- GPTK722 - Teaching Assistant Orientation
- GPTK758 - What Can Moodle Do? (Online Webinar)
- GPTK703 - Graduate Seminar In University Teaching (All Disciplines)
- GPTK766 - UDL 101: Universal Design for Learning for Inclusive Teaching

DIGITAL

Digital skills for today’s grad student
- GPTK774 - Best Practices for Promoting Interaction & Participation on Zoom
- GPD1513 - Get Started Coding with Python
- GPD1515 - Beginner’s Guide to the R Programming Language
- GPLL243 - Using Zotero for Grads
Teaching Assistant Training and Orientation,
Friday September 4,
11:00 am - 12:00 pm; https://concordia-ca.zoom.us/j/93460875770
Questions?
Nanophysics / Condensed Matter Physics

Sushil Misra
Ingo Salzmann
Panagiotis Vasilopoulos

Alexandre Champagne
Pablo Bianucci
Saurabh Maiti

http://www.concordia.ca/artsci/physics.html
http://www.concordia.ca/artsci/physics.html