CV – Alexandre Mercier-Aubin

Address	73 Barrette,	**Mobile Phone**	+1 (418) 572 0698
	Levis, Quebec, Canada	**Email**	alexandre.mercier-aubin.1@ulaval.ca
Date of Birth	December 16, 1996	**Website**	alexandremercieraubin.com
Nationality	Canadian		

Personal Profile

Graduate student at McGill University in computer science. My fields of study are constraint programming, computer graphics and algorithms. I seek knowledge as well as new challenges to push forward my limits.

Education

2020-2023   PhD in Computer Science - McGill University

In progress

2019-2020   M. Sc. in Computer Science - Université Laval

Research in constraint programming with Prof. Claude-Guy Quimper

2017-2019   B. Sc. in Computer Science - Université Laval

honor profile

2014-2017   DEC-BAC in Computer Science - Cégep Lévis-Lauzon

Employment History

Present   Université Laval
teaching assistant

Teach the practical aspect of the advanced programming in C++ course. Corrector for the computer graphics course. Support students at the help center for computer science students (CARÉ) with questions related to 15 different courses: from beginner programming courses to advanced algorithm design and operating systems.

2018/05, 2018/09   Activision, Beenox
game engine developper intern

Design and program the game engine for Call of Duty: Black Ops 4.
Technologies: DirectX, C++, LUA Contributions: Shaders, LOD formulas, Bugfixes, HUD formulas, cross-platform compatibilities, etc.

2017/01 - 2017/08   Centre de Robotic et Vision Industrielle
Intern/Programmer

Machine learning applied to Computer Vision.

2016/05 - **2016/09**	Valero, Levis *computer science intern*
	Translate programs from Visual Basic to C#.
2015/05 - **2015/09**	Consortium Cooperatif de Services Fédératifs *IT Technician*
	IT support, creating and managing a database, creating a web site, etc.

Prizes and scholarship

- **Bourse de doctorat Hydro-Québec en science**
  15 000$ *per year, up to 3 years*

- **School of Computer Science PhD funding, McGill University**
  21 000$ *per year, up to 3 years*

- **MITACS accelerate, CRISI**
  39 000$

- **Undergraduate Research Fellowship 2019-2020, Université Laval**
  declined 6500$

- **Association for Constraint Programming, CP2019**
  450$

Publications

Peer-reviewed conference papers

published

- Alexandre Mercier-Aubin, Ludwig Dumetz, Jonathan Gaudreault and Claude-Guy Quimper. The Tolerance Constraint: A Step Towards Stochastic CP Solvers. In proceedings of the 26th International Conference on Principles and Practice of Constraint Programming (CP 2020), 2020.

- Alexandre Mercier-Aubin, Jonathan Gaudreault and Claude-Guy Quimper. Leveraging Constraint Scheduling: A Case Study to the Textile Industry. In proceedings of the 17th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR 2020), 2020.

Thesis

Under evaluation by the jury as of September 3rd 2020

- Alexandre Mercier-Aubin. Ordonnancement de tâches sous contraintes sur des métiers à tisser. M. Sc. Thesis, Université Laval, 2020.

Peer-reviewed workshops

- Alexandre Mercier-Aubin, Jonathan Gaudreault and Claude-Guy Quimper. Multi-Resource Scheduling with Setup Times: An Application Case to the Textile Industry. 25th International Conference on Principles and Practice of Constraint Programming (CP 2019): Doctoral program. `https://cp2019.a4cp.org/accepted_dp/09-alexandre_mercier_aubin.pdf` (accessed January 29, 2020).

Interests

- **Teaching**
- **Algorithms**
- **Games & game development**
- **Constraint programming**
- **Hiking**
- **Music**

Leadership

- **Leader in various undergraduate team projects**: Gaudrophone, BigData7027, projet2018-eq4 and ComputerGraphics, etc.

- **Team leader in the Valleyfield game creator competition**

Some interesting projects

- **Game engines**

  One made during college: https://youtu.be/8OPpt3-iIbY
  The source code of a more complex engine: https://github.com/AlexandreMercierAubin/ComputerGraphics

- **Video games I worked on**

  Call of Duty: Black Ops 4: https://www.callofduty.com/ca/en/blackops4
  Proto-Spyder Assault, 48h Valleyfield game dev contest: https://youtu.be/qJjy8b0kuSY
  SansFin, french horror game, collegial project: https://youtu.be/s6vr07Nt1IY

Extracurricular

V.P. Social at the AGIL: Organize events for the association of graduate student in computer science.
Volunteer at the ASETIN: Volunteer work at the student association of computer science. I've been a bartender, receptionist and helped prepare the initiations.
Volunteer at Lévis: Receptionist at the Water Festival of Lévis.

Referees

Name	Claude-Guy Quimper	Name	Jonathan Gaudreault
Company	Université Laval	**Company**	Université Laval
Position	Associate Professor	**Position**	Full Professor
Contact	Claude-Guy.Quimper@ift.ulaval.ca	**Contact**	jonathan.gaudreault@ift.ulaval.ca