

CV – Alexandre Mercier-Aubin

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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 developer 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 Robotique et Vision Industrielle
Intern/Programmer
Machine learning applied to Computer Vision.

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

Prizes and scholarship

- **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

accepted for publication

- A. Mercier-Aubin, L. Dumetz, J. Gaudreault and C. Quimper.: The Tolerance Constraint: A Step Towards Stochastic CP Solvers. To appear in proceedings of the 26th International Conference on Principles and Practice of Constraint Programming (CP 2020), 2020.
- A. Mercier-Aubin, J. Gaudreault and C. Quimper.: Leveraging Constraint Scheduling: A Case Study to the Textile Industry. To appear in proceedings of the 17th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR 2020), 2020.

Workshops

- A. Mercier-Aubin, J. Gaudreault and C. 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-ilbY>

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