

# Philippe Olivier

Philippe.Olivier@polymtl.ca • 514.433.5700 • [github.com/PhilippeOlivier](https://github.com/PhilippeOlivier) ↗

## EDUCATION

### Polytechnique Montréal

PhD, Computer Engineering

Aug. 2016 – May 2021

- Thesis: Fairness in Combinatorial Optimization
- Research supervisors: Gilles Pesant and Andrea Lodi

### Université Laval

B.S., Computer Science

Aug. 2012 – May 2016

## RESEARCH EXPERIENCE

### Research Interests

- Operations research
- Combinatorial optimization
- Constraint programming
- Integer programming

### Publications

Lodi, A., Olivier, P., Pesant, G., and Sankaranarayanan S. (2022) "Fairness over Time in Dynamic Resource Allocation with an Application in Healthcare". *Mathematical Programming*. ↗

Olivier, P., Lodi, A., and Pesant, G. (2021) "Measures of Balance in Combinatorial Optimization". *4OR*. ↗

Olivier, P., Lodi, A., and Pesant, G. (2020) "The Quadratic Multiknapsack Problem with Conflicts and Balance Constraints". *INFORMS Journal on Computing*. ↗

Olivier, P., Lodi, A., and Pesant, G. (2018) "A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems". In *Integration of AI and OR Techniques in Constraint Programming, Delft, Netherlands, (CPAIOR 2018)*. ↗

### Conference Presentations

CPAIOR 2018 (Delft, Netherlands)

June 2018

A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems ↗

JOPT 2018 (Montreal, Canada)

May 2018

A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems ↗

IFORS 2017 (Quebec, Canada)

July 2017

Solving the Wedding Seating Problem by Constraint Programming ↗

### Poster Presentations

CP 2019 (Stamford, United States)

Oct. 2019

Measures of Balance in Combinatorial Optimization

### Member

Laboratoire Quosséça ↗

Aug. 2016 – May 2021

Canada Excellence Research Chair in Data Science for Real-Time Decision-Making ↗ Aug. 2016 – May 2021

## TEACHING EXPERIENCE

### Université du Québec à Montréal

Course Lecturer

- INF1070: Administration of Computer Systems  
Commands, applications, and management of a Linux system.

Jan. 2022 – Now

### Polytechnique Montréal

Course Lecturer

- INF1005D: Procedural Programming in Python  
Introduction to Python programming.

Sept. 2021 – Dec. 2021

Teaching Assistant

- INF4705/INF8775: Algorithm Design  
Asymptotic notation, complexity classes, algorithm design patterns, metaheuristics.

Jan. 2018 – Dec. 2019

**Université Laval**

Teaching Assistant

Sept. 2013 – Dec. 2013

**WORK  
EXPERIENCE****pganalyze**

Contract work

Aug. 2022 – Now

Building multi-objective optimization models for solving database index selection problems.

**Hydro-Québec TransÉnergie**

Intern

Sept. 2014 – Apr. 2015

Automating the data transfer between a database and specialized software. Automating some of the tests done by electrical engineers.

**PROJECTS****Fantasy Solver**

DFS Solver

June 2021 – Now

Solver for optimal lineup generation in multi-entry *Daily Fantasy Sports* (DFS) tournaments. It is, to my knowledge, the only exact solver for generating a provably optimal set of lineups for DFS tournaments.