

WORK

CONTRACT WORK

**pganalyze** 08/2022–Now

- Built an optimization model for automated index selection in databases
- Presented this model at the JOPT 2023 and PGCon 2023 conferences

**Integrated Reasoning** 06/2023–Now

- Scientific advisor on operations research, modeling, and optimization

EMPLOYMENT

**Hydro-Québec TransÉnergie** 09/2014–04/2015

- Automated data transfers to/from specialized software
- Automated testing performed by electrical engineers

EDUCATION

**Polytechnique Montréal** 08/2016–05/2021  
PhD, Computer Engineering

**Université Laval** 08/2012–05/2016  
BSc, Computer Science

RESEARCH

INTERESTS

- Operations research
- Constraint programming
- Integer programming

PUBLICATIONS

**Fairness over Time in Dynamic Resource Allocation with an Application in Healthcare**

Lodi, A., Olivier, P., Pesant, G., and Sankaranarayanan S.  
*Mathematical Programming* (2022)

**Measures of Balance in Combinatorial Optimization**

Olivier, P., Lodi, A., and Pesant, G.  
*4OR* (2021)

**The Quadratic Multiknapsack Problem with Conflicts and Balance Constraints**

Olivier, P., Lodi, A., and Pesant, G.  
*INFORMS Journal on Computing* (2020)

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

Olivier, P., Lodi, A., and Pesant, G.  
*Integration of AI and OR Techniques in Constraint Programming, Delft, Netherlands, (CPAIOR 2018)* (2018)

**CONFERENCE PRESENTATIONS**

<b>PGCon 2023 (Ottawa, Canada)</b>	06/2023
Automating Index Selection Using Constraint Programming	
<b>JOPT 2023 (Montreal, Canada)</b>	05/2023
Optimizing Database Index Selection Using Constraint Programming	
<b>CPAIOR 2018 (Delft, Netherlands)</b>	06/2018
A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems	
<b>JOPT 2018 (Montreal, Canada)</b>	05/2018
A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems	
<b>IFORS 2017 (Quebec, Canada)</b>	07/2017
Solving the Wedding Seating Problem by Constraint Programming	

**POSTER PRESENTATIONS**

<b>CP 2019 (Stamford, United States)</b>	10/2019
Measures of Balance in Combinatorial Optimization	

**MEMBER**

<b>Laboratoire Quosséca</b>	08/2016–05/2021
<b>Canada Excellence Research Chair in Data Science for Real-Time Decision-Making</b>	08/2016–05/2021

**TEACHING****COURSE LECTURER****Polytechnique Montréal**

• INF1005D: Procedural Programming in Python	01/2023–05/2023
• INF1005D: Procedural Programming in Python	08/2022–12/2022
• INF1005D: Procedural Programming in Python	08/2021–12/2021

**Université du Québec à Montréal**

• INF1070: Administration of Computer Systems (two classes)	08/2022–12/2022
• INF1070: Administration of Computer Systems	01/2022–04/2022

**TEACHING ASSISTANT****Polytechnique Montréal**

• INF4705/INF8775: Algorithm Design	01/2018–12/2019
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**Université Laval**

08/2013–12/2013

**PROJECTS****Fantasy Solver**

06/2021–Now

Multi-objective solver for optimal lineup generation in multi-entry *Daily Fantasy Sports* (DFS) tourneys. It is, to my knowledge, the only exact solver for generating provably optimal sets of lineups for DFS tourneys.