Philippe Olivier

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WORK

CONTRACT WORK

pganalyze 08/2022–Now

- Built an optimization model for automated index selection in databases
- This multi-objective model can be fine-tuned by the user
- Working on publishing research related to this model

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

PGCon 2023 (Ottawa, Canada) 06/2023
Automating Index Selection Using Constraint Programming

JOPT 2023 (Montreal, Canada) 05/2023
Optimizing Database Index Selection Using Constraint Programming

CPAIOR 2018 (Delft, Netherlands) 06/2018
A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems

JOPT 2018 (Montreal, Canada) 05/2018
A Comparison of Optimization Methods for Multi-Objective Constrained Bin Packing Problems

IFORS 2017 (Quebec, Canada) 07/2017
Solving the Wedding Seating Problem by Constraint Programming

POSTER PRESENTATIONS

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

MEMBER

Laboratoire Quosséça 08/2016–05/2021

Canada Excellence Research Chair in Data Science for Real-Time Decision-Making 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

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.