


# ARTHUR MAHÉO

3/35 Fitzgerald St, South Yarra VIC 3141, Australia

[arthur.maheo@anu.edu.au](mailto:arthur.maheo@anu.edu.au) +61 (0) 481 091 465  0000-0001-9175-3224

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## Education

Australian National University, Canberra, Australia

PhD in Operations Research

Submitted 2019

- Supervised by Pascal Van Hentenryck and Philip Kilby.
- Designing and implementing efficient solutions to large mixed-integer programs using Benders decomposition.

Université de Nantes, Nantes, France

Université Libre de Bruxelles, Bruxelles, Belgium

Masters in Operations Research

2014

Double degree in Maths and Computer Science

2012

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## Selected publications

Mahéo, A., Kilby, P., & Van Hentenryck, P. (2019). Benders decomposition for the design of a hub and shuttle public transit system. *Transportation Science*, 53(1), 77–88.

DOI: [10.1287/trsc.2017.0756](https://doi.org/10.1287/trsc.2017.0756)

Mahéo, A., Urli, T., & Kilby, P. (2016). Fleet Size and Mix Split-Delivery Vehicle Routing. arXiv: [1612.01691](https://arxiv.org/abs/1612.01691)

Morita, H. & Mahéo, A. (2014). Classification Model Using Contrast Patterns and GRASP.

*Journal of Information Assurance and Security*, 9(5), 235–243.

DOI: [10.1109/WICT.2013.7113126](https://doi.org/10.1109/WICT.2013.7113126)

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## Programming skills

Working knowledge, Python, PHP, C++

Open source projects

- **BRANDEC**:<sup>1</sup> a framework for Benders with integer sub-problems.
- **Local TSP**:<sup>2</sup> local search heuristics for the TSP in Python, along with a **reader**.<sup>3</sup>

Advanced knowledge, Haskell, C, Bash

Conversant in most programming paradigms.

Linear solver APIS, Gurobi, CPLEX

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## Teaching experience

Supervision, Honours

With Pierre Le Bodic, Monash

2018

- Nelson Frew, “Implicit enumeration with dual bounds from approximation algorithms.”

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1. <https://gitlab.com/Soha/brandec>

2. <https://gitlab.com/Soha/local-tsp>

3. <https://gitlab.com/Soha/tsplib-reader>

**Head Tutor, manage course content and tutors**  
Declarative Programming (COMP90048), University of Melbourne 2019  
Programming Paradigms (FIT2102), Monash 2017, 2018

- Write tutorials and assignments in Haskell.
- Maintain the submission server.
- Mentor first-time tutors.

**Tutor, deliver course content**  
Optimisation and Decision Making, Melbourne Business School 2019  
Introduction to Programming and Algorithms (COMP1100), ANU 2015, 2016

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Work experience

**Aziluth, France** 2011–2014  
Project leader **Battle Arenas**<sup>4</sup>

- Browser strategy and management game with over 1,500 players daily. In-house engine written in PHP with over 90,000 LOC.

**De la Plume à l'Écran, France** 2008–2016  
Webmaster

- Design and maintain a publishing **website**<sup>5</sup> for an NGO promoting Native American cinema.

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4. <http://www.battle-arenas.net/>

5. <https://delaplumealecran.org/>