Clément Tamines PhD Student in Computer Science

☑ clement.tamines@umons.ac.be • ⓒ clement.tamin.es



I am a PhD student in the Computer Science department at the University of Mons (UMONS) in Belgium. I am co-supervised by Véronique Bruyère (UMONS) and Jean-François Raskin (Université libre de Bruxelles). My research interests regard equilibria in non-zero-sum multiplayer games and solving parity and generalized parity games. I am also very interested in the field of machine learning.

Education

10/2018 - 09/2022	PhD in Science, Computer Science, University of Mons, Belgium.
10/2019 - 03/2020	University Certificate , <i>Artificial Intelligence</i> , University of Mons, Belgium. Graduated <i>Magna Cum Laude</i> .
09/2016 - 08/2018	Master of Science, Computer Science, University of Mons, Belgium. Graduated Summa Cum Laude.
09/2013 - 08/2016	Bachelor of Science, Computer Science, University of Mons, Belgium.

Academic Experience

10/2018 - 09/2022	PhD Thesis.	University of Mons.
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Title Equilibria in Multiplayer Games with Multiple Objectives.

Directors Véronique Bruyère (UMONS) and Jean-François Raskin (ULB).

10/2018 – 01/2022 **Teaching Assistant**, *University of Mons*.

Graduated Cum Laude.

o Algorithmics and Bioinformatics: Java 8 project on DNA fragment assembly.

09/2018 – 08/2019 **Supervisor**, *University of Mons*.

- o Research internship on symbolic solving of games using Binary Decision Diagrams.
- o Master student project on window techniques for solving parity games.

09/2016 - 05/2018 **Student Teaching Assistant**, *University of Mons*.

- o Programming and algorithmics I (Python 3).
- o Programming and algorithmics II (Java 8).

Professional Experience

09/2017 – 11/2017 Internship in Software Development, Thales Belgium SA. Tubize, Belgium.

Design and implementation of a constraint programming model handling the network generation part of a radio configuration tool. The implementation was done using Java 8 and the Choco Solver constraint programming library.

Publications

- [BPRT19a] Véronique Bruyère, Guillermo A. Pérez, Jean-François Raskin, and Clément Tamines. Partial Solvers for Generalized Parity Games. In Reachability Problems 13th International Conference, RP 2019, Brussels, Belgium, September 11-13, 2019, Proceedings, pages 63–78, 2019.
- [BPRT19b] Véronique Bruyère, Guillermo A. Pérez, Jean-François Raskin, and Clément Tamines. Partial Solvers for Generalized Parity Games (Full Version). CoRR, abs/1907.06913, 2019.
 - [BRT21] Véronique Bruyère, Jean-François Raskin, and Clément Tamines. **Stackelberg-Pareto Synthesis (Full Version)**. *CoRR*, abs/2102.08925, 2021.

Programming Skills

Python Tensorflow (Keras), Scikit-learn, PyTest, Jupyter Notebook, Matplotlib

Cloud service Google Colaboratory, FloydHub

Java 8 Swing, JUnit, Choco Solver

Tools Git, Maven, JetBrains suite, Eclipse

Languages

French Native language.

English Full professional proficiency.

Dutch Notions (looking to improve).

Talks

2020 Formal Verification Using Games, Youth Seminar, 05/03, Mons, Belgium.

2019 Partial Solvers for Generalized Parity Games, Highlights'19, 18/09, Warsaw, Poland.

Partial Solvers for Generalized Parity Games, RP'19, 11/09, Brussels, Belgium.

Partial Solvers for Generalized Parity Games, MoRe'19, 22/06, Vancouver, Canada.

Your Turn to Play!, Math & Science Days'19, 29/03, Mons, Belgium.

Attended Research Events

2021 Theoretical Foundations of Computer Systems Boot Camp, online.

2020 GandALF: Games, Automata, Logics, and Formal Verification, online.

Highlights of Logic, Games and Automata, online.

Modelling and Verification of Parallel Processes, MOVEP summer school, online.

Dynamics and Information Workshop, Tel Aviv, Israel.

2019 Highlights of Logic, Games and Automata, Warsaw, Poland.

13th International Conference on Reachability Problems, Brussels, Belgium.

LearnAut: Learning and Automata (LICS'19 workshop), Vancouver, Canada.

MoRe: Multi-objective Reasoning in Verification and Synthesis , Vancouver, Canada.

Theory and Algorithms in Graph and Stochastic Games, co-organizer, Mons, Belgium.

MdC: Mardi des Chercheurs (UMONS research event), Mons, Belgium.

CFV Seminar, Brussels, Belgium.

MFV Seminar, Brussels, Belgium.

2018 Highlights of Logic, Games and Automata, Berlin, Germany.

Logic and learning, FoPSS summer school, Oxford, UK.

Modelling and Verification of Parallel Processes, MOVEP summer school, Cachan, France.

Miscellaneous

2015 – 2018 Activities and Societies, University of Mons.

- o Communication manager of the General Association of Science Students.
- o Member of the Computer Science Society.
- o Student member in the council of the Faculty of Science.

2015 – 2018 **Student Jobs**, *University of Mons*.

- o Guiding and informing people through campus during open days.
- o Informing people during student fairs (SIEP).