

Julien Calbert

Ph.D. student in Mathematical Engineering, UCLouvain, Louvain-la-Neuve, Belgium
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RESEARCH INTERESTS

Symbolic control, Abstraction, Data-driven control, Optimization

EDUCATION

Ph.D. student in Mathematical Engineering 2020 — Present
UCLouvain, Louvain-la-Neuve, Belgium
FRIA/FNRS Fellow
Supervisor Pr. Raphaël Jungers

Master's Degree in Mathematical Engineering: Applied mathematics 2018 — 2020
UCLouvain, Louvain-la-Neuve, Belgium
Honours obtained: magna cum laude

Bachelor's Degree in Engineering: Applied mathematics 2015 — 2018
UCLouvain, Louvain-la-Neuve, Belgium
Honours obtained: summa cum laude

TEACHING EXPERIENCE

UCLouvain, Louvain-la-Neuve, Belgium 2020 — Present
Teaching Assistant

- LEPL1101: Algèbre linéaire (BAC 1)
- LINMA2380: Matrix computations (Master 1)
- LEPL1103: EDPs et analyse complexe (BAC 2)

I gave some lectures for each of these courses in front of an audience.

LANGUAGES

- **French:** First language
- **English:** Fluent

PUBLICATIONS

Conference paper

- Julien Calbert, Sébastien Mattenet, Antoine Girard, Raphaël M. Jungers, **Memoryless concretization relation**, *26th ACM International Conference on Hybrid Systems: Computation and Control (HSCC)*, 2023, (submitted).
- Julien Calbert, Benoît Legat, Lucas Egidio, Raphaël M. Jungers, **An Efficient Method to Verify the Inclusion of Ellipsoids**, *IFAC-PapersOnLine*, vol. 56, no 2, pp. 1958-1963, 2023.
- Julien Calbert, Raphaël M. Jungers, **Data-driven heuristic symbolic models and application to limit-cycle detection**, *2023 American Control Conference (ACC)*, pp. 4351-4356, 2023.
- Julien Calbert, Benoît Legat, Lucas Egidio, Raphaël M. Jungers, **Alternating simulation on hierarchical abstractions**, *2021 60th IEEE Conference on Decision and Control (CDC)*, pp. 593-598, 2021.
- Wei Ren, Julien Calbert, Raphaël M. Jungers, **Zonotope-based controller synthesis for LTL specifications**, *2021 60th IEEE Conference on Decision and Control (CDC)*, pp. 580-585, 2021.
- Julien Calbert, Laurent Jacques, Pierre-Antoine Absil, **Learning integral operators from diagonal-circulant neural networks**, *Ph. D. dissertation, Master thesis. Université catholique de Louvain*, 2023.

AWARDS

FRRIA/FNRS Grant for doctoral research
Organization: Belgian National Fund for Scientific Research

2020 — 2024

SKILLS

- **Programming:** Julia, Python, Matlab, C, C++, Java

MASTER DISSERTATION

Topic: Learning integral operators from diagonal-circulant neural networks
Committee: Pierre-Antoine Absil, Laurent Jacques, John Lee, Benoît Pairet

HOBBIES

- **Youth organisation :** Staff member of a scout group
- **Running :** Half-marathon (Namur 2023, Nivelles 2023, Braine-le-Comte 2023), Marathon (Athens 2023)
- **Other sports:** Swimming (twice a week), futsal (once a week), badminton (once a week)