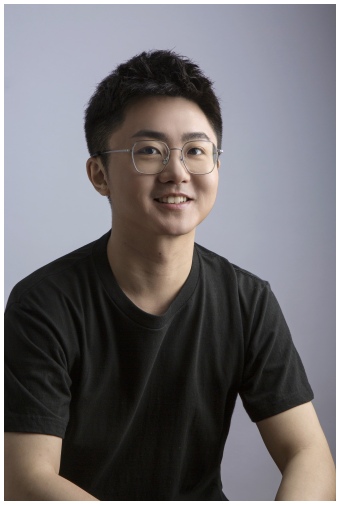

TONG CHEN

I was a Ph.D student at laboratory LAAS-CNRS in France, supervised by Edouard Pauwels, Victor Magron and Jean-Bernard Lasserre. The topic of my Ph.D thesis is about Robustness Verification of Neural Networks using polynomial optimization. During my PhD, I was working for high efficient, optimization-based approaches to verify robustness of neural networks. Currently, I am investigating the possibility to combine reinforcement learning algorithm with polynomial optimization to explore the hidden structures (sparsity, symmetry, hierarchy, etc.). I am interested in the reliability, interpretablility, and also the mathematical foundation of neural networks.

EDUCATIONS

Sep. 2019 - Dec. 2022 — Université Paul Sabatier, France
- *PhD, Laboratory LAAS-CNRS, POP team*

Sep. 2018 - Sep. 2019 — Université Paris Sud, France
- *Master 2, Département de Mathématiques d'Orsay, StatML*

Sep. 2017 - Jun. 2018 — Université Paris Sud, France
- *Master 2, Département de Mathématiques d'Orsay, AAG*

Sep. 2013 - Jun. 2017 — Wuhan University, China
- *Bachelor, School of Mathematics and Statistics, Mathematics Base Class*

RESEARCH INTERESTS

Optimization
- *polynomial optimization*
- *semidefinite programming*
- *first-order algorithm*

Artificial Intelligence
- *deep learning*
- *reinforcement learning*
- *robustness*

PUBLICATIONS

2022 — Computational Optimization and Applications
- *T. Chen, J-B. Lasserre, V. Magron, E. Pauwels,* A Sublevel Moment-SOS Hierarchy for Polynomial Optimization.

2021 — Conference on Neural Information Processing Systems (NeurIPS)
- *T. Chen, J-B. Lasserre, V. Magron, E. Pauwels,* Semialgebraic Representation of Monotone Deep Equilibrium Models and Applications to Certification.

2020 — Conference on Neural Information Processing Systems (NeurIPS)
- *T. Chen, J-B. Lasserre, V. Magron, E. Pauwels,* Semialgebraic Optimization for Lipschitz Constants of ReLU Networks.

Personal Infos:
Nationality: Chinese
Homepage:
Google Scholar:
Github:

Contact:
Email: tchen@laas.fr
Telephone: 06 95 08 11 65

Language:
Chinese: Maternal
English: B2
French: B1

Programming Skills:
Python, Matlab, Julia, Latex

Hobby:
Table tennis, Badminton, Reading, Flute