TONG CHEN

From 1st June 2023, Tong starts as a postdoc researcher with Raghavendra Selvan, at Machine Learning Section, University of Copenhagen. His main research is efficient and sustainable ML under the SustainML EU project. Previously, Tong was a Ph.D student at laboratory LAAS-CNRS in France, supervised by Edouard Pauwels, Victor Magron and Jean-Bernard Lasserre. The topic of his Ph.D thesis is about Robustness Verification of Neural Networks using polynomial optimization. During his PhD, he was working for high efficient, optimization-based approaches to verify robustness of neural networks. Currently, he is investigating the possibility to combine reinforcement learning algorithm with polynomial optimization to explore the hidden structures (sparsity, symmetry, hierarchy, etc.).

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*
- *efficient and reliable ML*

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