

Le Quoc-Tung

Ph.D. Candidate

✉ quoc-tung.le@ens-lyon.fr

🌐 tung-qle.github.io

🐙 [tung-qle](#)

Education

- Sep 2020 – **Ph.D. Student**, *Laboratoire de l'Informatique du Parallelisme, ENS de Lyon*, Lyon, France
Sep 2023 (Expected) Supervisors: Rémi Gribonval and Elisa Riccietti
Subject: **Towards robust adversarial learning with sparse deep networks**
Description: My Ph.D. studies the theoretical and algorithmic aspects of the sparse matrix factorization problem and relates them to sparse deep neural networks.
- Sep 2017 – **License 3 - Master 2**, *ENS Paris*, Paris, France
Aug 2020 **L3**: Informatique Formation interuniversitaire - **ENS Paris**
M1: Master Parisien de Recherche en Informatique (**MPRI**) Niveau 1 - **ENS Paris**
M2: Master Mathematics, Vision, Apprentissage (**MVA**) - **ENS Paris Scalay**
- Sep 2019 – **Undergraduate**, *Hanoi University of Science and Technology*, Hanoi, Vietnam
Aug 2020 Program: **Talented Engineering of Information and Technology**

Research experience

- Apr 2020 – **Internship M2**, *Team DANTE, ENS de Lyon*, Lyon
Aug 2020 Supervisor: Rémi Gribonval - LIP, ENS de Lyon.
Description: Studying **Multi-layer sparse matrix factorization**.
- Feb 2019 – **Internship M1**, *Team MLIA, LIP6*, Paris
Jun 2019 Supervisor: Mathieu Cord - LIP6, Sorbone University
Description: Studying **Domain Adaptation** for Deep Architecture and the effect of Deep features on **Transfer Learning**.
- Jun 2018 – **Internship L3**, *Team MC2, ENS de Lyon*, Lyon
Aug 2018 Supervisor: Omar Fawzi - LIP, ENS de Lyon
Description: Studying **Quantum Mechanics** as well as **Quantum computing** and establishing lower bound and algorithms for optimization problems on Quantum and Classical Settings.
- Feb 2016 – **Internship**, *Modeling, Simulation and Optimization Laboratory, School of Information and Communication Technology*, Hanoi
May 2017 Supervisor: Huynh Thi Thanh Binh - SolCT, Hanoi University of Science and Technology
Description: Studying **Evolutionary Algorithms** and its applications in **Wireless Sensor Network** with the main focus on energy, coverage and lifetime optimization.

Publications

- [1] **Q-T., Le, E., Riccietti, R., Grivonval, Spurious Valleys, NP-hardness, and Tractability of Sparse Matrix Factorization With Fixed Support**, *SIAM Journal on Matrix Analysis and Applications*, 2022

- [2] **Q-T., Le, L., Zheng, E., Riccietti, R., Grivonval, Fast learning of fast transforms, with guarantees, ICASSP 2022 - IEEE International Conference on Acoustics, Speech and Signal Processing, Singapore, Singapore, May 2022**
- [3] **Q-T., Le and R., Gribonval, Structured Support Exploration for Multi-layer Sparse Matrix Factorization, ICASSP 2021 - IEEE International Conference on Acoustics, Speech and Signal Processing, Toronto, Ontario, Canada, June 2021**
- [4] **T-H., Nguyen, T-H., Nguyen, T-T-B., Huynh, E., Kurniawan and Q-T., Le, Connectivity optimization problem in vehicular mobile Wireless Sensor Networks, 2016 International Conference on Computational Intelligence and Cybernetics, Makassar, Indonesia, Nov 2016**

Talks and Presentations

- Sep 2022 **Sparse Matrix Factorization and Beyond, Workshop MIA-MIVA, Sophia-Antipolis, France**
- Jun 2022 **From hardness to efficiency in sparse deep network training, SNN Workshop, virtual**
- May 2022 **NP-hardness, Tractability and Landscape of Fixed Support Matrix Factorization, Journée SMAI-MODE, Limoges, France**
- Apr 2022 **Fixed support matrix factorization, Séminaire d'équipe ARIC, ENS de Lyon, Lyon, France**
- June 2021 **Fixed support matrix factorization is NP hard, GdR ISIS thematic day: Theory of deep learning, virtual**

Honor and awards

- 2012-2013 **Third Prize in Vietnamese Mathematics Olympiads**
- 2013-2014 **First Prize in Vietnamese Mathematics Olympiads**
- 2014 **Le Van Thiem Award**
This prize is annually given to two or four students and teachers to recognize their achievements in teaching and studying of mathematics by Vietnamese Mathematical Society.
- 2014-2015 **Special Prize in Vietnamese Mathematics Olympiads for Undergraduate**
Special Prize is only given to students who obtain two First Prizes or achieve the highest score in Algebra and Analytics Section.
- Nov 2016 **Consolation Prize in Samsung Software Challenges**

Other skills

- Programming C, C++, Python, Java, Ocaml
- Language Vietnamese (Mother tongue), English (6.5 IELTS), French (A2 TCF)
- Operating System Windows, MacOS, Ubuntu, Debian