

# NGUYEN TA DUY

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## INTEREST

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Optimization, Theoretical Machine Learning, Theoretical Computer Science.

## EDUCATION

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**Boston University** 09/2021 – present  
Ph.D. Student in Computer Science, advised by Alina Ene. GPA: 3.95/4.  
**National University of Singapore** 08/2013 – 04/2019  
Master of Science, Computer Science (Artificial Intelligence). GPA: 4.75/5.  
Bachelor of Computing, Computer Science; Double Degree with École Polytechnique. GPA: 4.53/5;  
Highest Distinction.  
**École Polytechnique, France** 01/2015 – 04/2019  
Diplôme de l'École Polytechnique, Mathematics & Computer Science. GPA: 3.65/4.

## AWARDS

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Best paper award, Genetic Algorithm track, GECCO 2017. 2017  
NUS Research Scholarship (*full funding for MSc degree*). 2017 – 2019  
Eiffel Scholarship (*full funding at École Polytechnique*). 2015 – 2017  
ASEAN Scholarship (*full funding for BComp at NUS*). 2013 – 2017  
53rd International Mathematical Olympiad Silver medal. 2012  
Vietnam National Mathematical Olympiad Silver medals. 2011, 2012

## WORK EXPERIENCE

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Research Assistant, National University of Singapore 04/2019 – 08/2021  
Research Intern, École Polytechnique & JDA Software Montreal 04/2017 – 08/2017  
Software Engineering Intern, Keluro Paris 06/2016 – 09/2016

## TEACHING EXPERIENCE

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Teaching Assistant for Algorithmic Mechanism Design (CS4261/CS5461, Fall 2018), NUS.  
Teaching Assistant for Introduction to AI (CS3244, Spring 2018), NUS.  
Teaching Assistant for Programming Language Concepts (CS2104, Fall 2017), NUS.

## PUBLICATIONS

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\* = equal contribution, † = in alphabetical order.

### Conference papers

5. On the Convergence of AdaGrad on  $\mathbb{R}^d$ : Beyond Convexity, Non-Asymptotic Rate and Acceleration. Zijian Liu\*, **Ta Duy Nguyen**\*, Alina Ene, Huy Le Nguyen. *International Conference on Learning Representations, ICLR 2023*.
4. Adaptive Accelerated (Extra-)Gradient Methods with Variance Reduction. Zijian Liu\*, **Ta Duy Nguyen**\*, Alina Ene, Huy Le Nguyen. *International Conference on Machine Learning, ICML 2022*.
3. Threshold Task Games: Theory, Platform and Experiments. (†) Kobi Gal, **Ta Duy Nguyen**, Quang Nhat Tran, Yair Zick. *International Conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2020*.

2. Resource Based Cooperative Games: Optimization, Fairness and Stability. (†) **Ta Duy Nguyen**, Yair Zick. *Symposium on Algorithmic Game Theory*, SAGT 2018.
1. Fast Genetic Algorithms. (†) Benjamin Doerr, Huu Phuoc Le, Régis Makhlara, **Ta Duy Nguyen**. *Genetic and Evolutionary Computation Conference*, GECCO 2017.

### Manuscripts

2. META-STORM: Generalized Fully-Adaptive Variance Reduced SGD for Unbounded Functions. Zijian Liu\*, **Ta Duy Nguyen**\*, Thien Hang Nguyen\*, Alina Ene, Huy Le Nguyen. *arxiv:2209.14853*, 2022.
1. On Adversarial Bias and the Robustness of Fair Machine Learning. Hongyan Chang\*, **Ta Duy Nguyen**\*, Sasi Kumar Murakonda\*, Ehsan Kazemi, Reza Shokri. *arxiv:2006.08669*, 2020.

### SKILLS

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**Languages:** Vietnamese: Native; English: TOEFL: 111 (2020); French: TCF: C1 (2017).

**Programming:** Proficient in Python (scikit-learn, PyTorch), Java.

### SERVICES

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JMLR 2022 Reviewer. ICML 2022 Reviewer. FOCS 2022 Subreviewer. AAMAS 2021 Subreviewer. AAAI 2020 Subreviewer.