

# Yu-Guan Hsieh

cyberhsieh212@gmail.com  
<https://www.cyber-meow.com>  
<https://github.com/cyber-meow>

## WORK EXPERIENCE

---

- 2025 – Now      **Research scientist at Spellbrush, Tokyo, Japan**  
Work on data processing and large-scale training of visual content generation models
- 2024      **Postdoctoral researcher at Apple, Paris, France**  
Conduct research around vision-language pre-training, dataset curation, diffusion models, and text-to-image generation

## EDUCATION

---

- 2019 – 2023      **Université Grenoble Alpes, Grenoble, France**  
Ph.D. in optimization and machine learning  
Thesis: *Decision-Making in Multi-Agent Systems*  
Advisors: Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos
- 2018 – 2019      **École normale supérieure Paris-Saclay, Cachan, France**  
MSc degree in Mathematics, Computer Vision, Machine Learning (MVA)  
Grade: 18.05/20 (Success with *Highest Honors*)
- 2016 – 2020      **École normale supérieure, Paris, France**  
BSc degree and MSc in computer science. Grades: 17.22/20 and 17.6/20.  
ENS graduate degree as *normalien*
- 2014 – 2016      **Lycée du Parc, Lyon, France**  
Intensive preparatory program leading to entrance exams to French Grandes Écoles

## INDUSTRIAL AND ACADEMIC INTERNSHIPS

---

- 2022 Aug. – 22 Nov.      **Amazon Web Services, Santa Clara, USA**  
Applied science internship—Diffusion Prior for Multi-Armed Bandits  
Supervised by Shiva Kasiviswanathan
- 2021 Oct. – 22 Jan.      **Amazon Web Services, Tübingen, Germany**  
Applied science internship—Multi-Armed Bandits and Causality  
Supervised by Shiva Kasiviswanathan
- 2019 Apr. – Sept.      **Jean Kuntzmann Laboratory (UMR 5224 CNRS), Grenoble, France**  
Research internship—Extragradient and its variants  
Supervised by Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos
- 2018 Mar. – Aug.      **RIKEN Center for Advanced Intelligence Project, Tokyo, Japan.**  
Research internship—Weakly supervised learning  
Supervised by Gang Niu and Masashi Sugiyama
- 2018 June – Aug.      **Behaviors.ai, Lyon, France**  
Research internship—Multimodal learning  
Supervised by Amélie Cordier and Mathieu Lefort
-

## PUBLICATIONS

---

### Preprints

- Yu-Guan Hsieh, Cheng-Yu Hsieh, Shih-Ying Yeh, Louis Béthune, Hadi Pour Ansari, Pavan Kumar Anasosalu Vasu, Chun-Liang Li, Ranjay Krishna, Oncel Tuzel, and Marco Cuturi. *Graph-Based Captioning: Enhancing Visual Descriptions by Interconnecting Region Captions*. arXiv preprint:2407.06723. 2024.
- Beomsu Kim, Yu-Guan Hsieh, Michal Klein, Marco Cuturi, Jong Chul Ye, Bahjat Kavar, and James Thornton. *Simple ReFlow: Improved Techniques for Fast Flow Models*. arXiv preprint:2410.07815. 2024.

### Conferences

- Yu-Guan Hsieh, James Thornton, Eugene Ndiaye, Michal Klein, Marco Cuturi, and Pierre Ablin. *Careful with that Scalpel: Improving Gradient Surgery with an EMA*. In **International Conference on Machine Learning (ICML)**, 2024.
- Shin-Ying Yeh, Yu-Guan Hsieh, Zhidong Gao, Bernard B W Yang, Giyeong Oh, and Yanmin Gong. *Navigating Text-To-Image Customization: From LyCORIS Fine-Tuning to Model Evaluation*. In **International Conference on Learning Representations (ICLR)**, 2024.
- Yu-Guan Hsieh, Shiva Kasiviswanathan, Branislav Kveton, and Patrick Bloebaum. *Thompson Sampling with Diffusion Generative Prior*. In **International Conference on Machine Learning (ICML)**, 2023.
- Yu-Guan Hsieh, Kimon Antonakopoulos, Volkan Cevher, and Panayotis Mertikopoulos. *No-Regret Learning in Games with Noisy Feedback: Faster Rates and Adaptivity via Learning Rate Separation*. In **Conference on Neural Information Processing Systems (NeurIPS)**, 2022.
- Yu-Guan Hsieh, Shiva Kasiviswanathan, and Branislav Kveton. *Uplifting Bandits*. In **Conference on Neural Information Processing Systems (NeurIPS)**, 2022.
- Yu-Guan Hsieh, Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos. *Optimization in Open Networks via Dual Averaging*. In **IEEE Conference on Decision and Control (CDC)**, 2021.
- Yu-Guan Hsieh, Kimon Antonakopoulos, and Panayotis Mertikopoulos. *Adaptive Learning in Continuous Games: Optimal Regret Bounds and Convergence to Nash Equilibrium*. In **Conference on Learning Theory (COLT)**, 2021.
- Yu-Guan Hsieh, Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos. *Explore Aggressively, Update Conservatively: Stochastic Extragradient Methods with Variable Stepsize Scaling*. In **Conference on Neural Information Processing Systems (NeurIPS)**, 2020.
- Yu-Guan Hsieh, Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos. *On the Convergence of Single-Call Stochastic Extra-Gradient Methods*. In **Conference on Neural Information Processing Systems (NeurIPS)**, 2019.
- Yu-Guan Hsieh, Gang Niu, and Masashi Sugiyama. *Classification from Positive, Unlabeled and Biased Negative Data*. In **International Conference on Machine Learning (ICML)**, 2019.

### Journals

- Yu-Guan Hsieh, Yassine Laguel, Franck Iutzeler, and Jérôme Malick. *Push–Pull with Device Sampling*. **IEEE Transactions on Automatic Control (TAC)**, 2023.
- Yu-Guan Hsieh, Franck Iutzeler, Jérôme Malick, and Panayotis Mertikopoulos. *Multi-agent Online Optimization with Delays: Asynchronicity, Adaptivity, and Optimism*. **Journal of Machine Learning Research (JMLR)**, 2022.

## DISTINCTION AND AWARDS

---

- **Academic Thesis Prize** awarded for outstanding doctoral dissertation in 2024
- Spotlight at NeurIPS 2020
- Silver medal in International Mathematical Olympiad 2013