

# Massimo Caccia

## Curriculum Vitae

Department of Computer Science  
Université de Montréal  
☎ (+1) 514-503-8403  
✉ [massimo.p.caccia@gmail.com](mailto:massimo.p.caccia@gmail.com)  
🌐 My Webpage  
🐙 Github   in LinkedIn

## Education

- 2017–present **PhD, Computer Science**, *Université of Montréal, Quebec Artificial Intelligence Institute (Mila)*.  
Currently focused on Continual Learning
- 2013–2017 **Master of Science, Financial Engineering**, *HEC Montréal*.  
Thesis: Option Pricing and Hedging for Discrete Time Autoregressive Hidden Markov Model
- 2010–2013 **Bachelor of Science, Mathematics & Finance**, *Université de Montréal*.  
With honors. Topics: Actuarial science, Financial mathematics, Statistics, and more

## Publications

### In Conference Proceedings

- 2021 Dominic Zhao, Johannes Von Oswald, Simon Schug, **Massimo Caccia**, Nicolas Zucchet, and Joao Sacramento. [Learning where to learn: Gradient sparsity in meta and continual learning](#). In *NeurIPS - Advances in Neural Information Processing Systems*, 2021.
- 2021 Pau Rodriguez, **Massimo Caccia**, Alexandre Lacoste, Lee Zamparó, Issam Laradji, Laurent Charlin, and David Vazquez. [Beyond Trivial Counterfactual Explanations with Diverse Valuable Explanations](#). In *ICCV - Proceedings of the International Conference on Computer Vision*, 2021.
- 2021 Oleksiy Ostapenko, Pau Rodriguez, **Massimo Caccia**, and Laurent Charlin. [Continual Learning via Local Module Composition](#). In *NeurIPS - Advances in Neural Information Processing Systems*, 2021.
- 2020 **Massimo Caccia**, Pau Rodriguez, Oleksiy Ostapenko, Fabrice Normandin, Min Lin, Lucas Caccia, Issam Laradji, Irina Rish, Alexandre Lacoste, David Vazquez, and Laurent Charlin. [Online Fast Adaptation and Knowledge Accumulation: a New Approach to Continual Learning](#). In *NeurIPS - Advances in Neural Information Processing Systems*, 2020.
- 2020 **Massimo Caccia\***, Lucas Caccia\*, William Fedus, Hugo Larochelle, Joelle Pineau, and Laurent Charlin. [Language GANs Falling Short](#). In *ICLR - International Conference on Learning Representation*, 2020.
- 2020 Alexandre Lacoste, Pau Rodríguez, Frédéric Branchaud-Charron, Parmida Atighehchian, **Massimo Caccia**, Issam Laradji, Alexandre Drouin, Matt Craddock, Laurent Charlin, and David Vázquez. [Synbols: Probing Learning Algorithms with Synthetic Datasets](#). In *NeurIPS - Advances in Neural Information Processing Systems*, 2020.
- 2020 Lucas Caccia, Eugene Belilovsky, **Massimo Caccia**, and Joelle Pineau. [Online Learned Continual Compression with Adaptive Quantization Module](#). In *ICML - International Conference on Machine Learning*, 2020.
- 2019 Rahaf Aljundi\*, **Massimo Caccia\***, Lucas Caccia\*, Eugene Belilovsky\*, Min Lin, Laurent Charlin, and Tinne Tuytelaars. [Online Continual Learning with Maximal Interfered Retrieval](#). In *NeurIPS - Advances in Neural Information Processing Systems*, pages 11849–11860, 2019.

## Book Chapters

- 2018 **Massimo Caccia** and Bruno Rémillard. [Option Pricing and Hedging for Discrete Time Autoregressive Hidden Markov Model](#). In *Innovations in Insurance, Risk- and Asset Management*. Springer Proceeding in Mathematics & Statistics, 2018.

## Workshops Papers

- 2021 Fabrice Normandin, Florian Golemo, Oleksiy Ostapenko, Pau Rodriguez, Matthew D Riemer, Julio Hurtado, Khimya Khetarpal, Dominic Zhao, Ryan Lindborg, Timothée Lesort, Laurent Charlin, Irina Rish, and **Massimo Caccia**. [Sequoia: A Software Framework to Unify Continual Learning Research](#). *ICML Workshop on Theory and Foundation of Continual Learning*, 2021.
- 2020 **Massimo Caccia**, Pau Rodriguez, Oleksiy Ostapenko, Fabrice Normandin, Min Lin, Lucas Caccia, Issam Laradji, Irina Rish, Alexandre Lacoste, David Vazquez, and Laurent Charlin. [Online Fast Adaptation and Knowledge Accumulation: a New Approach to Continual Learning](#). *CVPR Workshop on Continual Learning*, 2020.
- 2019 Cem Subakan\*, **Massimo Caccia\***, and Laurent Charlin. [Continual Learning of Generative Models with Maximum Entropy Generative Replay](#). In *ICML Workshop on Continual Learning*, 2019.
- 2019 Rahaf Aljundi\*, **Massimo Caccia\***, Lucas Caccia\*, Eugene Belilovsky\*, Min Lin, Laurent Charlin, and Tinne Tuytelaars. [Online Continual Learning with Maximal Interfered Retrieval](#). In *ICML Workshop on Continual Learning (Spotlight Talk)*, 2019.
- 2018 **Massimo Caccia\***, Lucas Caccia\*, William Fedus, Hugo Larochelle, Joelle Pineau, and Laurent Charlin. [Language GANs Falling Short](#). In *NeurIPS Workshop on Critiquing and Correcting Trends in Machine Learning (Spotlight Talk)*, 2018.

## Work Experience

- Aug 2021 – **Machine Learning Intern**, Amazon Science.  
present Developing novel machine learning algorithms, particularly deep learning models for continual reinforcement learning.
- Jan. 2020 – **Machine Learning Intern**, ElementAI (now ServiceNow).  
June 2021 Developing novel machine learning algorithms, particularly deep learning models for continual learning.
- June 2017 – **Machine Learning Intern**, Spotify.  
Aug. 2017 Applying deep learning solutions for music recommendations.
- Sept. 2016 – **Machine Learning Intern**, Quebec Artificial Intelligence Institute (Mila).  
Dec. 2016 Developing novel machine learning algorithms.
- July 2015 – **Data Scientist**, LightspeedPOS.  
Sept. 2016 Using data mining, machine learning and data engineering for data-driven decision making. Mainly working in Python.
- July 2014 – **Quantitative Analyst — Algorithmic Trading**, Nymbus Capital.  
Apr. 2015 Researching new algorithmic trading strategies in the futures market (commodities, fixed income and currencies) using financial modelling and machine learning. Mainly working in Matlab and C#.
- Jan. 2012 – **Assistant Investment Consultant (internship)**, AON.  
June 2012

## Organization

- 2021 **CVPR Workshop on Continual Learning (CLVision)**, Challenge Chair.  
Leading the development of the challenge

- 2020 **CVPR Workshop on Continual Learning (CLVision)**, *Challenge Chair*.  
Working on the development of the challenge

## Awards & Scholarships

- 2019 **CIBPA Foundation Bursary 2019 - Merit**, Bursary awarded to promising Italian-Canadian students.
- 2016 **EY's Entrepreneurship Bursary**, EY's Bursary program aims to reward the students with the best business plan.
- 2015 **Health Promotion Innovation Challenge**, Hackaton focused on health promotion. Grand Prize for the application "SocialAngel".
- 2015 **The Canadian Derivatives Exchange Scholars Program**, Scholarship awarded to the most innovative research project on derivatives in Canada.
- 2015 **Financiere Sun Life Scholarship (M.Sc.)**, Bursary awarded to the students who are working on risk management related to insurance and who demonstrate exceptional skills and/or results.
- 2015 **Departement of Management Science Scholarship**, Awarded to top students in the department of Decision Sciences.
- 2014 **Fondation Francis et Genevieve Melançon Scholarship**, Awarded to top students at HEC Montréal.

## Teaching Assistantship

- Fall, 2020 **Machine Learning**, HEC Montréal.
- Fall, 2019 **Machine Learning**, HEC Montréal.
- Winter, 2016 **Financial Mathematics**, HEC Montréal.
- Fall, 2015 **Statistics, Financial Mathematics**, HEC Montréal.
- Winter, 2015 **Calculus**, HEC Montréal.
- Fall, 2014 **Business Analytics**, HEC Montréal.

## Reviewing

### Conferences

- 2021 **ICLR** (Outstanding reviewer), **ICML**, **NeurIPS**.
- 2020 **ICLR** (Outstanding reviewer), **NeurIPS** (Top 10% reviewer), **IJCAI**.

### Workshops

- 2021 **CLVISION (CVPR)**, **Theory and Foundation of Continual Learning (ICML)**, **MAIS**.
- 2020 **LifelongML (ICML)**, **CL-ICML (ICML)**, **CLVISION (CVPR)**, **MAIS**.
- 2019 **MAIS**.