


# Gonçalo Mordido

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## Experience

2022 – Now	<b>Mila - Quebec AI Institute &amp; Polytechnique Montreal</b> (Canada) <i>Postdoctoral Fellow</i> <ul style="list-style-type: none"><li>Hardware-efficient deep neural networks.</li></ul>
2020	<b>NVIDIA</b> (Germany) <i>Research Intern</i> (4 months) <ul style="list-style-type: none"><li>Compression of depth-wise separable convolutions in deep neural networks.</li></ul>
2018 – 2019	<b>NVIDIA</b> (Germany) <i>Research Intern</i> (6 months) <ul style="list-style-type: none"><li>Compression of deep neural networks using Monte Carlo methods.</li></ul>
2016 – 2017	<b>NOVA University Lisbon</b> (Portugal) <i>Research Assistant</i> (1 year) <ul style="list-style-type: none"><li>Automated discovery and quality assessment of user-generated content with machine learning.</li></ul>

## Education

2017 – 2021	<b>Hasso Plattner Institute</b> (Germany) <i>Ph.D. in Artificial Intelligence</i> <ul style="list-style-type: none"><li>Grade: Magna cum laude</li><li>Thesis: Diversification, compression, and evaluation methods for generative adversarial networks.</li></ul>
2015 – 2017	<b>NOVA University Lisbon</b> (Portugal) <i>M.Sc. in Computer Science Engineering</i> <ul style="list-style-type: none"><li>Grade: A</li><li>Thesis: Automated organization and quality analysis of user-generated audio content.</li></ul>
2012 – 2015	<b>NOVA University Lisbon</b> (Portugal) <i>B.Sc. in Computer Science Engineering</i> <ul style="list-style-type: none"><li>Grade: A</li></ul>

## Awards & Recognition

2021	<b>Honors Ph.D. graduation.</b> Hasso Plattner Institute
2020	<b>Recognition award</b> for "exceptional and outstanding contributions". NVIDIA
2015	<b>Best bachelor's project.</b> NOVA University Lisbon
2015	<b>1st place hackathon.</b> NOVA University Lisbon

## Patents

2022	<b>Incorporating a ternary matrix into a neural network.</b> A. Keller, G. Mordido, M. Van keirsbilck. <i>US Patent App. 17/356,279</i>
2019	<b>Representing a neural network utilizing paths within the network to improve a performance of the neural network.</b> A. Keller, G. Mordido, N. Gamboa, M. Van keirsbilck. <i>US Patent App. 16/352,596</i>

## Publications

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- 2022 | **Sharpness-aware training for accurate inference on noisy DNN accelerators.**  
G. Mordido, S. Chandar, F. Leduc-Primeau. *CoLLAs 2022 workshop*
- Improving meta-learning generalization with activation-based early-stopping.**  
S. Guioy, C. Pal, G. Mordido, S. Chandar. *CoLLAs 2022*
- MemSE: Fast MSE prediction for noisy memristor-based DNN accelerators.**  
J. Kern, S. Henwood, G. Mordido, E. Dupraz, A. Aissa-El-Bye, Y. Savaria, F. Leduc-Primeau. *AICAS 2022*
- Tiny CNN for seizure prediction in wearable biomedical devices.**  
Y. Zhang, Y. Savaria, S. Zhao, G. Mordido, M. Sawan, F. Leduc-Primeau. *EMBC 2022*
- 2021 | **Compressing 1D time-channel separable convolutions using sparse random ternary matrices.**  
G. Mordido, M. Keirsbilck, A. Keller. *INTERSPEECH 2021*
- Evaluating post-training compression in GANs using locality-sensitive hashing.**  
G. Mordido, H. Yang, C. Meinel. *Preprint*
- Assessing image and text generation with topological analysis and fuzzy logic.**  
G. Mordido\*, J. Niedermeier\*, C. Meinel. *WACV 2021*
- 2020 | **Mark-Evaluate: Assessing language generation using population estimation methods.**  
G. Mordido, C. Meinel. *COLING 2020*
- Best student forcing: A simple training mechanism in adversarial language generation.**  
J. Sauder\*, T. Hu\*, X. Che, G. Mordido, H. Yang and C. Meinel. *LREC 2020*
- Monte Carlo gradient quantization.**  
G. Mordido, M. Keirsbilck, A. Keller. *CVPR 2020 EDLCV workshop*
- Improving the evaluation of generative models with fuzzy logic.**  
J. Niedermeier\*, G. Mordido\* and C. Meinel. *AAAI 2020 Meta-Eval workshop*
- microbatchGAN: Stimulating diversity with multi-adversarial discrimination.**  
G. Mordido, H. Yang, and C. Meinel. *WACV 2020*
- 2019 | **Instant quantization of neural networks using Monte Carlo methods.**  
G. Mordido\*, M. Keirsbilck\*, A. Keller. *NeurIPS 2019 EMC2 workshop*
- 2018 | **Pseudo-ground-truth for adversarial text generation using reinforcement learning.**  
J. Sauder, X. Che, G. Mordido, H. Yang and C. Meinel. *NeurIPS 2018 Deep RL workshop*
- Dropout-GAN: Learning from a dynamic ensemble of discriminators.**  
G. Mordido, H. Yang, and C. Meinel. *KDD 2018 DL'Day*
- 2017 | **Automatic organisation, segmentation, and filtering of user-generated audio content.**  
G. Mordido, J. Magalhaes, and S. Cavaco. *MMSP 2017*
- Automatic organisation and quality analysis of user-generated content with audio fingerprinting.**  
G. Mordido, J. Magalhaes, and S. Cavaco. *EUSIPCO 2017*

## Mentoring

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2022 – Now	<b>Charmi Chokshi.</b> <i>Professional Master's student</i> , Mila - Quebec AI Institute & Amazon <b>Kaushik Moudgalya.</b> <i>Professional Master's student</i> , Mila - Quebec AI Institute & Jumio <b>Selim Gilon.</b> <i>Professional Master's student</i> , Mila - Quebec AI Institute & E-SMART Control <b>Pranshu Malviya.</b> <i>Ph.D. student</i> , Mila - Quebec AI Institute & Polytechnique Montreal <b>Abdelrahman Zayed.</b> <i>Ph.D. student</i> , Mila - Quebec AI Institute, Polytechnique Montreal & Microsoft <b>Simon Guiroy.</b> <i>Ph.D. student</i> , Mila - Quebec AI Institute & University of Montreal <b>Jonathan Kern.</b> <i>Ph.D. student</i> , Polytechnique Montreal <b>Sébastien Henwood.</b> <i>Ph.D. student</i> , Polytechnique Montreal <b>Yang Zhang.</b> <i>Ph.D. student</i> , Polytechnique Montreal <b>Batoul Sayegh.</b> <i>Ph.D. student</i> , Polytechnique Montreal <b>Kamran Chitsaz.</b> <i>Master's student</i> , Polytechnique Montreal
2021	<b>Philipp Hildebrandt.</b> <i>Master's student</i> , Hasso Plattner Institute
2020	<b>Cornelius Hagmeister.</b> <i>Master's student</i> , Hasso Plattner Institute
2019	<b>Julian Niedermeier.</b> <i>Master's student</i> , Hasso Plattner Institute
2018	<b>Jonathan Sauder.</b> <i>Research intern</i> , Hasso Plattner Institute

## Presentations

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2021	<b>Oral presentation.</b> <i>INTERSPEECH 2021</i> <b>Invited talk.</b> <i>MIT</i> <b>Oral presentation.</b> <i>GTC 2021</i> <b>Spotlight presentation.</b> <i>WACV 2021</i>
2020	<b>Oral presentation.</b> <i>COLING 2020</i> <b>Spotlight presentation.</b> <i>CVPR 2020 EDLCV workshop</i> <b>Spotlight and poster presentation.</b> <i>WACV 2020</i> <b>Oral presentation.</b> <i>AAAI 2020 Meta-Eval workshop</i>
2019	<b>Oral and poster presentation.</b> <i>NeurIPS 2019 EMC2 workshop</i>
2018	<b>Poster presentation.</b> <i>KDD 2018 DL'Day</i>
2017	<b>Invited talk.</b> <i>SAP TechEd 2017</i> <b>Poster presentation.</b> <i>EUSIPCO 2017</i>

## Academic service

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2022	<b>Co-organizer.</b> <i>Chandar Research Lab (CRL) symposium at Mila - Quebec AI Institute</i> with Sarath Chandar. <b>Co-organizer.</b> <i>Hardware-Aware Efficient Training (HAET) workshop at ICML 2022</i> together with François Leduc-Primeau, Ghouthi Hacene, Vincent Gripon, Vahid Nia, Julie Grollier, and Yoshua Bengio. <b>Co-organizer.</b> <i>1st Conference on Lifelong Learning Agents (CoLLAs 2022)</i> together with Sarath Chandar, Razvan Pascanu, Doina Precup, and others.
2021	<b>Reviewer.</b> <i>EMNLP 2021</i> <b>External reviewer.</b> <i>Knowledge-Based Systems</i> <b>External reviewer.</b> <i>CVPR 2021</i> <b>Reviewer.</b> <i>EACL 2021</i>
2020	<b>Reviewer.</b> <i>ACL 2020</i> <b>Reviewer.</b> <i>EMNLP 2020</i> <b>Reviewer.</b> <i>WACV 2020</i>
2019	<b>External reviewer.</b> <i>Neural Computing and Applications</i> <b>Reviewer.</b> <i>ICIS 2019</i>
2018	<b>External reviewer.</b> <i>IEEE Access</i>
2017	<b>External reviewer.</b> <i>IEEE Big Data 2017</i>

## Teaching

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2022	<b>Neural networks: Architectures and applications</b> (graduate course, Polytechnique Montreal) <i>Guest Lecturer &amp; Assignment Editor</i>
2021	<b>Clean-IT: Towards sustainable digital technologies</b> (MOOC, openHPI) <i>Guest Lecturer</i>
2020	<b>Practical applications of deep learning</b> (graduate course, Hasso Plattner Institute) <i>Teaching Assistant</i>
2019	<b>Machine intelligence with deep learning</b> (graduate course, Hasso Plattner Institute) <i>Teaching Assistant</i>
2018	<b>Competitive problem solving with deep learning</b> (graduate course, Hasso Plattner Institute) <i>Teaching Assistant</i>
2017	<b>Machine intelligence with deep learning</b> (graduate course, Hasso Plattner Institute) <i>Teaching Assistant</i> <b>Natural language generation using GANs</b> (graduate project, Hasso Plattner Institute) <i>Teaching Assistant</i>