

EDUCATION	<b>University of Montreal / Mila</b> Ph.D. Computer Science <i>Advisor:</i> Dr. Pierre-Luc Bacon	May, 2022 - Present
	<b>ETH Zurich (Eidgenössische Technische Hochschule)</b> MSc. Robotics, Systems and Control <i>Advisor:</i> Prof. Dr. Andreas Krause <i>Thesis:</i> Safe Learning-based Control in High-dimensional Spaces	2018 - 2021
	<b>Georgia Institute of Technology</b> BSc. Electrical Engineering, Minor in Robotics, Co-op Rotation Graduated with Highest Honors <i>Thesis:</i> 3D Reconstruction of Live Chickens in Poultry Houses	2013 - 2018
ACADEMIC RESEARCH	<b>Mila Research Institute</b>   <i>Advisor:</i> Dr. Pierre-Luc Bacon Visiting Student Researcher	Feb. 2021 - August 2021
	<ul style="list-style-type: none"><li>Proposed algorithms to design synthetic antimicrobial peptides in high-dimensional molecular spaces using Meta Reinforcement Learning and Bayesian Optimization.</li></ul>	
	<b>ETH Zurich</b>   <i>Advisor:</i> Prof. Dr. Andreas Krause <i>Safe Learning-Based Control in High-dimensional Spaces</i>	April 2020 - Jan. 2021
	<ul style="list-style-type: none"><li>Implemented safe Bayesian optimization algorithm with sim-to-real approach for position control of quadrotors.</li><li>Employed genetic algorithms to identify controllers that efficiently trade-off safety and performance.</li></ul>	
	<b>ETH Zurich</b>   <i>Advisor:</i> Prof. Dr. Melanie Zeilinger <i>Safe Model-Based Reinforcement Learning</i>	Sept. 2019 - Jan. 2020
INDUSTRY EXPERIENCE	<ul style="list-style-type: none"><li>Performed sample efficient learning using Thompson sampling and open-loop Model Predictive Control.</li><li>Augmented model-based Reinforcement Learning with Scenario-based Optimization arguments to obtain safety-certified algorithms.</li></ul>	
	<b>Georgia Institute of Technology</b>   <i>Advisor:</i> Dr. Fumin Zhang <i>GT-MAB: Miniature Autonomous Blimps</i>	May 2015 - April 2016
	<ul style="list-style-type: none"><li>Performed system identification and developed PID controllers to control 3D motion of a robotic helium blimp.</li><li><b>Nano Blimp:</b> developed hardware and software for communication protocol for smaller version of blimp.</li></ul>	
INDUSTRY EXPERIENCE	<b>NNAISENSE, Lugano</b> Research Intern	October 2021 - April 2022
	<ul style="list-style-type: none"><li>Proposed transfer-learning approach to enable fast and efficient adaptation of Recurrent Neural Network models of dynamical systems.</li><li>Designed Lyapunov-based safety certificates for formal verification of model-based Reinforcement Learning algorithms.</li></ul>	
	<b>Georgia Tech Research Institute</b> Co-op Intern: Robotics and Image Processing	Fall 2015, Spring 2016, Summer 2017
	<ul style="list-style-type: none"><li>Implemented and deployed path-planning algorithms for an agricultural ground robot to autonomously navigate poultry houses.</li><li>Collaborated with poultry scientist to develop novel obstacle (chicken) avoidance routines using point cloud data from Xbox Kinect.</li><li>Designed Windows GUIs in C# to run a pedestrian tracking software and identify ideal road-crossing locations for the Georgia Department of Transport.</li></ul>	

PREPRINTS	<b>On the adaptation of recurrent neural networks for system identification.</b> <i>Under Review: Automatica Journal.</i> (Available at: <a href="https://arxiv.org/abs/2201.08660">https://arxiv.org/abs/2201.08660</a> ). 2022. M. Forgione, <b>A. Muni</b> , D. Piga, M. Gallieri.		
	<b>Designing Biological Sequences via Meta-Reinforcement Learning and Bayesian Optimization.</b> <i>Under Review: 39<sup>th</sup> International Conference on Machine Learning (ICML).</i> 2022. L. Feng, P. Nouri, <b>A. Muni</b> , Y. Bengio, P. Bacon.		
PUBLICATIONS	<b>Autopilot Design for a class of Miniature Autonomous Blimps.</b> <i>IEEE Conference on Control Technology and Applications. Pages:841-846.</i> 2017. S. Cho, V. Mishra, Q. Tao, P. Varnell, M. King-Smith, <b>A. Muni</b> , W. Smallwood, F. Zhang.		
	<b>Robotics for Poultry House Management.</b> <i>ASABE Annual International Meeting. 1701103.(doi:10.13031/aim.201701103).</i> 2017. C. T Usher, W. D Daley, B. P Joffe and <b>A. Muni</b> .		
	<b>Control Theory – Autonomous Blimp.</b> <i>IEEE Control Systems Society Video Contest. Available Online: <a href="#">YouTube video</a>.</i> 2015. Q. Tao, M. King-Smith, <b>A.D. Muni</b> , V. Mishra, S. Cho, J.P. Varnell, F. Zhang.		
	<b>Opening the Black Box: High-dimensional Safe Policy Search via Sim-to-Real.</b> <i>16<sup>th</sup> Workshop for Women in Machine Learning (WiML), NeurIPS 2021.</i> <b>A. Muni</b> , M. Turchetta, A. Krause.		
TALKS	<b>Learning-Based Control for Constrained Systems using Thompson Sampling and Scenario Optimization.</b> <i>Machine Learning Summer School (MLSS), Tübingen. 2020.</i> Available: <a href="#">YouTube video</a> . <b>A. Muni</b> , K. Wabersich, M. Zeilinger.		
	<b>3D Reconstruction of Live Chickens in Poultry Houses.</b> <i>13<sup>th</sup> Annual Undergraduate Research Spring Symposium, Georgia Tech. 2018.</i> <b>A. Muni</b> and Colin Usher.		
HONORS AND AWARDS	Kyunghyun Cho Diversity Award, Mila		2022
	UdeM Tuition Exemption Scholarship for International Students		2022
	NeurIPS Travel Grant, WiML Workshop		2021
	Best Oral Presentation, 3 <sup>rd</sup> position, Undergraduate Research Symposium		Spring 2018
	Best Overall Design Award, <i>MLH MakeHarvard</i> Hackathon		Spring 2018
	3x President's Undergraduate Research Award		2018, 2016, 2015
	ThinkSwiss Research Scholarship		Summer 2017
	James G. and Mary G. Wohlford Co-op Scholarship		Spring 2017
	IEEE Control System Society Video Contest, 3 <sup>rd</sup> position		Summer 2015
TEACHING EXPERIENCE	<b>Teaching Assistant for Differential Equations</b> <i>Georgia Tech School of Mathematics</i>		Jan. 2016 – May 2016
	<b>Peer Tutor for Differential Equation</b> <i>Georgia Tech Center for Academic Success</i>		Sept. 2014 – Sept. 2015
SEMINARS AND SUMMER SCHOOLS	AGI Safety Fundamentals Program, Effective Altruism Cambridge		Spring 2022
	Machine Learning Summer School (MLSS), Tübingen		July 2020
	ETH Robotics Summer School: “Real World, Real Environments”		July 2019
LEADERSHIP AND SERVICE	Reviewer: ICML, Decision Awareness in Reinforcement Learning Workshop		2022
	Panelist: “Designer Farms”, Wharton Agribusiness & Food Security Club, UPenn		2020
	Georgia Tech Undergraduate Research Ambassador		2017 - 2018
	Women in Electrical & Computer Engineering Club - Publicity, Newsletter Chair		2015 - 2018
	Georgia Tech School of Electrical and Computer Engineering Ambassador		2014 - 2015
	Volunteer tutor for underprivileged students from K-5 <sup>th</sup> grade in Atlanta		2013 - 2014