Alex Lewandowski

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Papers & Preprints

Curvature Explains Loss of Plasticity
A. Lewandowski, Haruto Tanaka, Dale Schuurmans, Marlos C. Machado   *06/2023*
» Submitted

Reinforcement Teaching
C. Muslimani*, A. Lewandowski*, Dale Schuurmans, M. Taylor, J. Luo   *06/2023*
» Transactions on Machine Learning Research.

State and Reward Design: Towards Reinforcement Teaching
A. Lewandowski*, C. Muslimani*, M. Taylor, J. Luo   *12/2021*
» Ecological Theory of RL Workshop at NeurIPS.

Disentangling Generalization in Reinforcement Learning with Contextual Decision Processes
A. Lewandowski, D. Schuurmans, J. Luo   *09/2021*
» Preprint

ZORB: A Derivative-Free Backpropagation Algorithm for Neural Networks
V. Ranganathan, A. Lewandowski   *12/2020*
» Beyond Backpropagation Workshop at NeurIPS (Oral Presentation)

Recurrent Open-loop Control in Offline Reinforcement Learning
A. Lewandowski, D. Schuurmans   *12/2020*
» Offline Reinforcement Learning Workshop (NeurIPS 2020)

Generalization Across Space and Time in Reinforcement Learning
A. Lewandowski   *12/2020*
» Pre-registration Experiment Workshop (NeurIPS 2020)

Batch and Sequential Policy Optimization with Doubly Robust Objectives
A. Lewandowski, D. Schuurmans   *12/2019*
» Optimization Foundations of Reinforcement Learning Workshop (NeurIPS 2019)

Batch Normalized Deep Kernel Learning for Weight Uncertainty
A. Lewandowski   *12/2017*
» Bayesian Deep Learning Workshop (NIPS 2017)

Work Experience

Research Associate, Canadian Research Institute
Huawei Technologies Co., Ltd.   *01/2023 – Present*
» Supervisor: Jun Luo
» Fundamental research on emerging technologies: reinforcement, deep and continual learning.

Research Associate, Noah's Ark Lab
Huawei Technologies Co., Ltd.   *01/2021 – 12/2022*
» Supervisor: Jun Luo
» Researching auto-curriculum and generalization in reinforcement learning, with applications to autonomous vehicles.

Teaching Assistant, Department of Computer Science
University of Alberta   *01/2019 – Present*
» Organized discussion groups and worksheets for new introductory reinforcement learning course.
» Guided students through projects and group assignments for foundations in information retrieval.

Research Assistant, Department of Computer Science
University of Alberta   *08/2018 – Present*
» Supervisor: Dale Schuurmans
» Researching methods that bridge the gap between online and batch reinforcement learning

Teaching Assistant, Department of Mathematical and Statistical Sciences

UNIVERSITY OF ALBERTA   *09/2016 – 04/2018*
» Led help sessions in Introduction to Applied Statistics, Statistics I/II, Applied Regression Analysis and Time Series Analysis.
» Provided one on one assistance with assignments for first and second year classes at the Decima Robinson Support Centre.

Research Assistant, Department of Mathematical and Statistical Sciences

UNIVERSITY OF ALBERTA   *05/2017 – 07/2018*
» Supervisor: Ivor Cribben
» Implemented Gaussian process and deep learning methods to classify patients based on fMRI data using TensorFlow.
» Developed stochastic variational methods for recurrent neural network parameterized kernels in Gaussian process classification.

Education

Ph.D. in Computing Science

UNIVERSITY OF ALBERTA   *2019 – Present*
» Specialization: Statistical Machine Learning
» Supervisors: Dale Schuurmans, Marlos C. Machado

M.Sc. in Statistics

UNIVERSITY OF ALBERTA   *2016 – 2018*
» Specialization: Statistical Machine Learning
» Supervisors: Ivor Cribben & Rohana Karunamuni
» Thesis: Recurrent and Bayesian Kernel Learning for Small Data with Applications to Neuroimaging

Honours Bachelor in Mathematics

UNIVERSITY OF WATERLOO   *2012 – 2016*
» Major: Mathematical Economics

Honors & Awards

Alberta Innovates Graduate Student Scholarship

University of Alberta, Department of Computing Science   2022-2024

President's Doctoral Prize of Distinction

University of Alberta, Department of Computing Science   2021-2024

NSERC Postgraduate Scholarships – Doctoral

University of Alberta, Department of Computing Science   2021 - 2024

Josephine Mitchell Scholarship

University of Alberta, Department of Mathematical and Statistical Sciences   2018

Profiling Alberta's Graduate Students Award

University of Alberta, Department of Mathematical and Statistical Sciences   2017

Josephine Mitchell Scholarship

University of Alberta, Department of Mathematical and Statistical Sciences   2017

Queen Elizabeth II Graduate Scholarship

University of Alberta, Department of Mathematical and Statistical Sciences   2016

Term Dean's Honour List

University of Waterloo   2015

President's Scholarship

University of Waterloo   2012

Service

Organizer	ICLR Reinforcement Learning Social 2020, NeurIPS SSBM Social 2020, ICLR SSBM Social 2021, Openmind Continual Learning Retreat
Reviewer	TNNLS 2018-2019, Neurips OPTRL Workshop 2019, ICLR 2020-2023 (Outstanding Reviewer Award 2021-2022), ICML RL4RealLife Workshop 2021, NeurIPS 2021-2023 (Top Reviewer Award 2022), NeurIPS Offline RL Workshop 2021, ICML 2021-2023 (Outstanding Reviewer Award 2022)