

Pim de Haan

Curriculum Vitae

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Research interests

Machine learning; causality; geometric deep learning; category theory; applications of deep learning to physical sciences

Professional Experience

- **Research Associate**, Qualcomm AI Research, *Netherlands* 04/2019–present
Causality team; intern supervision; recruiting
- **Machine Learning Consultant**, *Netherlands* 11/2017–03/2019
Designed and built time series analysis for an energy monitoring start-up
- **AI Developer**, FeedbackFruits, *Netherlands* 10/2016–11/2017
Led the AI team developing recommendation systems for teachers
- **Co-founder and Developer**, IGNE, *Netherlands* 01/2013–10/2015
Built full-stack web applications for start-ups in Health Tech and Fin Tech

Education

- **University of Amsterdam, QUVA lab**, PhD candidate (planned) 04/2019–01/2023
Supervised by Max Welling
Thesis topic: category theory applied to geometric deep learning & causality
- **University of California, Berkeley**, visiting research scholar 03/2018–12/2018
Supervised by Sergey Levine; imitation/reinforcement learning & causality
- **University of Amsterdam**, master in artificial intelligence, GPA: 9.2/10 07/2016–06/2019
- **University of Cambridge**, master in theoretical physics 10/2015–06/2016
With honours; general relativity; quantum field theory; symmetries; statistical mechanics
- **University of Edinburgh**, exchange student in theoretical physics 08/2014–12/2014
- **University of Amsterdam**, bachelor in physics and astronomy, cum laude 07/2011–06/2015

Selected Publications

(* denotes equal contribution)

Under review at <i>Physical Review Letters</i>	<i>Learning Lattice Quantum Field Theories with Equivariant Continuous Flows</i>	Mathis Gerdes*, Pim de Haan* , Corrado Rainone, Roberto Bondesan, Miranda Cheng
NeurIPS 2022	<i>Weakly-supervised Causal Representation Learning</i>	Johann Brehmer*, Pim de Haan* , Phillipe Lippe, Taco Cohen
ICLR 2021 (spotlight)	<i>Gauge Equivariant Mesh CNNs</i>	Pim de Haan* , Maurice Weiler*, Taco Cohen, Max Welling
NeurIPS 2020	<i>Natural Graph Networks</i>	Pim de Haan , Taco Cohen, Max Welling
NeurIPS 2019 (Oral)	<i>Causal Confusion in Imitation Learning</i>	Pim de Haan , Dinesh Jayaraman, Sergey Levine
AISTATS 2019 (Oral)	<i>Reparameterizing Distributions on Lie Groups</i>	Luca Falorsi, Pim de Haan , Tim R. Davidson, Patrick Forré

Other experience

- Reviewer for NeurIPS (2021, 2022), ICLR (2020-2023), ICML (2022)
- Organizer of and lecturer at the [Categories for AI](#) course
- Lecturer at the First Italian Summer School for Geometric Deep Learning (2022) & African Masters for Machine Intelligence (2021)

Skills

- Expert knowledge of Python scientific & deep learning stack (NumPy, SciPy, Jax, PyTorch)
- Large scale computing clusters and distributed deep learning
- Expert Python programmer. Experienced in Rust, Haskell, Clojure
- Presenting and teaching complex subjects to scientific and broad audiences