

Emilien Dupont

<https://emiliendupont.github.io>

EDUCATION

- **University of Oxford** Oxford, UK
PhD Machine Learning
◦ Supervised by Yee Whye Teh & Arnaud Doucet
- **Stanford University** Stanford, CA
MS Computational and Mathematical Engineering
◦ GPA: 4.02
- **Imperial College London** London, UK
BSc Theoretical Physics
◦ Rank: 1/206 students, Grade: 87.2%

EXPERIENCE

- **Google DeepMind** London, UK
Research Scientist Intern
◦ Research with Danilo Rezende
- **Apple** Oxford, UK
Part Time Research Intern
◦ Part time research on neural rendering during PhD with collaborators at Apple
- **Apple** Seattle, WA
Research Intern
◦ Research on neural rendering supervised by Qi Shan
- **Schlumberger STIC** Menlo Park, CA
Machine Learning Scientist
◦ Created, implemented and deployed machine learning algorithms to solve problems in time series, vision and geology, improving state of the art for several tasks
◦ Research on deep generative models with a focus on learning interpretable representations
- **Gurobi Optimization** Palo Alto, CA
Software Engineering Intern
◦ Researched, formulated and solved integer optimization models for a wide area of industry applications including energy, telecom and medicine
- **DTU Compute** Lyngby, Denmark
Research Intern
◦ Research on sparse dynamics for PDEs supervised by Allan Engsig-Karup

PUBLICATIONS

- [1] **E. Dupont***, H. Loya*, M. Alizadeh, A. Golinski, Y. W. Teh, A. Doucet, COIN++: Data Agnostic Neural Compression
- [2] **E. Dupont***, H. Kim*, A. Eslami, D. Rezende, D. Rosenbaum, From data to functa: Your data point is a function and you should treat it like one
- [3] **E. Dupont***, A. Golinski*, M. Alizadeh, Y. W. Teh, A. Doucet, COIN: COmpression with Implicit Neural representations, *ICLR 2021 Neural Compression Workshop **Spotlight***
- [4] **E. Dupont**, Y. W. Teh, A. Doucet, Generative Models as Distributions of Functions, *AISTATS 2022 **Oral***

- [5] *M. Hutchinson**, *C. Le Lan**, *S. Zaidi**, **E. Dupont**, *Y. W. Teh*, *H. Kim*, LieTransformer: Equivariant self-attention for Lie Groups, *ICML 2021*
- [6] **E. Dupont**, *M. A. Bautista*, *A. Colburn*, *A. Sankar*, *C. Guestrin*, *J. Susskind*, *Q. Shan*, Equivariant Neural Rendering, *ICML 2020*
- [7] **E. Dupont**, *A. Doucet*, *Y. W. Teh*, Augmented Neural ODEs, *NeurIPS 2019*
- [8] **E. Dupont**, *S. Suresha*, Probabilistic Semantic Inpainting with Pixel Constrained CNNs, *AISTATS 2019*
- [9] **E. Dupont**, Learning Disentangled Joint Continuous and Discrete Representations, *NeurIPS 2018*
- [10] **E. Dupont**, *T. Zhang*, *P. Tilke*, *L. Liang*, *W. Bailey*, Generating Realistic Geology Conditioned on Physical Measurements with GANs, *ICML 2018 TADGM Workshop*

AWARDS

- Google DeepMind Scholarship 2018
PhD funding, 150,000 USD
- Schlumberger Out of the Ordinary Award 2018
Award for extraordinary technical achievements
- Digital Forum Innovation Award 2017
Schlumberger award for most innovative project among 300+ submissions
- Schlumberger AI Leader 2016
Elected as leader of the 1000+ AI community within Schlumberger
- Governor's Prize 2014
Ranked 1st of 206 students in Physics at Imperial College London

TEACHING

- Teaching Assistant, SB2.1, Statistical Inference Oxford, 2020
- Teaching Assistant, SB2.2, Statistical Machine Learning Oxford, 2019
- Teaching Assistant, CME 102, Ordinary Differential Equations Stanford, 2016

SKILLS

- Programming
 - *Experienced*: Python, C++, Matlab
 - *Familiar*: JavaScript, Scala (Spark)
- Frameworks
 - *Deep Learning*: Pytorch, Jax, Haiku, Keras
 - *Visualization*: d3, plotly
- Languages
 - *Fluent*: Danish, English, French
 - *Intermediate*: German

PROJECTS

- **Visualizations**
Created d3 based **interactive visualizations** of mathematical concepts, data and generative art
- **Open source paper implementations**
Open sourced code for several deep learning papers with ★1000+ on **GitHub**

ACADEMIC SERVICES

- Reviewer: AISTATS 2022, ICLR 2022, ICLR 2021 (*Outstanding reviewer award*), NeurIPS 2020 (*Outstanding reviewer award*), ICML 2020 (*Top reviewer award*), NeurIPS 2019 (*Top reviewer award*)

INVITED TALKS

- The Curse of Discretization and Learning Distributions of Functions 2021
ML Collective
- Representational Limitations of Invertible Models 2020
ICML 2020, INN+ Workshop
- Combining Physics and Machine Learning with Neural ODEs 2019
Abingdon, UK
- Deep Learning for Prognostics and Health Management Tutorial 2017
Prognostics and Health Management Conference, Tampa Bay, FL
- Deep Learning Applications Panel 2017
Prognostics and Health Management Conference, Tampa Bay, FL

LINKS

- emiliendupont.github.io
- github.com/EmilienDupont
- observablehq.com/@emiliendupont
- twitter.com/emidup
- linkedin.com/in/emiliendupont
- scholar.google.com/citations?user=IY5WyIEAAAAJ