Sergio Calvo Ordoñez

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Education

- **University of Oxford** — Oxford, UK
  DPhil in Machine Learning — *September 2023 - September 2027*
  - ***Interests:*** *Probabilistic Machine Learning, Generative AI, Graph Representation Learning, and Dynamical Systems.*
  - ***Supervised by:*** *Prof Álvaro Cartea (University of Oxford) and Prof JM Hernández-Lobato (University of Cambridge).*
- **University of Cambridge** — Cambridge, UK
  MPhil in Machine Learning and Machine Intelligence; ***Grade: 74%*** — *October 2022 - September 2023*
  - ***Dissertation topic:*** *Breaking the Limits of Diffusion Models via Continuous Dynamical Systems.*
  - ***Supervised by:*** *Prof Carola Bibiane Schönlieb and Dr Angélica Áviles-Rivero.*
- **Queen Mary University of London** — London, UK
  BSc in Theoretical Physics; ***Grade: 88.4% (class rank 3/∼200 students)*** — *September 2019 - June 2022*

Publications

1. **Sergio Calvo-Ordoñez**, Matthieu Meunier, Francesco Piatti, Yuantao Shi. (2024). *Partially Stochastic but Infinitely Deep Bayesian Neural Networks.* **Accepted at the International Conference of Machine Learning (ICML).**
2. **Sergio Calvo-Ordoñez**, Chun-Wun Cheng, Jiahao Huang, Lipei Zhang, Chun-Wun Cheng, Guang Yang, Carola-Bibiane Schönlieb, Angelica I Aviles-Rivero. (2024). *The Missing U for Efficient Diffusion Models.* **Accepted in Transactions on Machine Learning Research (TMLR).**
3. **Sergio Calvo-Ordoñez**, Jiahao Huang, Lipei Zhang, Guang Yang, Carola-Bibiane Schönlieb, Angelica I Aviles-Rivero. (2023). *Beyond U: A Faster & Lighter Diffusion Model.* **Accepted at the NeurIPS 2023 Workshop on Diffusion Models.**
4. Richard Bergna, **Sergio Calvo-Ordoñez**, Felix L. Opolka, Pietro Liò, Jose Miguel Hernández-Lobato. (2024). *Uncertainty Modelling in Graph Neural Networks via Stochastic Differential Equations.* **Submitted to the International Conference of Learning Representations (ICLR).**
5. **Sergio Calvo-Ordoñez**, Konstantina Palla, Kamil Ciosek. (2024). *Epistemic Uncertainty and Observation Noise with the Neural Tangent Kernel.* **Submitted to the International Conference of Learning Representations (ICLR).**

Experience

- **Spotify** — London, UK
  Research Scientist Intern — *June 2024 - August 2024*
  - Research in the intersection of Bayesian Methods, Reinforcement Learning, and LLMs under the supervision of Dr Konstantina Palla, Dr Kamil Ciosek, and Dr Zhenwen Dai.
- **University of Cambridge** — Cambridge, UK
  Research Assistant — *December 2022 - June 2023*
  - Worked on an AI safety paper focusing on defining evaluation metrics for automated interpretability tools and developing an automated framework for the interpretability of LLMs supervised by Dr David Krueger.
- **BAE Systems** — Bristol, UK
  Research Engineer Intern — *June 2022 - September 2022*
  - Researched Neural Radiance Fields (NeRF) for representing complex scenes and generating novel views.
- **Queen Mary University of London** — London, UK
  Research Assistant — *May 2022 - September 2022*
  - Conducted theoretical and empirical analysis of Bayesian updating as a continuous dynamical system.
- **Redoptima** — London, UK
  Machine Learning and Data Engineer Intern — *August 2021 - October 2021*
  - Implemented a state-of-the-art segmentation approach for satellite imagery that increased the company's coverage by 30%.
- **TruLife Optics** — London, UK
  Data Scientist Intern — *May 2021 - August 2021*
  - Engineered and deployed an end-to-end software that carries factory checks consisting in hologram classification with 92% and increased the factory's productivity by 60%.