Gabriele ABBATI

ADDRESS: Eagle House, Walton Well Road,
             OX2 6ED, Oxford, UK
EMAIL: gabb@robots.ox.ac.uk
WEBSITE: http://www.robots.ox.ac.uk/~gabb/
GitHub: https://github.com/gabb7
GOOGLE SCHOLAR: URL to profile
LinkedIn: URL to profile

EDUCATION

2016 - PRESENT	**D.Phil. (Ph.D.)** in **Machine Learning**, UNIVERSITY OF OXFORD, Oxford (UK) *Supervisors*: Prof. Michael A Osborne, Dr. Tom Rainforth. *Research areas*: Gaussian Processes, Deep Learning, Generative Modeling Funded by **Oxford - Google DeepMind** scholarship
2018	**Visiting Researcher**, MAX-PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS, Tübingen (DE) *Supervisors*: Prof. Bernhard Schölkopf, Dr. Stefan Bauer
2014 - 2016	**M.Sc.** in **Computational Science and Engineering**, ETH ZÜRICH, Zürich (CH) *Major*: Computational Physics. *Final GPA*: 5.62/6
2010 - 2013	**B.Eng.** in **Mathematical Engineering**, POLITECNICO DI MILANO, Milano (IT) *Major*: Numerical Modelling and Partial Differential Equations. *Final Grade*: 110/110

WORK EXPERIENCE

JUN 2019 - SEP 2019	**Software Engineer Intern, Applied ML**. FACEBOOK, London (UK) – Ads Team
SEP 2017 - NOV 2017	**Machine Learning Research Intern**. MIND FOUNDRY, Oxford (UK) – Implemented and tested state-of-the-art global optimization methods (*Python*) – Researched on Gaussian Process-based optimization algorithms
SEP 2015 - DEC 2015	**Computational Scientist Intern**. SWISS NATIONAL SUPERCOMPUTING CENTER (CSCS), Lugano (CH) – Contributed to the GPU-porting of *Ramses*, code for astrophysical simulations – Developed and tested on HPC supercomputer Piz Daint
SEP 2014 - JAN 2015	**Teaching Assistant (Stochastics)**. ETH ZÜRICH, Zürich (CH) – Taught probability and statistics to ETH Bachelor students

PUBLICATIONS

2019	**Abbati***, G., Wenk*, P., Bauer, S., Osborne, M. A., Krause, A., & Schölkopf, B., "AReS and MaRS - Adversarial and MMD-Minimizing Regression for SDEs". In *Proceedings of the 36th International Conference on Machine Learning (ICML)*. Long oral presentation.
	Wenk*, P., **Abbati***, G., Bauer, S., Osborne, M. A., Krause, A., & Schölkopf, B., "ODIN: ODE-Informed Regression for Parameter and State Inference in Time-Continuous Dynamical Systems". *arXiv preprint arXiv:1902.06278*.
2018	Perez Orozco, B., **Abbati**, G., & Roberts, S., "MOrdReD: Memory-based Ordinal Regression Deep Neural Networks for Time Series Forecasting". *arXiv preprint arXiv:1803.09704*.
	Abbati, G., Tosi, A., Osborne, M.A. & Flaxman, S., "AdaGeo: Adaptive Geometric Learning for Optimization and Sampling". In *Proceedings of the 21st International Conference on Artificial Intelligence and Statistics (AISTATS)*.

2017   **Abbati**, **G.**, Bauer, S., Winklhofer, S., Schüffler, P., Held, U., Burgstaller, J., Steurer, J. & Buhmann, J., "MRI-based Surgical Planning for Lumbar Spinal Stenosis". In *Medical Image Computing and Computer-Assisted Intervention (MICCAI) 2017: 20th International Conference.*

Verma, S., **Abbati**, **G.**, Novati, G., & Koumoutsakos, P. "Computing the force distribution on the surface of complex, deforming geometries using vortex methods and Brinkman penalization". In *International Journal for Numerical Methods in Fluids.*

* equal contribution

Computer Skills

- Fluent with **Python** and **machine learning** APIs (*scikit-learn, TensorFlow, Keras*, etc.)
- **O**bject-**O**riented **P**rogramming
- Software **versioning** (*git, subversion*)
- **Bash** scripting
- LaTeX document editing
- Command of **C/C++**, and experience with parallel computing APIs such as **OpenMP**, **POSIX** threads, **MPI**, **AVX/SSE** and **OpenACC**
- Able to use **Linux**, **Mac OS X** and **Windows** operating systems

Awards

2016 -   **Oxford-Google DeepMind Graduate Scholarship**
2019   – Full funding for the duration of my Ph.D. at the University of Oxford

Leadership Experience

2017 -   **President** of the **Oxford University Amateur Boxing Club (OUABC)**
2018   – Led the club committee during the academic year
      – Led the organization of the two main events of the year, Town vs Gown and Varsity, Town vs Gown and Varsity, counting 300 and 800 spectators respectively)

2016 -   **Full Blue Athlete** of the **Oxford University Amateur Boxing Club (OUABC)**
2018   – Participated twice to the annual competition with Cambridge University

Languages

Italian: Mother Tongue   **English:** Fluent   **French:** Limited Working Proficiency

Life Skills & Hobbies

Sports: played tennis and golf for several years, grew recent interest in snowboarding and rock climbing

Hobbies: played modern and classical guitar since I was young, passionate about several forms of art (literature, modern painting)