

Gabriele ABBATI

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EDUCATION

- 2016 - **D.Phil. (Ph.D.) in Engineering Science**, UNIVERSITY OF OXFORD, Oxford (UK)
PRESENT *Supervisor:* Prof. Michael A Osborne, **Machine Learning Research Group**
Research areas: Bayesian methods, Gaussian Processes, Deep Learning, Causality
Funded by Oxford - Google DeepMind scholarship
Expected graduation: end 2019
- MAR 2018 - **Visiting Researcher**, MAX-PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS, Tübingen (DE)
OCT 2018 *Supervisor:* Prof. Bernhard Schölkopf, Dr. Stefan Bauer
- 2014 - **M.Sc. in Computational Science and Engineering**, ETH ZÜRICH, Zürich (CH)
2016 *Major:* Computational Physics. *Final GPA:* 5.62/6
- 2010 - **B.Eng. in Mathematical Engineering**, POLITECNICO DI MILANO, Milano (IT)
2013 *Major:* Numerical Modelling and Partial Differential Equations. *Final Grade:* 110/110

WORK EXPERIENCE

- SEP 2017 - **Machine Learning Research Intern**, MIND FOUNDRY, Oxford (UK)
NOV 2017
 - Implemented and tested state-of-the-art global optimization methods (*Python*)
 - Researched on Gaussian Process-based optimization algorithms
- SEP 2015 - **Computational Science Intern**, SWISS NATIONAL SUPERCOMPUTING CENTER (CSCS),
DEC 2015 Lugano (CH)
 - GPU-ported part of the *Ramses* code, used for astrophysical simulations, to improve computational performance (*Fortran90*, *Open ACC*)
 - Tested and developed on HPC supercomputer Piz Daint
- SEP 2014 - **Teaching Assistant (Stochastics)**, ETH ZÜRICH, Zürich (CH)
JAN 2015
 - Taught basis of probability and statistics to ETH Bachelor students

PUBLICATIONS

- 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, Proceedings, Part III* (pp. 116–124).
- 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*.

COMPUTER SKILLS

- Fluent with **Python** and **machine learning** APIs (*scikit-learn, TensorFlow, Keras*, etc.)
- **Object-Oriented Programming**
- 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 (10 people) 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)