

Gabriele ABBATI

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EDUCATION

- PRESENT **D.Phil. (Ph.D.) in Engineering Science**, UNIVERSITY OF OXFORD, Oxford (UK)
Supervisor: Prof. Michael A Osborne, **Machine Learning Research Group**
Research interests: Bayesian methods, Gaussian Processes, Deep Learning, Causality
Funded by **Oxford - Google DeepMind**
- 2018 **Visiting Ph.D. Student**, MAX-PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS, Tübingen (DE)
Supervisor: Prof. Bernhard Schölkopf
- 2016 **M.Sc. in Computational Science and Engineering**, ETH ZÜRICH, Zürich (CH)
Major: Computational Physics, *Final GPA:* 5.6/6
- 2013 **B.Eng. in Mathematical Engineering**, POLITECNICO DI MILANO, Milano (IT)
Final Grade: 110/110

WORK EXPERIENCE

- 2017 **Machine Learning Research Intern**, MIND FOUNDRY, Oxford (UK) (2 months)
– Implemented and tested state-of-the-art global optimization methods (Python)
– Researched on and improved Gaussian Process-based algorithms (Python)
- 2015 **Computational Science Intern**, SWISS NATIONAL SUPERCOMPUTING CENTER (CSCS), Lugano (CH) (3 months)
– GPU ported the *Ramses* code, used for astrophysical physical simulations (written in Fortran90, using the directive-based API OpenACC)
– Tested the developments on the HPC cluster Piz Daint
- 2014 **Teaching Assistant (Stochastics)**, ETH ZÜRICH, Zürich (CH)

PUBLICATIONS

- 2018 **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)*, to appear.
- 2017 **Abbati, G.**, Bauer, S., Winklhofer, S., Schöffler, 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 **C/C++**, **Fortran** with parallel computing APIs such as **OpenMP**, **POSIX** threads, **MPI**, **CUDA**, **AVX/SSE** and **OpenACC**
- Object-oriented programming
- **LaTeX** document editing
- Software **versioning** (*git*, *subversion*)
- Fluent with **Python** and **machine learning** packages (*scikit-learn*, *TensorFlow*, *Keras*, etc.)
- **Bash** scripting
- Able to use **Linux**, **Mac OS X** and **Windows** operating systems

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

- Societies:**
- Oxford University Amateur Boxing Club (OUABC):
 - 2016/2017 and 2017/2018: Full Blue Athlete
 - 2017/2018: President (lead the organization of the main events of the year, Town vs Gown and Varsity, 300 and 800 spectators respectively)
 - Oxford University Mountaineering Club (OUMC)
 - The Oxford Union (Debating Society)

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