Gabriele Abbati

Address: 24 Wharf House, Juxon Street,
OX2 6DU, Oxford, UK
Phone: +44 7802 356035 (primary)
+39 347 389 08 27 (secondary)
email: gabb@robots.ox.ac.uk
home page: http://www.robots.ox.ac.uk/~gabb/

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** scholarship

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)*.

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 **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)