

Daniele Calandriello

PHD STUDENT IN MACHINE LEARNING

INRIA Lille-Nord Europe · 40, Avenue Halley, 59650 Villeneuve d'Ascq, France

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Education

INRIA Lille – Nord Europe, France

PHD IN MACHINE LEARNING

Lille, France

Oct. 2014 - PRESENT

- Thesis: “Efficient Sequential Learning in Structured and Constrained Environments”
- Advisors: Prof. Alessandro Lazaric and Prof. Michal Valko

Politecnico di Milano

MASTER IN COMPUTER SCIENCE ENGINEERING

Milano, Italy

Oct. 2011 - Apr. 2014

- Thesis: “Multi-Task Reinforcement Learning with linear approximator under group sparsity assumption”
- Advisors: Prof. Marcello Restelli
- Final score: 110/110 cum Laude, Gpa: 29.78/30.00

Politecnico di Milano

BACHELOR IN COMPUTER SCIENCE ENGINEERING

Milano, Italy

Sep. 2008 - Oct. 2011

- Thesis: “Jedi Training: interactive robogame with physical autonomous robot”
- Advisors: Prof. Andrea Bonarini
- Final score: 110/110 cum Laude, Gpa: 29.72/30.00

OTHER EXPERIENCE

Spring School on Structural Inference

TOPIC: LARGE-SCALE ML, STRUCTURED SIGNAL PROCESSING AND LARGE SCALE LIMITS OF RANDOM GEOMETRIC STRUCTURES

Bad Malente, Germany

Mar. 2017

Machine Learning Summer School

TOPIC: FOUNDATIONS OF MACHINE LEARNING

Kyoto, Japan

Aug.-Sep. 2015

Spring School on Structural Inference

TOPIC: NON-PARAMETRIC ESTIMATION, ONLINE LEARNING AND NON-PARAMETRIC BAYES

Sylt, Germany

Mar. 2015

Tokyo Institute of Technology

SIX MONTH STAY IN SUGIYAMA LABORATORY AS VISITING RESEARCHER, YSEP EXCHANGE PROGRAM

Tokyo, Japan

Oct. 2012 - Feb. 2013

Aristoteleio Panepistimio Thessalonikis

ONE WEEK SEMINAR ON GENETIC AND EVOLUTIONARY ALGORITHMS

Thessaloniki, Greece

Mar. 2013

Publications

IN SUBMISSION

Efficient Second-Order Online Kernel Learning with Adaptive Embedding

D Calandriello, A Lazaric, M Valko. Under review

Incremental Spectral Sparsification for Large-Scale Graph-Based Semi-Supervised Learning

D Calandriello, A Lazaric, M Valko, I Koutis. arXiv preprint, 2016

<https://arxiv.org/pdf/1601.05675.pdf>

CONFERENCES

Second-Order Kernel Online Convex Optimization with Adaptive Sketching

D Calandriello, M Valko, A Lazaric. International Conference on Machine Learning (ICML), 2017

Distributed adaptive sampling for kernel matrix approximation

D Calandriello, A Lazaric, M Valko. International Conference on Artificial Intelligence and Statistics (AISTAT), 2017

<http://hal.inria.fr/hal-01482760v1>

Analysis of Nyström method with sequential ridge leverage score sampling

D Calandriello, A Lazaric, M Valko. Uncertainty in Artificial Intelligence (UAI), 2016

<https://hal.inria.fr/hal-01343674>

Sparse Multi-task Reinforcement Learning

D Calandriello, A Lazaric, M Restelli. Advances in Neural Information Processing Systems (NIPS), 2014

<https://hal.inria.fr/hal-01073513>

Safe policy iteration

M Pirota, M Restelli, A Pecorino, D Calandriello. International Conference on Machine Learning (ICML), 2013

<http://jmlr.org/proceedings/papers/v28/pirota13.pdf>

JOURNAL

Semi-supervised information-maximization clustering

D Calandriello, G Niu, M Sugiyama. Neural Networks, 2014

<http://www.sciencedirect.com/science/article/pii/S0893608014001245>

Physically Interactive Robogames: Definition and design guidelines

D Martinoia, D Calandriello, A Bonarini. Robotics and Autonomous Systems, 2013

<http://airwiki.ws.dei.polimi.it/images/2/27/JTHICORGPaperPrePrint.pdf>

Talks

Distributed adaptive sampling for kernel matrix approximation

NIPS Workshop on Adaptive and Scalable Nonparametric Methods in ML Poster Session, Dec. 2016

Bad Malente spring school Poster Session, Apr. 2017

AISTAT Poster Session, Apr. 2017

Incremental Spectral Sparsification for Large-Scale Graph-Based Semi-Supervised Learning

ICML Workshop on Resource-Efficient Machine Learning Poster Session, Jul. 2015

Kyoto MLSS Poster Session, Aug. 2015

Invited talk at Sugiyama Laboratory, University of Tokyo, Sep. 2015

Sparse Multi-Task Reinforcement learning

NIPS Poster Session, Dec. 2014

NIPS Workshop on Multi-task learning, Dec. 2014

Sylt spring school Poster Session, Mar. 2015

Return Oriented Programming for binary exploitation

Course in computer security, Politecnico di Milano, Mar. 2012

Politecnico di Milano Open Unix Lab, Mar. 2013

Teaching

Graphs In Machine Learning

Teaching Assistant, Master in Mathématiques/Vision/Apprentissage, École normale supérieure Paris-Saclay

2014/2015, 2015/2016, 2016/2017

Scholarships & Awards

Travel Grant from AISTAT'17, Kyoto MLSS'15, NIPS'14

Student Volunteer Position at ICML'15

Jun. 2017 **Selected for the Google Machine Learning Summit in Zurich** including travel grant

Oct. 2014 **AI*IA Prize for best Master Thesis** from Italian Association for Artificial Intelligence

Nov. 2013 **Master Thesis Abroad Scholarship** from Politecnico di Milano

Feb. 2012 **Merit Scholarship** from Autostrade per l'Italia

Sep. 2011 **Admitted to Alta Scuola Politecnica** an advanced program reserved to top 1% students from Politecnico di Milano, declined admission to pursue other research projects.

2009-2012 **University Fees Waive, due to merit**

Service

External Reviewer for ICML 2015-2017

External Reviewer for NIPS 2015-2016

External Reviewer for IJCAI 2015-2017

External Reviewer for AI&STAT 2015-2017

Skills

Operating Systems: Advanced: Linux. Intermediate: Windows.

Programming Languages: Advanced: MATLAB/OCTAVE, C, PYTHON. Intermediate: JAVA, C++. Basic: PROLOG, AMPL.

CERTIFICATES

2012 **Coursera's Probabilistic Graphical Model course, 97/100**

2011 **Coursera's Machine Learning course, 100/100**

2013 **GRE Quantitative 167/170, 95 percentile, Verbal 165/170, 95 percentile, Writing 3.5/6 35 percentile.**

2013 **TOEFL 118/120**

Languages

Italian: Native

English: Fluent

Extracurricular Activity

ToH (Tower Of Hanoi), hacking competitions team in Politecnico di Milano

Milano, Italy

CORE MEMBER

2008 - 2014

- Experience in Computer Security. Participated to international CtF competitions, focusing on reverse engineering and exploiting binary files.