Carlo Ciliberto

Appointments

- 2021-Present **Associate Professor**, University College London, Computer Science Department, London UK.
 - 2018–2021 **Lecturer (Assistant Professor)**, Imperial College London, Department of Electrical and Electronic Engineering, London UK.
 - 2017–2018 **Research Associate**, University College London (UCL), Department of Computer Science, London UK.
 - 2013–2015 **Postdoctoral Fellow**, Massachusetts Institute of Technology, Cambridge, MA, USA.
 - 2012–2013 Postdoctoral Fellow, Istituto Italiano di Tecnologia, Genova, Italy.

Education

- 2009–2011 **PhD Student**, *In machine learning applied to computer vision and robotics*, Istituto Italiano di Tecnologia, Genova, Italy, PhD Thesis: Self-supervised Robots: A path towards Autonomous Learning.
- 2006–2008 Master of Science in Mathematics, *Universitá Roma Tre, Rome, Italy.*Master Thesis: The Jacobian ideal of a Hypersurface. 110/110 cum laude.
- 2003–2006 **Bachelor in Mathematics**, *Universitá Roma Tre, Rome, Italy.* 110/110 cum laude.

Teaching

- 2018–Present **Deep Learning**, *Imperial College London*, Postgraduate course. Introductory course to Deep Learning.
 - 2017–2018 **Advanced Topics in Machine Learning**, *University College London*, Postgraduate course. Introduction to Statistical Learning Theory.
 - 2014–2016 **Statistical Learning Theory**, *Massachusetts Institute of Technology*, Postgraduate course. Introduction to Statistical Learning Theory.

Grants

2020-2021 Royal Society Research Grant RGS\R1\201149, Structured Prediction for Reliable and Efficient Meta-Learning $(\pounds 20K)$, The project proposes a novel perspective on meta-learning based on structured prediction. The goal of the project is to provide theoretical guarantees for meta-learning.

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Organization of Scientific Events

- 2016 Data Learning and Inference (DALI), Machine learning workshop, Organization of the Workshop in collaboration with Prof. Lorenzo Rosasco, Prof. Thomas Hofmann, Prof. Zoubin Ghaharamani, Prof. Neil Lawrence and Prof. Bernhard Schölkopf., Website of the event: http://dalimeeting.org/dali2016/.
- 2015 **Brains Minds and Machines**, *Organization of the Workshop, Website of the event:* http://cbmm.mit.edu/bmm-workshop-sestri.
- 2015 Workshop: Robotics Afternoon at MBL, Workshop on Robotics with talks by leaders of the research in the field, Organization of the Workshop, Website of the event: http://lcsl.mit.edu/courses/cbmmss/robotics.
- 2015 Machine Learning Crash Course (MLCC), One-week course on Machine Learning. Taught by Prof. Lorenzo Rosasco and Francesca Odone, Organization of the course, Website of the event: http://lcsl.mit.edu/courses/mlcc/mlcc2015.

Invited Visits

- March 2015 Microsoft Research, Redmond, WA, USA. (Hosted by Sharam Izadi).
- August 2015 CBMM Summer School, Woods Hole, MA, USA. (Hosted by Tomaso Poggio).

Other Academic Activities

- Area Chair International Conference on Artificial Intelligence and Statistics (AISTATS) 2020, International Joint Conferences on Artificial Intelligence (IKCAI) 2020.
 - Reviewer Neural Information Processing Systems (NeurIPS) 2019 (Top 400 reviewers), 2018 (Top 50% reviewers), 2017 2015, International Conference on Machine Learning (ICML) 2019 (Top 20% reviewers), 2018-2016, International Conference on Artificial Intelligence and Statistics (AISTATS) 2019 2016, International Conference on Robotics and Autonomous Systesm (IROS) 2015 –2011, International Conference on Robotics and Automation (ICRA) 2015–2011, Journal of Machine Learning Research (JMLR) 2015–2019.

Selected Publications

- 2020 **Structured Prediction for Conditional Meta-Learning**, *R. Wang*, *Y. Demiris*, *C. Ciliberto*, Neural Information Processing Systems (NeurlPS) 2020.
- 2020 The Advantage of Conditional Meta-Learning for Biased Regularization and Fine-Tuning, G. Denevi, M. Pontil, C. Ciliberto, Neural Information Processing Systems (NeurIPS) 2020.
- 2020 A General Framework for Consistent Structured Prediction with Implicit Loss Embeddings, C. Ciliberto, L. Rosasco, A. Rudi, Journal of Machine Learning Research (JMLR) 2020.
- 2019 **Localized Structured Prediction**, *C. Ciliberto, F. Bach, A. Rudi*, Neural Information Processing Systems (NeurIPS) 2019.
- 2019 Sinkhorn Barycenters with Free Support via Frank-Wolfe, G. Luise, S. Salzo, M. Pontil, C. Ciliberto, Neural Information Processing Systems (NeurIPS) 2019.

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- 2019 **Online-Within-Online Meta-Learning**, *G. Denevi, D. Stamos, C. Ciliberto, M. Pontil*, Neural Information Processing Systems (NeurIPS) 2019.
- 2019 Leveraging Low-Rank Relations Between Surrogate Tasks in Structured Prediction, G. Luise, D. Stamos, M. Pontil, C. Ciliberto, International Conference on Machine Learning (ICML) 2019.
- 2019 Learning-to-Learn Stochastic Gradient Descent with Biased Regularization, G. Denevi, C. Ciliberto, R. Grazzi, M. Pontil, International Conference on Machine Learning (ICML) 2019.
- 2019 Random Expert Distillation: Imitation Learning via Expert Policy Support Estimation, R. Wang, C. Ciliberto, P. Amadori, Y. Demiris, International Conference on Machine Learning (ICML) 2019.
- 2018 Quantum machine learning: a classical perspective, C. Ciliberto, M. Herbster, A. D. Ialongo, M. Pontil, A. Rocchetto, S. Severini, L. Wossnig, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences.
- 2018 **Manifold Structured Prediction**, *C. Ciliberto*, *A. Rudi*, *G. M. Marconi*, *L. Rosasco*, Neural Information Processing Systems (NeurIPS) 2018.
- 2018 Differential properties of sinkhorn approximation for learning with wasserstein distance, G. Luise, A. Rudi, M. Pontil, C. Ciliberto, Neural Information Processing Systems (NeurIPS) 2018.
- 2018 **Learning to learn around a common mean**, *G. Denevi, C. Ciliberto, D. Stamos, M. Pontil*, Neural Information Processing Systems (NeurIPS) 2018.
- 2018 Incremental learning-to-learn with statistical guarantees, G. Denevi, C. Ciliberto, D. Stamos, M. Pontil, Uncertainty in Artificial Intelligence (UAI) 2018.
- 2017 **Consistent multitask learning with nonlinear output relations**, *C. Ciliberto, A. Rudi, M. Pontil*, Neural Information Processing Systems (NeurIPS) 2017.
- 2016 A consistent regularization approach for structured prediction, *C. Ciliberto, L. Rosasco, A. Rudi*, Neural Information Processing Systems (NeurIPS) 2016.
- 2015 Learning multiple visual tasks while discovering their structure, *C. Ciliberto, L. Rosasco, S. Villa*, Computer Vision and Pattern Recognition (CVPR) 2015.
- 2015 **Convex learning of multiple tasks and their structure**, *C. Ciliberto, Y. Mroueh, T. Poggio, L. Rosasco*, International Conference on Machine Learning (ICML) 2015.