

CURRICULUM VITAE of MASSIMILIANO PONTIL

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PERSONAL DETAILS

Date of birth: August 14, 1970

Nationality: Italian

EDUCATION

February 2, 1999: *PhD in Physics*, University of Genoa,

Title of the thesis: "Study and Application of Statistical Learning Theory" (Advisor: Prof. A. Verri).

July 13, 1994: *Laurea summa cum laude in Physics*, University of Genoa,

Title of the thesis: "Computation of Feynman Diagrams with *Mathematica*".

RESEARCH INTERESTS

Machine learning theory and algorithms, pattern recognition, function representation and approximation, statistical estimation, numerical optimization, convex optimization.

PROFESSIONAL HISTORY

October 2010 –: *Professor*, Dept. of Computer Science, University College London, UK.

October 2006 – September 2010: *Reader*, Dept. of Computer Science, University College London, UK.

January 2003 – September 2006: *Lecturer*, Dept. of Computer Science, University College London, UK.

November 2000 – May 2001: *Research Fellow*, Dept. of Mathematics, City University of Hong Kong, Hong Kong.

October 2000 – January 2003: *Research Associate*, Dept. of Information Engineering, University of Siena, Italy.

October 1997 – September 2000: *Postdoctoral Fellow*, Center for Biological and Computational Learning, Massachusetts Institute of Technology, USA.

OTHER APPOINTMENTS AND AFFILIATIONS

Program Committees

Conference on Learning Theory (COLT), 2010, 2011.

Eighth International Workshop on Mining and Learning with Graphs (MLG-2010), 2010.

Neural Information Processing Systems (NIPS) Workshop on Transfer Learning for Structured Data, 2009.

Algorithmic Learning Theory Conference (ALT), 2009.

International Conference on Machine Learning (ICML), Area Chair, 2009.

Conference on Learning Theory (COLT), 2008.

European Conference on Machine Learning (ECML), Workshop on Graph Labelling and Web Spam Challenge, 2007.

Conference on Learning Theory (COLT), 2005, 2006.

Joint IAPR International Workshops on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition, 2006.

International Conference on Machine Learning (ICML), 2004.

Organization

Session organizer, Conference on Information representation and estimation, University College London, London, UK, September 6–8, 2010.

Co-organizer (with S. Olhede and J. Shawe-Taylor) of a Workshop on “Sparsity in Machine Learning and Statistics”, Cumberland Lodge, UK, April 1–3, 2009.

Co-organizer (with J. Shawe-Taylor) of an Open House on Multi-Task and Complex Outputs Learning, University College London, London, UK, July 10–14, 2006.

Co-chair, Neural Information Processing Systems (NIPS) Workshop on Inductive Transfer, Whistler, British Columbia, Canada, December 9, 2005.

Co-chair, Neural Information Processing Systems (NIPS) Workshop on Accuracy-Regularization Frontier, Whistler, British Columbia, Canada, December 10, 2005.

Session co-organizer (with J. Suykens) European Symposium of Artificial Neural Networks (ESANN), Bruges, Belgium, April 26, 2003.

Co-organizer (with T. Evgeniou, C. Papageorgiou and T. Poggio) of the international workshop on “Support Vector Machines: Theory and Applications” (ACAI), Crete, Greece, July, 1999.

Editorial Board

Editorial Board of Machine Learning, 2009–.

Associate Editor of Pattern Recognition Letters, 2004–2006.

Books reviewed for: John Wiley (2), Cambridge Press (2), Springer (1).

Journal articles reviewed for: ACM Computing Surveys, Advances in Computational Mathematics, Biometrika, IEEE Trans. on KDE, IEEE Trans. on NN, IEEE Trans. on PAMI, Inverse Problems, J. of Approximation Theory, J. of Machine Learning Research, Machine Learning, Nature, Neural Computation, Neural Networks, Proc. A of the Royal Society.

Conference articles reviewed for: Neural Information Processing Systems (NIPS) 1999–2001, 2003, 2005–2009, AI & Statistics 2010, IJCNN 2003, IJCNN 2004.

Grant Panels

Invitation to Serve in American National Science Foundation Cyber-enabled Discovery and Innovation Panel on June 22–23, 2009 (invitation could not be taken).

Invitation to Serve in American National Science Foundation Machine Learning Panel on March 16–17, 2004 (invitation could not be taken).

Final Review Panel, American National Science Foundation, held in Arlington, Washington, USA, April 28,29, 2003.

Research proposals reviewed for: American National Science Foundation (2003), Belgian Science Foundation (2003, 2005), Dutch National Research Council (2008, 2009, 2010), EPSRC (2004, 2005), Honk Kong Research Council (2009).

Visits to Universities and Research Institutes

July 14–18, 2009: Max Planck Institute for Biological Cybernetics, Tübingen, Germany.

January 15 – June 14, 2008: Isaac Newton Institute for Mathematical Sciences, Cambridge, UK (Visiting Fellow).

November 24–28, 2008: Seminar für Statistik, ETH Zurich, Switzerland.

March 23–27, 2007: Dipartimento di Informatica, Università Cà Foscari di Venezia, Venice, Italy.

September 2006: Dipartimento di Scienze dell'Informazione, Università di Genova, Italy, Genoa, Italy

April 3–8, 2005: Toyota Technology Institute, University of Chicago, Chicago, IL, USA.

May 5–16, 2005: Department of Mathematics, City University of Hong Kong.

May 24 – June 11 and December 1–14, 2004: Department of Mathematics, City University of Hong Kong.

April 26 – May 8, 2004: Toyota Technology Institute, University of Chicago, Chicago, IL, USA (Visiting Professor).

April 19–22, 2004: Center for Biological and Computational Learning, Massachusetts Institute of Technology, Cambridge, MA, USA.

February 11–27, 2004: Department of Mathematics, City University of Hong Kong.

July 24 – August 22, 2003: Max Planck Institute for Biological Cybernetics, Tübingen, Germany.

June 28 – July 13 and August 8–26, 2003: National University of Singapore, Department of Computational Science, Singapore.

May 2–9, 2003: Center for Biological and Computational Learning, Massachusetts Institute of Technology, Cambridge, MA, USA.

August 26–September 7, 2002: University Carlos III of Madrid, Madrid, Spain (Visiting Professor).

July 6–19, 2002: Catholic University of Leuven, Leuven, Belgium (Visiting Professor).

February–March 2002: Dept. of Mathematics, City University of Hong Kong, Hong Kong.

December 2–14, 2001: Center for Biological and Computational Learning, Massachusetts Institute of Technology, Cambridge, MA, USA.

January 21 – February 5, 2001: Brain Sciences Institute, RIKEN, Tokyo, Japan.

PRIZES, AWARDS and OTHER HONOURS

October 2006 – September 2011: EPSRC Advanced Research Fellowship.

May 2002: Edoardo R. Caianiello award for the Best Italian PhD Thesis on Connectionism, Vietri sul Mare, Italy.

GRANTS

University College London

EPSRC grant EP/H027203/1 entitled “Structured Sparsity Methods in Machine Learning and Convex Optimisation”, £377,888 for June 2010 – November 2013. Lead PI, co-PI: R. Hauser (University of Oxford).

BBSRC grant BB/E017452/1 entitled “Prediction of Protein-Protein Interaction Hot Spots using a Combination of Physics and Machine Learning”, £368,821 for January 2007 – June 2010. co-PI, Lead PI: Prof. D. Jones (UCL).

EPSRC grant EP/D071542/1 entitled “A New Generation of Trainable Machines for Multi-task Learning”, £773,385 for October 2006 – September 2011 (EPSRC Advanced Research Fellowship). Sole PI.

EPSRC grant EP/D052807/1 entitled “Study of Regularization Methods in Machine Learning”, £10,800 for 2006. Sole PI.

IST Programme IST-2002-506778 of the European Community, “Multi-task Learning: Optimization Methods and Applications”, PASCAL Pump Priming Programme, €56,364 for December 2005 – June 2007. Lead PI, co-PIs: T. Evgeniou (INSEAD), J.P. Vert (École des Mines de Paris) and G. Bakir (Max Planck Institute for Biological Cybernetics).

EPSRC grant GR/T18707/017 entitled “Novel Machine Learning Methods Based on Techniques from Approximation, Estimation and Computation”, £123,766 for October 2004 – September 2007. Sole PI.

Travel grant to support the workshop on “Sparsity in Machine Learning and Statistics” (approx £5,000), Pascal 2 Network of Excellence, 2009. IST Programme IST-2002-506778 of the European Community.

Travel grants, 2003–2006 (approx £9,000), IST Programme IST-2002-506778 of the European Community.

Others

Consultant for US Air Force grant FA9550-09-1-0511, entitled “Adaptive Kernel Based Machine Learning Methods” (PI: Profs. Y. Xu and C.A. Micchelli), 2009–2011.

Senior Participant, American National Science Foundation Grant No. ITR-0312113, entitled “Estimation, Approximation and Computation in Learning Theory” (P.I.: Profs. C.A. Micchelli and Y. Xu), 2003–2005.

Italian Ministry of Education, University and Research (MIUR) Project “Giovani Ricercatori”, entitled “Feature Selection with Kernel Machines Techniques”, 5,500 Euros, University of Siena, Italy 2002.

INVITED TALKS and MEETING

December 7, 2010: NIPS Workshop entitled “New Directions in Multiple Kernel Learning”, Whistler, Canada.

October 8, 2010: DISI, University of Genoa.

October 5, 2010: Dipartimento di Sistemi e Informatica, University of Florence.

Septemebr 22, 2010: Dept of Mathematics, City University of Hong Kong,

July 19–23, 2010: Workshop on Inverse Problems in Data Driven Modelling, RICAM, Linz.

July 5–9, 2010: Workshop on Nonlinear Optimization, Variational Inequalities and Equilibrium Problems, Erice, Italy.

May 7, 2010: Statistics seminars at Imperial College, London, UK.

March 25, 2010: Xerox Research Centre Europe, Grenoble, France.

March 8, 2010: School of Computer Science at the University of Birmingham (Natural Computation Seminar Series), UK.

January 20, 2010: Dept of Mathematics, City University of Hong Kong,

July 21, 2009: Conference on Applied Inverse Problems (AIP 2009), Minisymposium on regularization Approaches to Learning from High Dimensional Data, Vienna, Austria.

July 16, 2009: Max Planck Institute for Biological Cybernetics, Tübingen, Germany.

June 25, 2009: Université Joseph Fourier, Grenoble, France.

March 16–20, 2009: Oberwolfach Workshop on Sparse Recovery Problems in High Dimensions: Statistical Inference and Learning Theory, Oberwolfach, Germany.

February 5, 2009: 10th Bologna Winter School on Machine Learning and Computational Biology, Bologna, Italy (invited lecture).

July 21–23, 2008: Mathematics in Biosciences, Helmholtz Zentrum Muenchen, Munich, Germany (invitation could not be taken).

July 16, 2008: Università degli Studi del Piemonte Orientale, Alessandria, Italy.

June 29 – July 4, 2008: Oberwolfach Workshop on Learning Theory and Approximation, Oberwolfach, Germany.

June 17, 2008: Foundations of Computational Mathematics, Workshop on Learning Theory, Hong Kong.

January 14, 2008: Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.

January 29, 2008: PASCAL Symposium meeting, Bled, Slovenia.

July 11, 2007: 22nd European Conference on Operational Research (Session on Higher Order Optimisation and Machine Learning), Prague, Czech Republic.

May 17, 2007: Department of Engineering Mathematics, Bristol University, Bristol, UK.

May 21, 2007: PASCAL "Entente Cordiale" Workshop, Department of Computer Science, UCL, London, UK.

March 7, 2007: Google Zurich, Switzerland.

March 29, 2007: Dipartimento di Matematica Pura ed Applicata, University of Padova, Italy.

January 30, 2007: School of Computer Science and Information Systems, Birkbeck College, London, UK.

December 13, 2006: DSNN Seminar Series, Mathematics Department, King's College London, UK.

June 29, 2006: Workshop on Feature Selection in Data Mining, SAID Business School, Oxford, UK.

June 21, 2006: Workshop on Analytic Methods for Learning Theory: Learning, Regularization and Approximation, Genoa, Italy.

June 16, 2005: Department of Computer Science, National University of Singapore.

May 31, 2005: Department of Electrical Engineering, Katholieke Universiteit Leuven, Belgium.

April 7, 2005: Toyota Technology Institute, University of Chicago, Chicago, IL, USA (Special Program on Learning Theory).

November 3, 2004: School of Electronics and Computer Science, University of Southampton, UK.

October 14, 2004: Department of Mathematics, London School of Economics, London, UK.

May 4, 2004: Toyota Technology Institute, University of Chicago, Chicago, IL, USA.

April 22, 2004: Department of Statistics, Boston University, Boston, MA, US.

April 21, 2004: Department of Brain and Cognitive Sciences and AI Labs (Brains and Machines Series), Massachusetts Institute of Technology, Cambridge, MA, USA.

March 25, 2004: Dagstuhl-Seminar 04131 on Geometric Properties from Incomplete Data, Dagstuhl, Germany.

September 22, 2003: Department of Computer Science, University of Genoa, Italy.

September 18, 2003: Microsoft Research, Cambridge, UK.

August 27–29, 2003: Symposium on Systems Identification, Rotterdam, Netherlands.

August 8, 2003: Machine Learning Summer School, Max Planck Institute for Biological Cybernetics, Tübingen, Germany (Invited Lecture).

June 30, 2003: Department of Computational Science, National University of Singapore, Singapore.

December 20–23, 2002: 2-nd Int. Symp. on Computing Sciences, Zhongshan University, Guangzhou, China.

December 10, 2002: Department of Mathematics, City University of Hong Kong, Hong Kong.

September 22–28, 2002: 7-th Course of the International School on Neural Nets Eduardo R. Caianiello, on Ensemble Methods for Learning Machines, IIASS-Vietri sul Mare, Salerno, Italy (Invited Lecture).

September 19, 2002: Department of Computer Science, University College London, London, UK.

August 27, 2002: ICANN Workshop on Advances on Kernel Methods for Signal Processing, Madrid, Spain.

July 11, 2002: NATO ASI on Learning Theory and Practice (LTP 2002), Leuven, Belgium (Invited Lecture).

May 31, 2002: 14-th Italian Workshop on Neural Networks (WIRN'02), Vietri sul Mare, Salerno.

December 12, 2001: Department of Statistics, Boston University, Boston, MA, USA.

December 7, 2001: NIPS Workshop on New Directions in Kernel-Based Learning Methods, Whistler, Canada.

March 27, 2001: Hong Kong University of Science and Technology, Hong Kong.

January 25, 2001: RIKEN, Brain Sciences Institute, Tokyo, Japan.

December 16, 2000: International joint meeting of the American Math. Soc. and Hong Kong Math. Soc., special session on The Mathematics of Learning Theory, Hong Kong.

November 1, 2000: City University of Hong Kong, Hong Kong.

June 26, 2000: AT&T Research Labs, Florham Park, NJ, USA.

May 18, 2000: Department of Information Engineering, University of Siena, Siena, Italy.

April 3, 2000: Department of Computer Science and Operations Research, University of Montreal, Montreal, Canada.

March 23, 2000: AT&T Research Labs, RedBank, NJ, USA.

ACADEMIC SUPERVISION

PhD Students

October 2010–: Bernardino Romera-Paredes, Department of Computer Science, UCL (co-supervisor).

October 2008–: Jean Morales, Department of Computer Science, UCL (first supervisor).

October 2007–: Guy Lever, Department of Computer Science, UCL (second supervisor).

October 2004–2007: Andreas Argyriou, Department of Computer Science, UCL (first supervisor). Thesis entitled “Learning to Integrate Data from Different Sources and Tasks” (now Research Assistant Professor at TTI-Chicago).

October 2003–2007: Lisa Wainer, Department of Computer Science, UCL (first supervisor). Thesis entitled “Online graph-based learning for classification” (now Research Associate at UCL Jill Dando Institute of Crime Science).

October 2003–2006: Ching Wai Tan, PhD Student, UCL, research topic on “Machine learning methods for protein folding prediction” (second supervisor).

Postdocs

September 2010–: Dr. Luca Baldassarre, Department of Computer Science, UCL.

February 2007 – August 2009: Andreas Argyriou, Department of Computer Science, UCL. (now Research Assistant Professor at TTI-Chicago).

September 2005 – April 2007: Yiming Ying, Department of Computer Science, UCL (now Lecturer at Exeter University, UK).

Academic Visitors

February–April 2009: Luca Baldassarre (PhD Student, University of Genoa).

June–September 2006: Jaisiel Madrid-Sánchez (PhD Student, University Carlos III of Madrid).

January–February 2006: Charles Micchelli (Distinguished Professor, Department of Mathematics and Statistics, SUNY Albany).

October 2003 – April 2004: Sauro Menchetti (PhD Student, University of Florence).

Others

Supervisor of 15 MSc students, Department of Computer Science, UCL (2003–2006).

Co-supervisor for the Master thesis of Luis Perez-Breva, Massachusetts Institute of Technology, 2000.

TEACHING ACTIVITY

University College London

Graduate course entitled “Advanced Topics in Machine Learning”, Department of Computer Science, Spring 2010 (15 lectures).

Graduate course entitled “Mathematical Programming and Research Methods”, Department of Computer Science, Fall 2009 (15 lectures).

Graduate course entitled “Advanced Topics in Machine Learning”, Department of Computer Science, Spring 2005 and 2006 (30 lectures).

Graduate course entitled “Supervised Learning”, Department of Computer Science, Fall 2005 (30 lectures).

MScCS course entitled “Fundamentals of Mathematics”, Department of Computer Science, Fall 2005 (10 lectures).

Graduate course entitled “Information Theory”, Department of Computer Science, Fall 2003 and 2004 (30 lectures).

Elsewhere

Lecture series entitled “Reproducing Kernel Hilbert Spaces in Learning Theory”, University Carlos III of Madrid, September 2002 (12 lectures).

PhD seminar class entitled “Elements of Statistical Learning Theory and Kernel-based Algorithms”, University of Florence, Spring 2002 (20 lectures).

3-rd year undergraduate class entitled “Introduction to Machine Learning”, University of Siena, Spring 2002 (24 lectures).

Lecture series on “Statistical Learning Theory”, Department of Mathematics, City University of Hong Kong, February 2002 (10 lectures).

1-st year undergraduate class on “Fundamentals of Computer Sciences”, University of Florence, Fall 2001 (40 lectures).

Teaching Assistant, “Graph Theory and Networks”, City University of Hong Kong, Spring 2001.

Graduate course “Theory of Learning: Classification and Regression”, Massachusetts Institute of Technology, Fall 1999 (2 lectures).

ENABLING ACTIVITY

Internal Examiner for the PhD thesis of Timothy Nugent (UCL) November 2010.

External Examiner for the PhD thesis of Nicola Rebagliati (Department of Informatics, University of Genoa, Italy), April 2010.

Internal Examiner for the PhD thesis of Matthew Fudge (UCL) September, 2009.

External Examiner for the PhD thesis of Luca Baldassarre (Department of Physics, University of Genoa, Italy) March 2010.

External Examiner for the MRes Thesis of Patrik Beck (Univ. of Bristol) December 2009.

External Examiner for the PhD thesis of Laurent Jacob (Center for Computational Biology, École des Mines de Paris) November 2009.

External Examiner for the PhD thesis of Sofia Mosci (Department of Physics, University of Genoa, Italy)
April 2009.

External Examiner for the PhD thesis of Giovanni Cavallanti (Dipartimento di Scienze dell'Informazione,
University of Milan, Italy), February 2009.

External Examiner for the PhD thesis of Alexei Pozdnoukhov (School of Computer and Communication
Sciences, EPFL Lausanne) May 2006.

External Examiner for the PhD thesis of Kristiaan Pelckmans (Department of Electrical Engineering,
Katholieke Universiteit Leuven) May 2005.

External Examiner for the PhD thesis of Francesco Camastra (Department of Informatics, University of
Genoa) May 2004.

Internal Examiner for the PhD thesis of Matthew Fudge (UCL) September, 2009.

Internal Examiner for the PhD thesis of Zack Voulgaris (SCSIS Birkbeck) March, 2009.

Internal Examiner for the PhD thesis of Simon Osindero (Gatsby Unit, UCL) April 2004.

ADMINISTRATION

Teaching Support coordinator. Responsible for the effective running of teaching support by Research
Fellows and PhD students in the Department of Computer Science at UCL, 2004–2006.

Computer Science Departmental Seminar Organizer, 2003–2004.

LIST of COLLABORATORS (PAST 5 YEARS)

Andreas Argyriou (TTI Chicago, USA)

Andrea Caponnetto (Dept. of Mathematics, City Univ. of Hong Kong)

Theodoros Egegiou (INSEAD, Fontainebleau, France)

Zoubin Ghahramani (Dept. of Engineering, Univ. of Cambridge, UK)

Raphael Hauser (Computing Laboratory, University of Oxford, UK)

Mark Herbster (Dept. of Computer Science, Univ. College London, UK)

David Jones (Dept. of Computer Science, Univ. College London, UK)

Karim Lounici (Statistical Laboratory, Univ. Cambridge, UK)

Cecilia Mascolo (Computer Laboratory, University of Cambridge)

Andreas Maurer (Munich and Grattino Labs)

Charles Micchelli (Dept. of Mathematics, State Univ. of New York, USA)

Fernando Perez Cruz (Dept. of Signal Processing, Univ. Carlos III of Madrid)

Alexandre Tsybakov (École Polytechnique and Laboratoire de Probabilités et Modèles Aléatoires, Univ.
Paris VI)

Sara van de Geer (Dept. of Mathematics, ETH Zurich)

Yiming Ying (Dept. of Computer Science, Univ. Bristol, UK)

Ding-Xuan Zhou (Dept. of Mathematics, City Univ. of Hong Kong, Hong Kong)

PUBLICATIONS

(h-index (from Google Scholar) = 30, in October 2010)

Journal Articles

- [1] Maurer, A., Pontil, M. (forthcoming). K-dimensional coding schemes in Hilbert spaces. *IEEE Transactions on Information Theory*.
- [2] Argyriou, A., Micchelli, C.A., Pontil, M. (2010) On spectral learning. *J. Machine Learning Research*, 11:935-953.
- [3] Lise, L., Archambeau, C., Pontil, M., Jones, D.T. (2009). Prediction of hot spot residues at protein-protein interfaces by combining machine learning and energy-based methods. *BMC Bioinformatics*, 10:365-382.
- [4] Argyriou, A., Micchelli, C.A., Pontil, M. (2009). When is there a representer theorem? Vector versus matrix regularizers. *Journal of Machine Learning Research*. 10:2507-2529.
- [5] Caponnetto, A., De Vito, E., Pontil, M. (2009). Entropy conditions for L_r -convergence of empirical processes. *Advances in Computational Mathematics* 30(4), 355-373.
- [6] Argyriou, A., Evgeniou, T., Pontil, M. (2008). Convex multi-task feature learning. *Machine Learning* 73(3), 243-272.
- [7] Caponnetto, A., Micchelli, C.A., Pontil, M., Ying, Y. (2008). Universal multi-task kernels. *Journal of Machine Learning Research* 9, 1615-1646.
- [8] Ying, Y., Pontil, M. (2008). Online gradient descent learning algorithms. *Foundations of Computational Mathematics* 8(5), 561-596.
- [9] Evgeniou, T., Pontil, M., Toubia, O. (2007). A convex optimization approach to modeling heterogeneity in conjoint estimation. *Marketing Science* 26, 805-818.
- [10] Micchelli, C.A., Pontil, M. (2007). Feature space perspectives for learning the kernel. *Machine Learning* 66, 297-319.
- [11] Costa, F., Frasconi, P., Menchetti, S., Pontil, M. (2005). Wide coverage natural language processing using kernel methods and neural networks for structured data. *Pattern Recognition Letters* 26(12), 1896-1906.
- [12] Elisseeff, A., Evgeniou, T., Pontil, M. (2005). Stability of randomized learning algorithms. *Journal of Machine Learning Research* 6, 55-79.
- [13] Evgeniou, T., Micchelli, C.A., Pontil, M. (2005). Learning multiple tasks with kernel methods. *Journal of Machine Learning Research* 6, 615-637.
- [14] Micchelli, C.A., Pontil, M. (2005). Learning the kernel function via regularization. *Journal of Machine Learning Research* 6, 1099-1125.
- [15] Micchelli, C.A., Pontil, M. (2005). On learning vector-valued functions. *Neural Computation* 17(1), 177-204.
- [16] Evgeniou, T., Pontil, M., Elisseeff, A. (2004). Leave-one-out error, stability, and generalization of voting combination of classifiers. *Machine Learning* 55(1), 71-97.
- [17] Passerini, A., Pontil, M., Frasconi, P. (2004). New results on error correcting output codes of kernel machines. *IEEE Trans. on Neural Networks*, 15 (1), 45-54.
- [18] Nakajima, C., Pontil, M., Heisele, B., Poggio, T. (2003). Full body person recognition. *Pattern Recognition* 36, 1997-2006.
- [19] Evgeniou, T., Pontil, M., Poggio, T., Papageorgiou, C. (2003). Image representations and feature selection for multimedia database search. *IEEE Trans. on Knowledge and Data Engineering* 15(4), 911-920.
- [20] Pontil, M. (2003). A note on different covering numbers in learning theory. *Journal of Complexity* 19, 665-671.
- [21] Pontil, M. (2003). Learning in reproducing kernel Hilbert spaces: a guide tour. *Bulletin of the Italian Artificial Intelligence Association – AI Notizie*, XVI(3), 8–17.
- [22] Yao, Y., Marcialis, G., Pontil, M., Frasconi, P., Roli, F. (2003). Combining flat and structured representations for fingerprint classification with recursive neural networks and support vector machines. *Pattern Recognition* 36(2), 397-406.
- [23] Evgeniou, T., Poggio, T., Pontil, M., Verri, A. (2002). Regularization and statistical learning theory for data analysis. *Computational Statistics and Data Analysis* 38, 421-432.

- [24] Evgeniou,T., Pontil,M., Poggio,T. (2000). Regularization networks and support vector machines. *Advances in Computational Mathematics* 13(1), 1-50.
- [25] Evgeniou,T., Pontil,M., Poggio,T. (2000). Statistical learning theory: a primer. *International Journal of Computer Vision* 38(1), 9-13.
- [26] Pallavicini,M., Patrignani,C., Pontil,M., Verri,A. (1998). Electron identification with k -nearest-neighbor techniques. *Nucl. Inst. and Meth. in Phys. Res. A* 405, 133-138.
- [27] Pontil,M., Verri,A. (1998). Properties of support vector machines. *Neural Computation* 10, 955-974.
- [28] Pontil,M., Verri,A. (1998). Support vector machines for 3D object recognition. *IEEE Trans. Pattern Anal. Mach. Intell.* 20(6), 637-646.

Book Chapters

- [29] Odone,F., Pontil,M., Verri,A. (2009). Machine learning techniques for biometrics. In *Handbook of Remote Biometrics for Surveillance and Security*, Tistarelli,M., Li,S.Z., Chellappa,R. (ed.) Springer, 247-271.
- [30] Perez-Cruz,F., Ghahramani,Z., Pontil,M. (2007). Conditional graphical models. In *Predicting Structured Data*, Bakir,G., Hofmann,T., Schölkopf,B., Smola,A.J., Taskar,B., Vishwanathan,S.V.N. (ed.) MIT Press, 265-281.
- [31] Eliseeff,A., Pontil,M. (2003). Leave-one-out error and stability of learning algorithms with applications. In *Advances in Learning Theory: Methods, Models and Applications*, NATO Science Series III: Computer and Systems Sciences, 190, Suykens,J.A.K.,Horvath,I., Basu,S., Micchelli,C.A., Vandewalle,J. (ed.), IOS press, 111-124.
- [32] Evgeniou,T., Pontil,M. (2001). Support vector machines: theory and applications. In *Machine Learning and Its Applications* Paliouras,G.,Karkaletsis,V., Spyropoulos,C.D. (ed.) Springer, 249-257.
- [33] Evgeniou,T., Pontil,M., Poggio,T. (1999). A unified framework for regularization networks and support vector machines. In *Advances in Large Margin Classifiers*, Smola,A.J., Bartlett,P. Schölkopf,B. Schuurmans,D. (ed.) MIT Press, 171-204.
- [34] Pontil,M., Rogai,S., Verri,A. (1998). Support vector machines: a large scale QP. In *High Performance Algorithms and Software in Nonlinear Optimization*, De Leone,R., Murli,A., Pardalos,P.M., Toraldo,G. (ed.) Kluwer Academic Publishers, 315-336.

Conferences (refereed)

- [35] Micchelli,C.A., Morales,J.M., Pontil,M. (Forthcoming) A family of penalty functions for structured sparsity. *Advances in Neural Information Processing Systems (NIPS)*.
- [36] Herbster,M., Lever,G., Pontil,M. (2009). Online prediction on large diameter graphs. *Advances in Neural Information Processing Systems (NIPS)*. Koller,D., Schuurmans,D., Bengio,Y., Bottou,L., et al. (ed.) 21, 649-656.
- [37] Herbster,M., Pontil,M., Rojas-Galeano,S. (2009). Fast prediction on a tree. *Advances in Neural Information Processing Systems (NIPS)*. Koller,D., Schuurmans,D., Bengio,Y., Bottou,L., et al. (ed.) 21, 657-664.
- [38] Lounici,K., Pontil,M., Tsybakov,A.B., van de Geer,S.A. (2009). Taking advantage of sparsity in multi-task learning. *The 22nd Annual Conference on Learning Theory (COLT)*, 73-82.
- [39] Maurer,A., Pontil,M. (2009). Empirical Bernstein bounds and sample-variance penalization. *The 22nd Annual Conference on Learning Theory (COLT)*, 115-124.
- [40] Argyriou,A., Maurer,A., Pontil,M. (2008). An algorithm for transfer learning in a heterogeneous environment. *European Conference on Machine Learning (ECML)*, 71-85.
- [41] Argyriou,A., Micchelli,C.A., Pontil,M., Ying,Y. (2008). A spectral regularization framework for multi-task structure learning. *Advances in Neural Information Processing Systems (NIPS)*. Platt,J.C., Koller,D., Singer,Y., Roweis,S. (ed.) MIT Press, 20, 25-32.
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- [43] Maurer,A., Pontil,M. (2008). Generalization bounds for k -dimensional coding schemes in Hilbert spaces. *Algorithmic Learning Theory (ALT)*, 19th International Conference, 79-91.

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