ThierryArtières

Full Professor in Machine Learning, Deep Learning and Artificial Intelligence

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This CV stresses on most recent positions and facts. Depending on the sections this CV sums up my activities since my last position change (Professor position in 2014 in Marseille) or for the last ten years. **Electronic version includes active URL links**.

Current position

Full Professor (PR Ex2) in Computer Science (27^{ieme} section)
Ecole Centrale Marseille, GEC group (**ECM**)
QARMA research team (Machine Learning in Marseille),
Computer Science Lab (**LIS Lab**), UMR 7020, Aix-Marseille Université (**AMU**).
PEDR bonus for Ph.D. supervision since 2001

Research topics

I am an academic researcher and teacher on machine learning and neural networks for about 30 years. I have been working at Cergy Pontoise university, then at Pierre et Marie Curie University, then at Aix Marseille University, always in CNRS labelled labs (called UMR). My main research topics include:

Machine Learning: Structured outputs, Extreme classification, Budget learning, Few shot learning, Multiview learning, Multisource learning

Deep Learning: Neural Networks, Learning representations, Kernels and deep learning, Adversarial Learning, Disentanglement, Deep and low rank tensor decompositions.

Sequences: Hidden Markov Models, Conditional Random Fields, Recurrent NNs, Contextual models, Sequence labelling and synthesis

Interdisciplinary: High energy physics, Neurosciences

Datas: Sequence and signals, Motion capture, Speech, User logs, Financial time series

Professional career

2014-	**Full Professor, Ecole Centrale Marseille**	LIS lab, Marseille
2007-2014	**Full Professor, Univ. Paris 6**	LIP6 lab, Paris
2006	**Habilitation to conduct research (HDR)** Machine learning for sequence data Reviewers : Y. LeCun (NYU, Facebook), E. Gaussier (LIG, Univ. Grenoble)	LIP6 lab, Paris
2001-2007	**Assistant Professor, Univ. Paris 6**	LIP6 lab, Paris
1996-2001	**Assistant Professor, Univ. Cergy Pontoise**	ETIS lab, Cergy
1991-1995	**Ph.D. Computer Science** Speaker recognition with neural networks and markovian models	LRI lab, Orsay

Scientific boards (since 2014)

2015-2019	**Member of Scientific board**	LIF then LIS lab
2017-	**Member of scientific board of convergence institute ILCB on Language Communication and the Brain** http://www.blri.fr/	
2017-	**Member of scientific board**	ECM
2018-	**Member of scientific board**	CSI INS2I (CNRS Institute)

Syllabus responsabilities (since 2014)

2018-	Head of Master (IAAA) (Artificial Intelligence and Machine Learning) at AMU and ECM, Marseille
2015-2018	Head of Fundamental Computer Science master at AMU, Marseille
2014	Head of master DAC (Data, Learning and Knowledge) at Univ. Paris 6, Paris
2018-	Head of Computer Science Teaching department at ECM Marseille
2019-	Head of Digital Lab (1 year) program at ECM Marseille (starting 09/2019)
2019-	Responsible of two short (1 week) ECM courses for companies opened end 2019

Teaching activity (since 2014)

Most of my courses' ressources may be found on my web page.

ML	Responsible of the Machine Learning unit for third year ECM students (80hours, up to 30 students) including different courses taught by few teachers from ECM and QARMA and by myself: Data Analysis, Optimization, Introduction to Data Science, ML for strutured outputs, Kaggle competition
DS	Responsible of the Data Science unit for master 2 IAAA students (30hours, up to 30 students) taught by H. Kadri (QARMA) and myself: panorama of machine learning domain
DL	Teacher in the Deep Learning unit for master 2 IAAA students (30hours, up to 30 students) taught by S. Ayache (QARMA) and myself: a guided tour of deep learning today
AI	Responsible of the Artificial Intelligence unit for third year ECM students (80hours, up to 40 students) including different courses taught by few teachers from ECM and QARMA and by myself: Reinforcment learning, Computer Vision Deep Learning
AIG	Responsible of the Artificial Intelligence and Games unit for second year ECM students (35hours, up to 60 students) taught by myself and covering: Problem solving, Two player games with Alpha-Beta, Supervised learning for game playing, Monte Carlo Tree Search for game playing
NN	Responsible of the Neural Networks unit for second year ECM students (15hours, up to 50 students) taught by myself and covering: Multi layer Perceptrons, Convolutional architectures, Adversarial learning

Research management (since 2010)

Animation	Head of (≈50 permanent people) Data Science department of LIS lab (2018-2019)
Animation	Head of QARMA team of LIS lab (≈20 people) (2014-2018)
Events	Organization of a french conference (CAP 2016) and 6 workshops as satellite events to major machine learning conferences, NIPS (2013), ICML (2014), ECML (2011,2013,2014), WSDM (2014)
Challenges	Organization of a series of **3** international challenges (LSHTC for Large Scale Hierarchical Text Classification) on extreme classification for classification problems with up to 300k classes (http://lshtc.iit.demokritos.gr/) with P. Gallinari (UPMC), Eric Gaussier (UJF), G. Paliouras (Demokritos, GrÃªce), and of a series of **2** international challenges (2013, 2014) on question answering through an european project (BioASQ).
Commitees	Member of ANR commitee on Big Data (2015), and regular reviewer for ANR proposals
Groups	Member of thinking group for creating an AMU institute on AI and Health (headed by M. Ouladsine (2019)
Groups	Member of Marseille's AI thinking group to build a 3IA institute proposal (2018)
Groups	Member of MarseilleIsAI initiative group (2019))
Reviews	Reviewer for International Conference on Machine Learning (ICML, 2015-), Neural Information Processing Systems (NIPS, 2014-), AAAI (2017-), AISTAT (2016-), IJCAI (2018-), ICLR (2016-), Ubiquitous Computing (UBICOMP 2013), CHI 2013, International Conference on Document Analysis and Recognition (ICDAR 2011-2015)...
Ph.D. Reviews	I have been a reviewer for about 21 Ph.D. jurys (including 2 in spain and one in Italy), and examinator of one Habilitation to drive research (HDR).

Collaborative projets (since 2010)

ANR	Principal Investigator (PI) of Class-Y (ANR blanc 2011-2015) on extreme classification (LIP6, Demokritos Athenes, UJF Grenoble).
ANRs	Member of 2 ongoing ANR projects : Deep In France (2017-2021) on deep lerarning (LITIS, LIP6, GREYC, INRIA Grenoble, I3S), and LIVES (2015-2019) on multiview mearning (LIF, LaHC, LIP6, INT)..
ANRs	Member / WorkPackage (WP) leader of ANRs Geopeuple (2011-2013) on map analysis and augmentation, SAIMSI (2010-2012) on author identification, VIGIES (2008-2011) on log analysis.
FUI	WP leader of AMAFI project (2010-2012) on financial time series prediction and analysis.
Europe	Member of european projects BioAsQ (2012-2014) on medical question answering, and ITEA UsiXML (2009-2013) on gesture interfaces.
Cifre	With BBSP (2009-2013) on chartist analysis in finance.

Ph.D. supervision (since 2010)

On going	4 Ph.D. including one cosupervised with Institut de NeuroSciences de la Timone (INT, AMU), one with Centre de Physique des Particules de Marseille (CPPM, AMU), and one with LIP6 (Sorbonne Université, Paris)
Completed	11 defended Ph.D. including the one of Q. Wang (2018, now Machine Intelligence Team of DAMO Academy, Alibaba Group), G. Contardo (2017, now Post Doc NYU), Y. DIng (2016, lead researcher, NetEase China), M. Cisse (2014, lead researcher, Facebook), A. Vinel (2013, researcher, Apple), T-M-T. Do (2010, now researcher, Trusting Social, Vietnam)
Others	3 Post docs, 1 year each, (2013, 2014, 2018) and 2 research engineers over 5 years (2009-2013 and 2013-2014)

Recent talks for academics, industrials and the civil society

Academics	State of the art in Deep Learning , CPPM (Particle Physics Lab), Marseille, May 2018
Academics	State of the art in Deep Learning , Summer school in Astrophysics, Marseille, May 2018
Academics	Deep Learning: new trends, Summer school IN2P3 2018, "DAQ Emergeants", Frejus, 2018
Academics	Panorama du deep learning, Seminar on Mathematics of deep learning , Marseille, Novembre 2018
Academics	Deep learning, state of the art: International Conference on Data-Driven Plasma Science (ICDDPS-2; https://icddps2019.sciencesconf.org/), May 2019
Industrial	The revolution of AI, Arcelor Mittal, Fos sur mer, 2018
Industrial	Deep learning and Machine Learning today, ATOS, Marseille, 2018
Civil Society	Introduction to AI, High school and, Lyc e Thiers, March 2019
Civil Society	AI: promises and hopes, Saint Martin de Crau, April 2019

Publications (selective list)

The listing below is restricted to most significant conference publications **rated as A ou A*** according to *core* ranking and journals, with few exceptions (ICLR is the major Deep learning conference but is recent and not raked yet), a more complete list may be found on *dblp*.

Three recent papers were *awarded*, at IVA (2013), ICONIP (2016) and ICML (2009).

Articles in peer-reviewed journals

Adversarial learning for modeling human motion
Artières Thierry, Qi Wang, Mickaël Chen, and Ludovic Denoyer
Visual Computer *(Sept. 2018) pp. 1–20. Springer Verlag, 2018*

An overview of the BIOASQ large-scale biomedical semantic indexing and question answering competition

George Tsatsaronis, Georgios Balikas, Prodromos Malakasiotis, Ioannis Partalas, Matthias Zschunke, Michael R. Alvers, Dirk Weissenborn, Anastasia Krithara, Sergios Petridis, Dimitris Polychronopoulos, Yannis Almirantis, John Pavlopoulos, Nicolas Baskiotis, Patrick Gallinari, Thierry Artières, Axel-Cyrille Ngonga Ngomo, Norman Heino, Éric Gaussier, Liliana Barrio-Alvers, Michael Schroeder, Ion Androutsopoulos, and Georgios Paliouras
BMC Bioinformatics 16 (2015) 138:1–138:28. 2015

Online refresh strategies for content based feed aggregation
Roxana Horincar, Bernd Amann, and Thierry Artières
World Wide Web 18.4 (2015) pp. 913–947. 2015

Regularized bundle methods for convex and non-convex risks
Trinh Minh Tri Do and Thierry Artières
Journal of Machine Learning Research 13 (2012) pp. 3539–3583. 2012

Modelling sequences using pairwise relational features
Rudy Sicard and Thierry Artières
Pattern Recognition 42.9 (2009) pp. 1922–1931. 2009

Learning mixture models with support vector machines for sequence classification and segmentation
Trinh Minh Tri Do and Thierry Artières
Pattern Recognition 42.12 (2009) pp. 3224–3230. 2009

Learning iteratively a classifier with the Bayesian Model Averaging Principle
Rudy Sicard, Thierry Artières, and Eric Petit
Pattern Recognition 41.3 (2008) pp. 930–938. 2008

Online Handwritten Shape Recognition Using Segmental Hidden Markov Models
Thierry Artières, Sanparith Marukatat, and Patrick Gallinari
IEEE Trans. Pattern Anal. Mach. Intell. 29.2 (2007) pp. 205–217. 2007

Articles in peer-reviewed conferences

Deep Networks with Adaptive Nyström Approximation
Luc Giffon, Stéphane Ayache, Thierry Artières, and Hachem Kadri
IJCNN 2019 - International Joint Conference on Neural Networks

Multi-View Data Generation Without View Supervision
Mickaël Chen, Ludovic Denoyer, and Thierry Artières
International Conference on Learning Representations (2018)

Recurrent Neural Networks for Adaptive Feature Acquisition
Gabriella Contardo, Ludovic Denoyer, and Thierry Artières
Neural Information Processing - 23rd International Conference, ICONIP 2016, Kyoto, Japan, October 16-21, 2016, Proceedings, Part III

Sequential Cost-Sensitive Feature Acquisition
Gabriella Contardo, Ludovic Denoyer, and Thierry Artières
Advances in Intelligent Data Analysis XV - 15th International Symposium, IDA 2016, Stockholm, Sweden, October 13-15, 2016, Proceedings

A probabilistic prior knowledge integration method: Application to generative and discriminative models
Nataliya Sokolovska and Thierry Artières
2016 International Joint Conference on Neural Networks, IJCNN 2016, Vancouver, BC, Canada

Joint Syntactic and Semantic Analysis with a Multitask Deep Learning Framework for Spoken Language Understanding
Jérémie Tafforeau, Frédéric Béchet, Thierry Artières, and Benoît Favre
Interspeech 2016, 17th Annual Conference of the International Speech Communication Association, San Francisco, CA, USA, September 8-12, 2016

Adapting lexical representation and OOV handling from written to spoken language with word embedding

Jérémie Tafforeau, Thierry Artières, Benoît Favre, and Frédéric Béchet

INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association, Dresden, Germany, September 6-10, 2015

Laughter animation synthesis

Yu Ding, Ken Prepin, Jing Huang, Catherine Pelachaud, and Thierry Artières

International conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2014, Paris, France

An Experimental Comparison of Active Learning Strategies for Partially Labeled Sequences

Diego Marcheggiani and Thierry Artières

Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing, EMNLP 2014, October 25-29, 2014, Doha, Qatar, A meeting of SIGDAT, a Special Interest Group of the ACL

Web-scale classification: web classification in the big data era

Ioannis Partalas, Massih-Reza Amini, Ion Androutsopoulos, Thierry Artières, Patrick Gallinari, Éric Gaussier, and Georgios Paliouras

Seventh ACM International Conference on Web Search and Data Mining, WSDM 2014, New York, NY, USA, February 24-28, 2014

Speech-driven eyebrow motion synthesis with contextual Markovian models

Yu Ding, Mathieu Radenen, Thierry Artières, and Catherine Pelachaud

IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP 2013, Vancouver, BC, Canada, May 26-31, 2013

Robust Bloom Filters for Large MultiLabel Classification Tasks

Moustapha Cissé, Nicolas Usunier, Thierry Artières, and Patrick Gallinari

Advances in Neural Information Processing Systems 26: 27th Annual Conference on Neural Information Processing Systems 2013. Proceedings of a meeting held December 5-8, 2013, Lake Tahoe, Nevada, United States.

Contextual Hidden Markov Models

Mathieu Radenen and Thierry Artières

2012 IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP 2012

Contextual detection of drawn symbols in old maps

Jonathan Guyomard, Nicolas Thome, Matthieu Cord, and Thierry Artières

19th IEEE International Conference on Image Processing, ICIP 2012, Lake Buena Vista, Orlando, FL, USA, September 30 - October 3, 2012

Matrix Pseudoinversion for Image Neural Processing

Rossella Cancelliere, Mario Gai, Thierry Artières, and Patrick Gallinari

Neural Information Processing - 19th International Conference, ICONIP 2012, Doha, Qatar, November 12-15, 2012, Proceedings, Part V

Learning Compact Class Codes for Fast Inference in Large Multi Class Classification

Moustapha Cissé, Thierry Artières, and Patrick Gallinari

Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2012, Bristol, UK, September 24-28, 2012. Proceedings, Part I

Joint Optimization of Hidden Conditional Random Fields and Non Linear Feature Extraction

Antoine Vinel, Trinh Minh Tri Do, and Thierry Artières

2011 International Conference on Document Analysis and Recognition, ICDAR 2011

Best-Effort Refresh Strategies for Content-Based RSS Feed Aggregation

Roxana Horincar, Bernd Amann, and Thierry Artières

Web Information Systems Engineering - WISE 2010 - 11th International Conference, Hong Kong, China, December 12-14, 2010. Proceedings

Neural conditional random fields

Trinh Minh Tri Do and Thierry Artières

Proceedings of the Thirteenth International Conference on Artificial Intelligence and Statistics, AISTATS 2010, Chia Laguna Resort, Sardinia, Italy, May 13-15, 2010

Large margin training for hidden Markov models with partially observed states
Trinh Minh Tri Do and Thierry Artières
Proceedings of the 26th Annual International Conference on Machine Learning, ICML 2009, Montreal, Quebec, Canada, June 14-18, 2009

A Fast Method for Training Linear SVM in the Primal
Trinh Minh Tri Do and Thierry Artières
Machine Learning and Knowledge Discovery in Databases, European Conference, ECML/PKDD 2008, Antwerp, Belgium, September 15-19, 2008, Proceedings, Part I

Polynomial Conditional Random Fields for Signal Processing
Trinh Minh Tri Do and Thierry Artières
ECAI 2006, 17th European Conference on Artificial Intelligence, August 29 - September 1, 2006, Riva del Garda, Italy, Including Prestigious Applications of Intelligent Systems (PAIS 2006), Proceedings

Patch Learning for Incremental Classifier Design
Rudy Sicard, Thierry Artières, and Eric Petit
ECAI 2006, 17th European Conference on Artificial Intelligence, August 29 - September 1, 2006, Riva del Garda, Italy, Including Prestigious Applications of Intelligent Systems (PAIS 2006), Proceedings

Automatic learning of domain model for personalized hypermedia applications
Hermine Njike Fotzo, Thierry Artières, Patrick Gallinari, Julien Blanchard, and Guillaume Letellier
IJCAI-05, Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence, Edinburgh, Scotland, UK, July 30 - August 5, 2005

A Model-Based Approach to Sequence Clustering
Henri Binsztok, Thierry Artières, and Patrick Gallinari
Proceedings of the 16th Eureopean Conference on Artificial Intelligence, ECAI'2004, including Prestigious Applicants of Intelligent Systems, PAIS 2004, Valencia, Spain, August 22-27, 2004

Classification and Tracking of Hypermedia Navigation Patterns
Patrick Gallinari, Sylvain Bidel, Laurent Lemoine, Frédéric Piat, and Thierry Artières
Artificial Neural Networks and Neural Information Processing - ICANN/ICONIP 2003, Joint International Conference ICANN/ICONIP 2003, Istanbul, Turkey, June 26-29, 2003, Proceedings

Strategies for Combining On-line and Off-line Information in an On-line Handwriting Recognition System
Nadji Gauthier, Thierry Artières, Patrick Gallinari, and Bernadette Dorizzi
6th International Conference on Document Analysis and Recognition (ICDAR 2001), 10-13 September 2001, Seattle, WA, USA

Sentence Recognition through Hybrid Neuro-Markovian Modeling
Sanparith Marukatat, Thierry Artières, Patrick Gallinari, and Bernadette Dorizzi
6th International Conference on Document Analysis and Recognition (ICDAR (2001), Seattle, USA

Multi-Modal Segmental Models for On-Line Handwriting Recognition
Thierry Artières, J.-M. Marchand, Patrick Gallinari, and Bernadette Dorizzi
15th International Conference on Pattern Recognition, ICPR'00, Barcelona, Spain, September 3-8, 2000.

Automatic contour extraction in images using a 2-D hidden Markov model
Olivier Gérard, Florence d'Alché-Buc, Sherif Makram-Ebeid, Patrick Gallinari, and Thierry Artières
ICANN'99 - 9th International Conference on Artificial Neural Networks, Edinburgh, United Kingdom

Multi-state predictive neural networks for text-independent speaker recognition
Thierry Artières and Patrick Gallinari
Fourth European Conference on Speech Communication and Technology, EUROSPEECH 1995, Madrid, Spain

Neural models for extracting speaker characteristics in speech modelization systems
Thierry Artières and Patrick Gallinari
Third European Conference on Speech Communication and Technology, EUROSPEECH 1993, Berlin, Germany, September 22-25, 1993