

LUDOVIC ARNOLD

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PUBLICATIONS

Learning Deep Representations – toward a new understanding of the deep learning paradigm.
Arnold, L. (2013). Ph.D. Thesis.

Layer-wise Learning of Deep Generative Models.
Arnold, L., Ollivier, Y. (2012). ArXiv e-prints.

Information-Geometric Optimization Algorithms: A Unifying Picture via Invariance Principles.
Arnold, L., Auger, A., Hansen, N., and Ollivier, Y. (2011). ArXiv e-prints.

An Introduction to Deep Learning.
Arnold, L., Rebecchi, S., Chevallier, S., and Paugam-Moisy, H. (2011). Paper presented at the European Symposium on Artificial Neural Networks (ESANN 2011).

Unsupervised Layer-Wise Model Selection in Deep Neural Networks.
Arnold, L. and Paugam-Moisy, H. and Sebag, M. (2010). European Conference on Artificial Intelligence (ECAI).

Optimisation de la Topologie pour les Réseaux de Neurones Profonds.
Arnold, L. and Paugam-Moisy, H. and Sebag, M. (2010). Reconnaissance de Formes et Intelligence Artificielle (RFIA).

EXPERIENCE

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|------------------------|---|-----------------------------|
| Ph.D. | Paris-Sud, LIMSI/LRI, Orsay, France | January 2010 - April 2013 |
| | INRIA (TAO) | |
| | Deep architectures for computational vision. | |
| Research Intern | LSVN (LAVAL Univ.) Québec, Canada | April 2011 - September 2011 |
| | An Information Geometric Approach to Sparsity in RBMs. | |
| Research Intern | INRIA (TAO) Saclay, France | April 2009 - December 2009 |
| | Experimental study of the topology of Deep Neural Networks. | |
| Research Intern | IUCAA Pune, India | June 2008 - August 2008 |
| | Application of image processing and machine learning techniques for morphological galaxy classification. | |
| Research Intern | INRIA-FUTURS Saclay, France | February 2007 - June 2007 |
| | Implementation of algorithms on graphs and formal proof of their correctness using the COQ proof assistant. | |

TEACHING

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|---------------------------|--|-------------|
| Teaching Assistant | Paris-Sud Univ., Orsay, France | 2009 - 2012 |
| | – Event driven programming and Visual Basic, | |
| | – Introduction to C++ programming, | |
| | – Unix System programming. | |

EDUCATION

M.Sc. in Computer Science (2nd part). Paris-Sud University, Orsay, France	2008 - 2009
M.Sc. in Engineering. ESIEA, Paris, France. a French engineering school delivering a five-year degree comparable to a Master of Science.	2007 - 2009
M.Sc. in Computer Science (1st part). Paris-Sud University, Orsay, France	2006 - 2007
Bachelor's Degree in Computer Science. Paris-Sud University, Orsay, France	2002 - 2006

SKILLS

Programming

C/C++, PYTHON, SCALA : very well known and used on a regular basis.

Systems

Linux administration : Experience running various Linux distributions: Gentoo, Debian, Ubuntu, ArchLinux and many more.

Languages

French : Native tongue.

English : Spoken and written fluently.

COMMUNITY INVOLVEMENT

- Reviewer for the *Pattern Recognition* international journal.
- Reviewer for the *International Conference on Learning Representations*.
- Participation in the ANR ASAP (Deep Learning) Project.
- Organization of the ESANN'2011 Special Session on Deep Networks.