

# Yann Esposito

Machine Learning Expert

✉ Please, contact me by email  
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## Professional experience

from 2007 *Consultant*, Air France (AsteK), Sophia Antipolis.  
2006-2007 *Post Doctorant*, Laboratoire Hubert Curien, Saint-Etienne.  
2004-2005 *ATER (enseignement et recherche)*, Université de Provence, Marseille.  
2001-2004 *Moniteur (enseignant & chercheur)*, Université de Provence, Marseille.  
1999-2000 *Vacataire*, Université Aix-Marseille III, Marseille.  
avant 1999 *Misc. summer jobs*, (Eurocopter, Naphtachimie, LCL...) near Marseille.

## Scientific applications

SEDiL (Stochastic Edit Distance Learning), Similarity matrices inference.

Public: biologists

Website : <http://yann.esposito.free.fr/sedil.php>

DEES, Probabilistic Automata Inference.

Public: computer scientists

Website : <http://yann.esposito.free.fr/dees.php>

## Education

2004 *Ph.D. in Computer Science*, Université de Provence, Marseille.  
2001 *DEA in Computer Science*, Université de la Méditerranée, Marseille.  
2000 *Maîtrise d'Informatique (mention bien)*, Université de Provence, Marseille.  
1999 *Licence d'Informatique (mention bien)*, Université de Provence, Marseille.  
1998 *DEUG MIAS option mathématiques*, Université de Provence, Marseille.  
1995 *BAC S option mathématiques*, Lycée P. Langevin, Martigues.

## Projects

UNIVERSITY

2006 Conception of an anonymous network protocol

- 2003-2004 ACI "Masses de Données" Genoto3d  
Machine Learning Applied to tertiary structure of proteins.  
2003 Managed a Computer Science conference web site (CAp'03).

#### SHARED ON THE INTERNET

- 2007-2009 *YPassword*, password management widget  
2007 *YClock*, Mac OS X Screensaver  
2003-2004 *metapoSt* package to draw probabilistic automata  
2003-2004 *YAquaBubbles*, Mac OS X screensaver

### Competences

Object Languages	C++, Java, Python, Perl, Objective-C
API	C++(STL), Java (Swing/Java 2D), Python (PySQLite, wxPython, crypto, socket), Objective-C (Cocoa, Core Data, Quartz Composer)
Other	C, camL
Unix	bash, zsh, awk, L <sup>A</sup> T <sub>E</sub> X, X <sub>Y</sub> L <sup>A</sup> T <sub>E</sub> X, ConTeXt, MetapoSt
Methods	UML, Merise
IDE	XCode, Environnement Unix
Data Mining	Entreprise Miner (SAS), weka, <i>svm<sub>light</sub></i>
Norms	HTML, XHTML, CSS, SVG
Version Control	GIT, BZR, subversion, cvs
Environments	Windows, Unix/Linux (Solaris, Ubuntu, Debian), Mac OS X
IHM	Java Swing, wxPython, Cocoa
Protocols	Ethernet, TCP/IP, UDP, FTP, DNS, DHCP
Tools	ifconfig, tcpdump, wireshark (ehtereal), lsof...
Security	AES, DES, 3DES, Codes de Hamming, PGP, GPG, réseaux anonymes...
Database	MySQL, PostgreSQL, SQLite

### Publications

#### THESIS

- 2004 *Contribution à l'inférence d'automates probabilistes*,  
Y. Esposito  
**Université de Provence**, under the direction of F. Denis.

INTERNATIONNAL JOURNAL

- 2008 *On Rational Stochastic Languages*,  
F. Denis, Y. Esposito,  
**Fundamenta Informaticæ**, vol. 86, (1-2), p. 41-77, 2008.
- 2005 *Links between Probabilistic Automata and Hidden Markov Models: probability distributions*,  
P. Dupont, F. Denis and Y. Esposito,  
**Pattern Recognition**, Special Issue on Grammatical Inference Techniques & Applications,  
Vol 38/9, pp 1349-1371, 2005.

INTERNATIONNAL CONFERENCES

- 2008 *SEDiL: Software for Edit Distance Learning*,  
Boyer L, Esposito Y , Habrard A , Oncina J , Sebban M  
**ECML 2008**, (accepted paper) Proceedings of the 19th European Conference on Machine Learning.
- 2006 *Using Pseudo-Stochastic Rational Languages in Probabilistic Grammatical Inference*,  
A. Habrard, Francois Denis, and Y. Esposito  
**ICGI 2006**, LNCS 4291, 112-124.
- 2006 *Learning Rational stochastic languages*,  
F. Denis, Y. Esposito, A. Habrard  
**COLT 2006**, 19th Annual Conference on Learning Theory, LNAI 4005, 274-288, 2006.
- 2004 *Learning classes of Probabilistic Automata*,  
F. Denis, Y. Esposito  
**COLT 2004**, 17th Annual Conference on Learning Theory, LNAI 3120, 124-139, 2004.
- 2003 *Residual languages and probabilistic automata*,  
F. Denis, Y. Esposito  
**ICALP**, p. 452-463, LNCS 2719.
- 2002 *Learning probabilistic residual finite state automata*,  
Y. Esposito, Aurélien Lemay, F. Denis, Pierre Dupont  
**ICGI 2002**, 6th International Colloquium on Grammatical Inference, LNAI 2484, 77-91, 2002.

NATIONAL JOURNAL

- 2007 *Identification à la limite d'automates probabilistes résiduels avec probabilité un*,  
F. Denis, Y. Esposito  
**JEDAI**, Vol. 6, Number 44, <http://jedai.afia-france.org/detail.php?PaperID=44>.

## NATIONAL CONFERENCES

- 2004 *Identification in the limit of Probabilistic Non Deterministic Automata and Undecidable problem for Multiplicity Automata*,  
F. Denis, Y. Esposito  
**CAP'04**, Presses Universitaires de Grenoble, 81-96, 2004.
- 2003 *Identification à la limite d'automates probabilistes avec probabilité de 1*,  
F. Denis, Y. Esposito  
**CAP'03**, Presses Universitaires de Grenoble, 249-264, 2003.

## ONLINE ARTICLES

- 2006 *Rational stochastic languages*,  
F. Denis, Y. Esposito,  
**Technical Report**, <http://fr.arxiv.org/abs/cs.LG/0602093>.

## WORKSHOP

- 2005 *Rational Stochastic Languages*,  
F. Denis, Y. Esposito,  
**TAGI 2005**, Theoretical Aspect of Grammar Induction.

## Teaching

Total	370 hours
Discipline	<i>Data Mining, Machine Learning, Professional softwares (project management), operationa research, Algorithmic, C Language, C++, System, Network, Computer Science Initiation.</i>
Level	BAC+1 → BAC+5
Public	DEUG (math., physique, bio), Licence, Licence Pro, Master, Master pro

Look at <http://www.lif.univ-mrs.fr/-esposito>. for more details