

## Alaa E. Abi-Haidar (1982-)

---

:snips  
Senior Data Scientist  
18 rue Saint Marc  
75002, Paris

ACASA. LIP6 . UPMC  
Couloir 25-26 . Bureau 521  
4 Place Jussieu  
75005 Paris

(T): +33 1 42 17 65 15  
(F) +33 1 42 17 74 62  
[alahay@alahay.org](mailto:alahay@alahay.org)  
[www.alahay.org](http://www.alahay.org)

### Education

**Ph.D.** in Informatics, Complex Systems Track (Major), Indiana University, 2011  
Advisor: Luis M. Rocha. Committee: Filippo Menczer, Predrag Radivojac et Alessandro Flammini

**Ph.D.** in Computer Science (Minor), Indiana University, 2011

**M.S.** in Computer Science, Indiana University, 2005

**B.S.** in Computer Science, American University of Beirut, 2003

### Teaching and Supervising Experience

Chargé de TD/TME (equivalent to Assistant Instructor) and project supervisor for the masters level Université Pierre et Marie Curie UPMC 2011-2012  
Assistant instructor for the course of Methods of Artificial Intelligence (MIA) for the master level at UPMC.  
Project supervisor for a course in artificial intelligence on information extraction from immune literature for the masters 1 level (3 students involved).  
Project supervisor for a course in immunology of systems on the history of immunology using information extraction from immune literature for the masters 1 level (3 students involved).

Assistant Instructor 2008–2011  
Indiana University Indiana University  
Assistant Instructor for the following courses: Simplicity of Complexity (I400), Informatics Management (I502), Introduction to Programming (I210) and Information Representation (I308)

### Research Experience

Senior Data Scientist 2016 -  
Fortia (Financial Solutions) 17 Ave George V, Paris 75008  
Named Entity Recognition, Natural Language Processing and some computer vision using Machine learning and Deep Learning for Fintech and regtech applications! [fortia](http://fortia.com).

Senior Data Scientist 2016 -  
:snips 18 rue st Marc, Paris 75002  
Big Data, Named Entity Recognition, Natural Language Processing and Deep Learning for ubiquitous and mobile development. [snips](http://snips.com).

Postdoctoral Research Fellow 2012 - 2016  
UPMC and CNRS LIP6 . CNRS . UPMC . UMR 7606. Paris  
- Supervised and Unsupervised Data Mining, Machine Learning and Information Extraction (Named Entity Recognition and Event Mining) with several partners:

- Bioliterature Mining from PubMed, Gene Ontology and the Immune Literature for parametric extraction and systems biology modeling in collaboration between I2D3 at Hopital Pitie-Salpetriere/CNRS and ACASA at LIP6 (Paris 6).
- Named entity recognition and disambiguation of recently OCR-ised / digitized newspapers from the 19th and 20th century for indexing and reading enhancement in collaboration with the Bibliotheque Nationale de France (BnF) and Europeana Newspaper in collaboration with the LiP6 of Paris 6.
- Named entity recognition and e-reading enhancement with several Editors and Publishers such as LE ROBERT, NATHAN, JOUVES, TRALLALLAIRES on a project called LOCUPLETO that is in collaboration with the LiP6 in Paris 6.
- Named entity recognition and minimal semantic and stylistic analysis of French Literature on the Labex Obvil project.
- Named entity recognition and social recommendation of Manga (Japanese Comics) for the iManga project with Actialuna that is in collaboration with the LiP6 in Paris 6. modeling at [ACASA au LIP6](#) and in collaboration with the previous lab.

Invited Researcher 2011 - 2012  
 BnF I2D3 . CNRS . UPMC . UMR 7211. Paris

I am following up on our research on named entity recognition, analysis and visualisation of massive amounts of recently digitised structured and unstructured texts. We have already developed several supervised and unsupervised methods that tackle this problem. We are currently testing and evaluating their performance and scalability while pioneering crowd-sourcing methods for massive annotations. .

Postdoctoral Research Fellow 2011 - 2012  
 UPMC and CNRS I2D3 . CNRS . UPMC . UMR 7211. Paris

Agent-Based modeling of T-cell Dynamics, emergence, immergence to understand complex systems and repertoire diversity in addition to data mining and information retrieval at [I3-Immuno.fr](#).

Research Assistant 2006–2008  
 Luis M. Rocha Indiana University

Immune-inspired spam detection, bioliterature mining and classification, and social dynamics at [CASCI](#).

Research Assistant 2006–2008  
 Luis M. Rocha Instituto Gulbenkian de Ciência

The BioCreAtIvE bioliterature text mining challenge and T-cell cross-regulation at the [FLAD Collaboratorium](#) .

Research Assistant 2005  
 Katy Börner Indiana University

Information visualization of taxonomy data.

Research Assistant 2004–2006  
 Peter J. Ortoleva Indiana University

PHP and SQL Development, data visualization, web and data mining, data curation, Transcriptional Regulatory Networks, and Gene Ontology at [CCVT](#).

Research Assistant 2003

Rabih Sultan American University of Beirut  
Image processing using Boreland C++ and software design, web design [chemistry web-site](#) at AUB.

**Employment** LebSocrates Beirut, Lebanon  
Head of Programming and Web Design 2001–2003  
Computer sales, maintenance, software development, and web design.

**Programming Skills** Expert: R, PHP, Python, SQL, HTML, L<sup>A</sup>T<sub>E</sub>X, Linux, Windows, Flash, VI, NetLogo  
Intermediate: Matlab, OpenGL, VTK, JavaScript, Java, C, C++ , CSS  
Basic: Perl, FORTRAN

**Software Skills** Expert: MaYA, GIMP, Microsoft Office and OpenOffice, Adobe Photoshop, Linux and Windows OS, Windows Movie Maker  
Intermediate: Poser, AutoCAD, 3DStudio MAX, LightWave, Bryce, Cinema 4D, Corel Draw Studio, Borland CBuilder, Apache, MySQL , Macromedia Flash

**Language Proficiency** Fluent<sup>1</sup>: English, Italian, French, Levantine Arabic, Portuguese, Spanish, Modern Standard Arabic  
Basic: Modern Greek, Biblical Hebrew, Armenian

**Extradisciplinary Activities** Artist [Coffeographer and Photographer](#) with 6 exhibits in the USA and three exhibits in Paris, one in Galerie Thuillier, 75003.  
Founder and organizer of the French Table, *L'hebdofrancofolie*, at Indiana University in Bloomington, IN (2004–2008)  
Founder of several non-profit activist organisations such as 1001faces.org, passasmile.org, etc.  
Free-time fashion photographer for [UPashion](#) (2011)

**Awards** Winner of best poster at the 1st Portuguese Forum on Computational Biology (FPBC 2008)  
Awarded internships at the Instituto Gulbenkian de Ciência (IGC) in 2006, 2007, 2008 and 2010.  
Awarded Bursaries to attend AlifeX and ICARIS2010.  
Winner of the best paper award in the International Conference of Artificial Immune Systems (ICARIS 2010)  
Awarded a 1000 Euro grant from CFCAM and a 2000 Euro grant from the RNSC for the [ImmunocomplexiT](#) conference proposal in 2012 to co-organize the Second ImmunocomplexiT Conference.

---

<sup>1</sup>Speaking and Writing

## Membership

Member of the Scientific Council of the Labex OBVIL at the Sorbonnes 2014-2017

Member of the Scientific Council of the Li-fi community

Program committee member of International Conference of Artificial Immune Systems (ICARIS) 2012 and ICARIS 2013

Program committee member of the European Conference of Artificial Life (ECAL) 2013, Taormina, Italy

Co-organizer of the Massive Data Flow workshop at the Institute of Complex Systems in Paris, France.

Program committee member of the International Society of Molecular Biology (ISMB) 2014 and co-organizer of the Art and Science Exhibit, Boston

Program committee member of the Artificial Life Alife 2014 and panel speaker for the Art and Science Exhibit, New York

Program committee of the Genetic and Evolutionary Computation Conference (GECCO 2014) track of Artificial Immune Systems.

Steering committee member of the Pavia Art and Science Festival 2014 <http://www.hypataiae.com/> and organizer of the photo competition.

TEDxIHECParis Partner

## Most Recent Publications

A. Abi-Haidar, O. Albertini and J.G. Ganascia. A simple method for named entity recognition for English and French. Wiles DMKD. [in press]

M. Riguet and A. Abi-Haidar. 2017. Faire figure d'autorité : analyse de réseaux appliquée au discours Authority Figures: Social Network Analysis applied to Literature <https://www.openscience.fr/Faire-figure-d-autorite-l-analyse-de-reseaux-appliquee-au-discours>

Marine Riguet and Alaa Abi Haidar. Autorités et réseaux d'influence dans la critique littéraire de la seconde moitié du XIXe siècle, Estrema : interdisciplinary magazine of humanities, n8, 2016, p. 195-220. URL : <http://www.estrema-cec.com/wp/?p=562>.

Alaa Abi-Haidar, Bin Yang, Jean-Gabriel Ganascia [2016]. Mapping the First World War Using Interactive Streamgraphs. *Sociology and Anthropology* Vol. 4(1), pp. 12 - 16 DOI: 10.13189/sa.2016.040103

Abi Haidar, Alaa; Ganascia, Jean-Gabriel [2016]. Automatic Detection of Characters in Case Insensitive Text in Comics. *Digital Humanities DH/ADHO* July 2016 Krakow, Poland

Abi Haidar, Alaa; Yang, Bin; Ganascia, Jean-Gabriel [2015]. Extracting and Visualizing Named Entities using Interactive Streamgraphs A Case Study on First World War Data. *Digital Humanities CSDH / SCHN*, Canada 2015.

C. Brando, F. Frontini, A. Abi Haidar and J.G. Ganascia. [2015] Reconnaissance de noms : adaptation au domaine de la littérature française du XIXe siècle. *JLC* 2015 Orleans, 2-4 Sept 2015.

A. Abi-Haidar, M. Tufis, J.G. Ganascia [2014]. *From Inter-Annotation to Intra-Publication Inconsistency*. *Proceedings of Inconsistency Robustness 2014*. Stanford University, USA.

Y. Moallem, A. Abi-Haidar and J.G. Ganascia [2014]. *Unsupervised Named Entity Recognition and Disambiguation: An Application to Old French Journals*. Proceedings of ICDM 2014. St. Petersburg, Russia.

A. Abi-Haidar, A. Six, V. Thomas-Vaslin, J.G. Ganascia. [2013]. *The Artificial Immune Systems Domain Identifying Progress and Main Contributors using Publication and Co-Authorship Analyses*. Advances in Artificial Life, ECAL. Vol. 12. 2013.

A. Abi Haidar. *Adaptive Immune-Inspired Text Classification*. Adaptive Spam Detection and Bio-Medical Article Classification Inspired by T Cell Cross-Regulation in the Immune System. LAP Lambert Academic Publishing ( 2013-03-07 ). ISBN-13: 978-3-659-36068-8

A. Abi-Haidar [2011]. *An adaptive document classifier inspired by T-Cell cross-regulation in the immune system* (PDF). PhD Dissertation, Indiana University.

A. Abi-Haidar and Luis. M. Rocha [2011]. *Collective Classification of Textual Documents by Guided Self-Organization in T-Cell Cross-regulation Dynamics*. Journal of Evolutionary Intelligence. Evolutionary Intelligence, DOI: 10.1007/s12065-011-0052-5

A. Loureno, M. Conover, A. Wong, F. Pan, Alaa Abi-Haidar, A. Nematzadeh, H. Shatkay, and L.M. Rocha [2010]. *Testing Extensive Use of NER tools in Article Classification and a Statistical Approach for Method Interaction Extraction in the Protein-Protein Interaction Literature*. Proceedings of the BioCreative III Workshop 2010, Bethesda, Maryland, September 13-15, 2010.

A. Abi-Haidar and L.M. Rocha [2010]. *Biomedical Article Classification Using an Agent-Based Model of T-Cell Cross-Regulation*. In: Artificial Immune Systems: 9th International Conference, (ICARIS 2010). Winner of Best Paper Award. E. Hart et al (Eds.) Lecture Notes in Computer Science. Springer-Verlag, 6209, 237-249.

A. Abi-Haidar and L.M. Rocha [2010]. *Collective Classification of Biomedical Articles using T-Cell Cross-regulation*. In: Artificial Life XII: Twelfth International Conference on the Simulation and Synthesis of Living Systems. H. Fellermann et al et al (Eds.). MIT Press, pp. 706-713.

A. Kolchinsky, A. Abi-Haidar, J. Kaur, A.A. Hamed and L.M. Rocha [2010]. *Classification of protein-protein interaction full-text documents using text and citation network features*. IEEE/ACM Transactions On Computational Biology And Bioinformatics, 7(3):400-411.

A. Kolchinsky, A. Abi-Haidar, J. Kaur, A.A. Hamed and L.M. Rocha [2009]. *Classification of protein-protein interaction documents using text and citation network features*. Proceedings of the BioCreative II.5 Workshop 2009: Special Session on Digital Annotations, Madrid, Spain, October 7-9, 2009. pp 34.

A. Abi-Haidar and L.M. Rocha [2008]. *Adaptive Spam Detection Inspired by a Cross-Regulation Model of Immune Dynamics: A Study of Concept Drift*. In: Proceedings of 7th International Conference on Artificial Immune Systems (ICARIS 2008). Doheon Lee, Peter Bentley, Sungwon Jung (Eds.) Lecture Notes in Computer Science. Springer-Verlag, Volume 5132/2008 36-47 doi:10.1007/978-3-540-85072-4.

A. Abi-Haidar and L.M. Rocha [2008]. *Adaptive Spam Detection Inspired by the Immune System*. In: Artificial Life XI: Eleventh International Conference on the Simula-

tion and Synthesis of Living Systems. S. Bullock, J. Noble, R. A. Watson, and M. A. Bedau (Eds.). MIT Press, pp. 1-8.

A. Abi-Haidar, J. Kaur, A. Maguitman, P. Radivojac, A. Retchsteiner, K. Verspoor, Z. Wang, and L.M. Rocha [2008]. *Uncovering protein interaction in abstracts and text using a novel linear model and word proximity networks*. Genome Biology 2008, 9(Suppl 2):S11doi:10.1186/gb-2008-9-s2-s11.

A. Abi-Haidar, J. Kaur, A. Maguitman, P. Radivojac, A. Retchsteiner, K. Verspoor, Z. Wang, and L.M. Rocha [2007]. *Uncovering Protein-Protein Interactions in the Bibliome*. Proceedings of the Second BioCreative Challenge Evaluation Workshop (ISBN 84-933255-6-2).

Qu, K., A.E. Abi Haidar, J. Fan, D. Basu, G. Lin, L. Ensman, M. Jolly, P. Ortoleva. [2007]. *Cancer Onset and Progression: A Genome-Wide, Nonlinear Dynamical Systems Perspective on Onconetworks*. Journal of Theoretical Biology. Volume 246, Issue 2, 21 Pages 234-244

Sun, J., K. Tuncay, A.Abi Haidar, F. Stanley, M. Trelinski, and P. Ortoleva. [2007]. *Transcriptional Regulatory Network Discovery via Multiple Method Integration: Application to E.coli K12*. Algorithms in Molecular Biology, 2:2 doi:10.1186/1748-7188-2-2

Kagan Tuncay, Lisa Ensman, Jingjun Sun, Alaa Abi Haidar, Frank Stanley, Michael Trelinski and Peter Ortoleva [2006]. *Transcriptional regulatory networks via gene ontology and expression data*. In Silico Biology 7, 0003

R.Sultan, Z. Shreif, Lara, A. Abi-Haydar [2004]. *Taming ring morphology in 2D Co(OH)<sub>2</sub> Liesegang patterns*. Phys. Chem. Chem. Phys., 6, 3461 - 3466

**Talks and Posters** Alaa ABI HAIDAR, Jean-Gabriel GANASCIA [2014]. Reconnaissance des entites nommees, application sur la literature Francaise. ACFAS. 13-15 Mai 2014. Montreal

Alaa ABI HAIDAR [2013]. Fractal Beauty. International Society of Molecular Biology (ISMB) Art and Science Exhibition. 19-21 July 2013. Berlin

Alaa ABI HAIDAR [2012]. Data Mining: What Can we Learn from the Immune Literature ?. October 23th 2012. Institut des Systemes Complexes Paris Ile-de-France. Complexity of the Immune system: from multi-scale data mining and integration to lymphocyte dynamics and repertoires modeling.

Alaa ABI HAIDAR, Julien VIBERT, Maxime CLEMENT, Romain Gugert, David KRIEF, Adrien SIX, Veronique THOMAS-VASLIN, Jean-Gabriel GANASCIA [2012]. Lymphocyte Dynamics Event Mining from Immune Literature. In proceedings of the International Conference of Artificial Immune Systems ICARIS 2012. Taormina, Italy 2012. Oral presentation

Alaa ABI HAIDAR, Adrien SIX, Veronique THOMAS-VASLIN, Jean-Gabriel GANASCIA [2012]. How are we doing in the AIS domain?. In proceedings of the International Conference of Artificial Immune Systems ICARIS 2012. Taormina, Italy 2012. Oral presentation

Julien VIBERT, Alaa ABI HAIDAR, Phuong PHAM, Adrien SIX, Veronique THOMAS-VASLIN [2012]. A mathematical model of thymocyte proliferation reveals differences in T cell dynamics according to age and genetic background. In proceedings of the International Conference of Artificial Immune Systems ICARIS 2012. Taormina, Italy 2012. Oral presentation

Alaa Abi-Haidar [2011]. Data mining and information visualization: a new approach to capitalize from on line public opinion trends (Invited Speaker). Club of Venice Plenary 2011. Venice, Italy.

Alaa Abi-Haidar and Luis Rocha [2011]. Collective Classification of Textual Documents by Guided Self-Organization in T-Cell Cross-Regulation Dynamic (Contributed talk). NetSci-2011: International Conference on Network Science and Its Applications. Budapest, Hungary.

Alaa Abi-Haidar and Luis Rocha [2010]. Collective Classification of Textual Documents Using Self-Organized Cross-Regulatory T-cells in the Adaptive Immune System (Contributed talk). GSO2010 : Guided Self-Organization 2010. Bloomington, IN.

Alaa Abi-Haidar and Luis Rocha [2008]. Adaptive Spam Detection Inspired by a Cross-Regulation Model of Immune Dynamics (Poster). 1st Portuguese Computational Biology Forum (FPBC 2008). Winner of Best Poster Award.

**Selected Press and IGC News (17/08/2010) [Best paper awarded to IGC scientist at the 9th ICARIS](#)  
Media Releases**

BBC Digital Planet Interview (2008) .

Telegraph (05/08/2008) [Can we make software that comes to life?](#)

Science Daily (06/08/2008) [ALife Conference To Reveal Bio-inspired Spam Detection](#)

Silicon Republic (06/08/2008) [Fighting spam and thinking robots – bio-inspired AI](#)

Portuguese Press (07/08/2008) Correio Manhã (p20 ext136180), Diário Notícias (p15 ext79040), Jornal Notícias (p5,28 ext150515), Público (p8 ext75000)

CiênciaHoje (11/08/2008) [Cientistas portuguesas criaram aspirador de lixo electrónico](#)

Tecnomania (12/08/2008) [Podemos hacer software que nazca a la vida?](#)

L'atelier (22/08/2008) [Spams et bactéries : même combat !](#)

**Extracurricular  
Press and Media  
Releases**

Telegraph (09/08/2008) [Spore: The science of Spore](#)

Indiana Daily Student (02/03/10) [Local artist uses coffee to make brewed art](#)

Indiana Daily Student (03/03/10) [Student transforms coffee into surrealist art](#)

Lost At E Minor (13/2/11) [New Photography/Alahay](#)

DIYphotography (11/12/12) [Can Bokeh Be Used for Watermarking Videos?](#)

MultiDimension Paris (13/06/13) [The {eYe} Opening Exhibition](#)

Cite Universitaire Paris (2015) [AI Citizen of the World and Bio-Informatician Artist](#)