# CURRICULUM VITAE

## PERSONAL INFORMATION

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| Name | XAVIER, Amatriain |
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| | La Garriga, 08530, Spain |
| Telephone | +34–628599948 |
| E-Mail | xavier@amatriain.net |
| Nationality | Spanish |
| Date of birth | 06-23-1973 |
| Family situation | Married, two children (ages 7 and 11) |

▷ Summary

I am a **researcher** in the areas of Information Retrieval and Data Mining, currently working in Telefonica Research, Barcelona. My current research focus is on **Recommender Systems** and neighboring technologies such as **User Modeling** and **Social Networks**. I am interested in applied research as well as systems and software engineering and technical management. I have authored more than 50 publications and several patents.

Previously to my current position, my focus was on Multimedia and Immersive Systems and I worked as Research Director for CREATE (Center for Research in Electronic Art Technology) and Associate Director of the Media Arts and Technology Initiatives, both at the University of California Santa Barbara, where I directed the Allosphere project.

Apart from my research, I am interested on **research and technical management**, software development and **agile** methods. I am the main proponent of the Agile Research Manifesto.

After studying Telecommunications Engineering – roughly equivalent to ECE –, I obtained a PhD on Computer Science and Communications from the Universitat Pompeu Fabra (Barcelona, Spain).

As a **university professor** I have lectured on Software Engineering, Information Retrieval, Information Systems for managers, and different courses related to Multimedia and Audio.

I have experience in managing teams, especially using agile methods such as **eXtreme Programming** and **Scrum**.

I am passionate about web and **digital culture** in general and a convinced advocate of **Open Source** methods and principles.

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| Main research areas | information retrieval, recommender systems, web science, social networks, user modeling, data mining, personalization, multimedia systems, audio and music processing |

# Research and Research Management

▷ Period
○ Employer

2007–

**Telefonica Research**
177, Via Augusta, Barcelona, 08021, Spain

▷ 2007 until Now
○ Position
○ Main responsibilities

Web Science, Recommender Systems, and User Modeling
Research Scientist
Telefonica is one of the largest Telecommunications Company in the World. As a Research Scientist in Telefonica Research I have led the area of Web Science with a specific focus on Social Networks and Recommender Systems. During this time I have led postdoc researchers and interns from around the world. My main goal as a researcher was to obtain top-tier publications in the field (see Publication list below) and generate internal IP in the form of patents and tech transfer. I have also acted as a high-profile consultant to development teams dealing with projects in those same areas.

Furthermore, I have also become involved in many different *horizontal* activities in the company:

- Suggested and promoted the use of Agile Methodologies (such as eXtreme Programming and Scrum) in the company. As such I then became part of the Methodologies Committee.

- Founder member of the Software Architecture Special Interest Internal Group, where I acted as a consultant. Amog other activities, I was in charge of assessing the maturity level of software architects in Telefonica R&D.

- Member of the Education Committee, where strategies for internal courses were discussed

- Involved in many activities related to Innovation and Strategic Planning. For instance, I was part of the Telefonica *Ambassadors For Innovation*, a team of 400 people selected from the whole Telefonica Corporation to discuss and promote Innovation.

- Member of the Selection Committee for high-profile software engineers or architects. In my role I inteviewed candidates and also proposed a methodology for interviews.

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| ▷ Period | 2006–2007 |
| ○ Employer | **University of California Santa Barbara** |
| ▷ 2006 until 2007 | The Allosphere Project |
| ○ Position | Associate Director for the Media Arts and Technology Initiatives |
| ○ Main responsibilities | Under direct supervision of the Director, responsible for industry relation, grant writing, facility coordination and PR for a $40 million multimedia research center to be hosted in the California Nanosystems Institute. Direct supervision of technical issues related to one of the largest immersive environments in the world, an spherical building called the Allosphere http://www.allosphere.ucsb.edu. |
| ▷ Period | 2005–2007 |
| ○ Employer | **University of California Santa Barbara** |
| ▷ 2005 until 2007 | Center for Research in Electronic Arts and Technology |
| ○ Position | Research Director |
| ○ Main responsibilities | Direct responsability over research coordination, planning and facility management for this research center that includes 3 different labs/studios and around 20 different researchers http://www.create.ucsb.edu. |
| ▷ Period | 1999–2005 |
| ○ Employer | **Universitat Pompeu Fabra** |
| ▷ 1999 until 2005 | Music Technology Group |
| ○ Position | Researcher/Project Manager |
| ○ Main responsibilities | Working under direct supervision of the head of the group, Dr. Xavier Serra, I was responsible for teams of up to 8 researchers. I was one of the 5 members in the MTG Management Board. Project manager developer and designer of the CLAM framework for audio and music applications http://clam-project.org. Among others, I participated, always with managing responsabilities, in the following publicly founded projects: SIMAC http://www.semanticaudio.org, AGNULA http://www.agnula.org, CUIDADO, TABASCO. I also participated in different projects for companies such as Yamaha Japan. |

# Teaching

▷ Period | 2007–
○ Employer | **EADA Business School, Barcelona (SPAIN)**

▷ 2010 until Now | Information Systems
○ Position | Associate Professor
○ Main responsibilities | Associate professor teaching Information Systems and Technology to prospective managers and business leaders enrolled in full or part-time MBA's in one of the world's top 100 Business Schools.

▷ Period | 2007-2010
○ Employer | **Universitat Pompeu Fabra**, Barcelona (SPAIN)

▷ 2007 until 2010 | Software Engineering and Information Retrieval
○ Position | Associate Professor
○ Main responsibilities | Associate professor and main coordinator of the undergraduate courses on Software Engineering and Information Retrieval. During this time I also directed several student Undergrad, Master and PhD Thesis.

▷ Period | 1999–2005
○ Employer | **Universitat Pompeu Fabra**, Barcelona (SPAIN)

▷ 1999 until 2005 | Software Engineering, Music and Audio Engineering, Programming & Data Structures, Database Programming
○ Position | Assistant Professor
○ Main responsibilities | Assistant Professor at the Computer Science Studies of the Pompeu Fabra University (UPF). Teaching: "Software Engineering" with a focus on Object Oriented Analysis/Design and C++, "Data Structures" and "Database Programming". Also responsible for Master Thesis / Visiting Students. During this time I directed around 15 student Thesis.

# Consulting and others

▷ Period | 2005–2008
○ Employer | **The Sound Guy Inc., Audio Impressions, ...**

▷ 2005 until 2008 | Software Development
○ Main responsibilities | Development of severl digital audio applications such as a cross-platform Audio Processing software plugin based on spectral transformations.

# EDUCATION

▷ Period
○ Acquired qualifications
○ Institute
○ Principal subjects
○ Results

1999–2005
**PhD on Computer Science and Digital Communications**
Universitat Pompeu Fabra (UPF), Barcelona (SPAIN)
Software Engineering, Multimedia Systems
Under the supervision of Dr. Xavier Serra I read my dissertation entitled "An Object-Oriented Metamodel for Digital Signal Processing with a focus on Audio and Music" receiving the highest degree (Cum Laude).

▷ Period
○ Acquired qualifications

○ University
○ Results

1992–1999
Telecommunications Engineering (roughly equivalent to ECE, including Master Degree)
Universitat Politecnica de Catalunya (UPC), Barcelona (SPAIN)
The Final Studies project on a language for describing musical scores and instruments and its corresponding implementation received the highest degree (Cum Laude).

▷ Period
○ Acquired qualifications
○ Results

1988–1992
Secondary School
At the end of the studies received the highest degree (Honour Mention) and an official honor grant to access university in Spain.

▷ Period
○ Subject
○ Summary

1984–1985
Primary School Abroad Studies
Studied sixth grade at the Twin Falls Elementary School, Twin Falls, Idaho (USA).

## SOFTWARE

▷ Period     2009–
○ Name     iPhone geo-personalized Recommendations
○ Summary     A mobile application that provides personalized and geolocated movie recommendations that are playing near current location
○ Tasks     Coordinator of the project.

▷ Period     2009–
○ Name     Music Expert Recommendation
○ Summary     A cross-platform distributed application for recommending music based on personal tastes and critic ratings. Developes in Flex/AIR + Python
○ Tasks     Coordinator of the project.

▷ Period     2002–
○ Name     CLAM (C++ Library for Audio and Music)
○ Summary     A Free framework for developing audio and music applications `http://clam-project.org`. It received the 2006 ACM Award to the Best Open Source Multimedia Software. Since 2007 it is part of the Google Summer of Code Program. It has received grants from several public administrations.
○ Tasks     Coordinator of the project since its inception.

▷ Period     2005–2006
○ Name     Annotator
○ Summary     An application for automatic description extraction from audio sources plus manual annotation and XML output (available as Open Source software through the CLAM webpage).
○ Tasks     Main Developer and software designer

▷ Period     2005–2009
○ Name     Spectral Machine
○ Summary     A crossplatform plugin (VST/AU, Win/OSX) for spectral audio transformations developed for the Soundguy Inc. company.
○ Tasks     Developer and software designer

▷ Period     2006
○ Name     Space
○ Summary     Software for spatializing musical instruments
○ Tasks     Developer and consultant for AudioImpressions

## Publications

**Selected Recent Publications**

▷ Amatriain, X. Pujol, J.M. Jaimes, A. Oliver, N. [2010]

*Data Mining Methods for Recommender Systems* In **Handbook of Recommender Systems**. P. Kantor, F. Ricci, L. Rokach, B. Shapira (ed.). Springer. 2010

▷ A. Karatzoglou, X. Amatriain, L. Baltrunas, N. Oliver [2010]

*Multiverse Recommendation: N-dimensional Tensor Factorization for Context-aware Collaborative Filtering*. in the **2010 ACM Recsys Conference**

▷ J. Bachs, X. Amatriain [2010]

*Geolocated Movie Recommendations based on Expert Collaborative Filtering*. in the **2010 ACM Recsys Conference**

▷ R. Garcia, X. Amatriain [2010]

*Hybrid Methods for Recommending Connections in Online Social Networks*. in the Workshop on Recommender Systems and the Social Web in the **2010 ACM Recsys Conference**

▷ N. Lathia, S. Hailes, L. Capra, and X. Amatriain [2010]

*Temporal Diversity in Recommender Systems*. in the **2010 ACM SIGIR Conference**.

▷ J. Ahn, X. Amatriain [2010]

*Towards Fully Distributed and Privacy-preserving Recommendations via Expert Collaborative Filtering and RESTful Linked Data*. in ACM/IEE Conference on **Web Intelligence**

▷ N. Tintarev, A. Flores, X. Amatriain [2010]

*Off the beaten track - a mobile field study exploring the long tail of mobile tourist recommendations*. in the **2010 Mobile HCI Conference**

▷ Amatriain, X. Arumi, P. [2010]

*Frameworks Generate Domain-Specific Languages : A case-study in the Multimedia Domain*. In **IEEE Transactions of Software Engineering**

▷ Amatriain, X. Lathia, N., Kwak, H. Oliver, N. [2009]

*The Wisdom of the Few. A Collaborative Filtering Approach Based on Expert Opinions from the Web*. **SIGIR'09**

▷ Amatriain, X. Pujol, J.M., Oliver, N. [2009]

*I like it... I like it not: Measuring User Ratings Noise in Recommender Systems*. **UMAP 09 (User Modeling, Adaptation, and Personalization**

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▷ Lathia, N. Amatriain, X. Pujol, J.M. [2009]

*Collaborative Filtering With Adaptive Information Sources*. The 7th Workshop on Intelligent Techniques for Web Personalization & Recommender Systems Held in conjunction with **IJCAI-09**

▷ Amatriain, X. Pujol, J.M. Tintarev, N. Oliver, N. [2009]

*Rate it Again: Increasing Recommendation Accuracy by User re-Rating*. **2009 ACM RecSys Conference**

▷ Amatriain, X. Baltrunas, L. [2009]

*Towards Time-Dependant Recommendation based on Implicit Feedback*. Context-aware Recommender Systems Workshop in **2009 ACM RecSys Conference**

▷ Amatriain X., Kuchera-Morin J. , Hollerer T. , Pope S.T. [2009]

*The Allosphere: An Immersive Multimedia Instrument for Scientific Data Discovery and Artistic Exploration* in **IEEE Multimedia**, 16 (2). April, 2009

▷ J. Wang, X. Amatriain, D. Garcia [2009]

*Combining multi-level audio descriptors via web identification and aggregation*, in **World Wide Web Conference (WWW'09)**.

▷ M. Cha, P. Rodriguez, J. Crowfort, S. Moon, X. Amatriain [2008]

*Watching TV over an IP Network* in Proceedings of the **8th ACM SIGCOMM conference on Internet measurement**

▷ Amatriain, X. [2007]

*A Domain-Specific Metamodel for Multimedia Processing Systems* in **IEEE Transactions on Multimedia**. Volume 9 Issue 6. October 2007

▷ Amatriain, X. [2007]

*CLAM, A Framework for Audio and Music Application Development* in **IEEE Software**. January/February 2007. pp 82-85.

## SELECTED RECENT PROFESSIONAL ACTIVITIES

▷ Period
○ Activity

2010
Invited Talk at Free University of Bolzano to celebrate its 10th anniversary "The Beauty of Computing... with People"

▷ Period
○ Activity

2010
General Conference co-Chair for 4th ACM Conference on Recommender Systems (Barcelona, Spain)

▷ Period
○ Activity

2010
Invited talk to SIGIR 2010 Industry track *Being Social: Research in Context-aware and Personalized Information Access @ Telefonica*.

▷ Period
○ Activity

2008-2010
Senior Program Committee member for the ACM Recommender Systems Conference (Recsys)

▷ Period
○ Activity

2010
Program Committee member for the ACM SIGIR Conference

▷ Period
○ Activity

2009
Invited Talk at Boston University "It's all about the Data. Data-driven approaches to the Recommender Problem"

▷ Period
○ Activity

2008
Invited talk in the "Future of Web Search Workshop" organized by Yahoo!

## RECOMMENDATIONS

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Public recommendations issued by current and former colleagues in LinkedIn can be retrieved in the corresponding LinkedIn page (http://www.linkedin.com/profile/view?id=7453935#recommendations). More formal and individualized recommendations may be available upon request.

## ABILITIES

### COMPUTER SKILLS

- Math/Stats/Machine Learning tools: R, SPSS, Matlab, Octave, Weka, Orange, Torch, libsvm, gnuplot, matplotlib...

- Programming Languages: Proficient C++ programmer, C, Java, Python, Ruby, Java-script, Matlab, HTML, XML, LaTeX...

- Development environments: GNU, Eclipse, XCode, Visual Studio, KDevelop

- Frameworks and API's: Hadoop, Qt, OpenGL, Weka, Flkt, Carbon...

- Development tools: unit testing tools (such as XUnit), profilers (Valgrind, Shark, Rational Distiller, ), UML modelers (Rational Rose, Umbrello...), CVS, svn, ...

- Methodologies: eXtreme Programming, Scrum, test-driven development, RUP...

- Operating Systems: GNU/Linux, OSX, Microsoft Windows

### LINKS

- Webpage: http://xavier.amatriain.net

- Blog: http://technocalifornia.blogspot.com

- Twitter: http://www.twitter.com/xamat

- LinkedIn: http://www.linkedin.com/in/xamatriain

- Slideshare: http://www.slideshare.net/xamat

Barcelona, January 2010
Xavier Amatriain