CURRICULUM VITAE

PERSONAL INFORMATION

Name	XAVIER, Amatriain
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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 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 Music.

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.

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 until Now
○ Position
○ Main responsibilities

2007–

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

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.

▷ 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. The courses consisted in solving practical cases in which students had to take business decisions with a strong technological component and background.
▷ 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. In the former I introduced students to advanced object-oriented analysis and design including UML and Design Patterns. I also taught software engineering methodologies with a strong focus on Agile Methods. In the Information Retrieval course I taught the basics of Search and Retrieval methods including web applications. During this time I also directed several student Undergrad, Master and PhD Thesis (see list below).
▷ Period	2007–
○ Employer	**Telefonica Research**, Barcelona (SPAIN)
▷ 2007 until Now	Data Mining, Information Retrieval, Recommender Systems
○ Position	Internal Lecturer
○ Main responsibilities	Created and taught several internal courses such as Recommender Systems, Information Retrieval and Data Mining.
▷ Period	2005–2007
○ Employer	**Media Art and Technology Department, UCSB**
▷ 2005 until 2007	Multimedia, Computer Music, and Programming
○ Position	Lecturer
○ Main responsibilities	Lecturer in the MAT Master Program and Music Department. Courses: MAT 276 (Multimedia Engineering), MAT 233 (Introduction to Programming), Music 109/209IA-IB (Direct Digital Synthesis, Processing and Composition).
▷ 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: (1)"Music and Audio Technology" (a mixture of audio software engineering and advanced spectral processing); (2) "Software Engineering" with a focus on Object Oriented Analysis/Design and C++, (3) "Data Structures" and (4)"Database Programming".
	Also responsible for Master Thesis / Visiting Students. During this time I directed around 15 student Thesis (listed below).

▷ Period	2004–2005
○ Employer	**Universitat Politecnica de Catalunya (UPC)**, Barcelona (SPAIN)
▷ 2004 until 2005	Open Source Engineering
○ Position	Lecturer
○ Main responsibilities	Lecturer at the Open Source Master in the UPC. My course was on Open Source Software Engineering.
▷ Period	2000–2003
○ Employer	**Universitat Oberta de Catalunya**, Barcelona (SPAIN)
▷ 2000 until 2003	Software Engineering
○ Position	Lecturer
○ Main responsibilities	Lecturer at the Computer Science Studies of the Universitat Oberta de Catalunya (Internet-based studies) teaching Software Engineering to fourth year students.
▷ Period	1999–2000
○ Employer	**Universitat Pompeu Fabra**, Barcelona (SPAIN)
▷ 1999 until 2000	Audio Processing
○ Position	Lecturer
○ Main responsibilities	Lecturer in the Digital Arts Master program of the Pompeu Fabra University (Barcelona, Spain). Classes on digital Audio Processing.
▷ Period	2002–2003
○ Employer	**Universitat La Salle**, Barcelona (SPAIN)
▷ 2002 until 2003	Audio Processing
○ Position	Lecturer
○ Main responsibilities	Lecturer in the Digital Audio Master of the La Salle University. Taught courses related to audio compression and audio analysis/retrieval.
▷ Period	1995–1997
○ Employer	**ITES**, Barcelona (SPAIN)
▷ 1995 until 1997	Sound Engineering
○ Position	Teacher
○ Main responsibilities	Taught different audio related subjects in a Professional School. Eighteen to twenty-five year old students were introduced to recording techniques, PA systems and also theoretical background on acoustics and electrical engineering.

Consulting and others

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

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

▷ Period | 1999–2005
○ Employer | **several**

▷ 1999 until 2005 | Talks and workshops on Free and Open Source Software
○ Position | Speaker
○ Main responsibilities | I have been involved in different activities related to Free Software and Open Source. I have given different talks and workshops

▷ Period | 1997–1999
○ Employer | **REDEX**

▷ 1997 until 1999 | Engineering Consulting
○ Position | Project Manager
○ Main responsibilities | Project Engineer and manager at an engineering consulting company. Managing teams of up to 10 engineers I developed projects for major public buildings in Spain. These projects included public address systems, air conditioning, electrical installations, security systems and communications infrastructure.

EDUCATION

▷ Period · 1999–2005
○ Acquired qualifications · **PhD on Computer Science and Digital Communications**
○ Institute · Universitat Pompeu Fabra (UPF), Barcelona (SPAIN)
○ Principal subjects · Software Engineering, Audio Signal Processing
○ Results · 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" in January 2005, receiving the highest degree (Cum Laude).

▷ Period · 2007–
○ Acquired qualifications · **Managerial skills**
○ Institute · Telefonica
○ Principal subjects · Leadership, Business Strategy, Team Building, Project Management
○ Results · Recently, I have attended several courses for building my managing and leadership skills in the context of a large multinational company. I have also taken several courses to polish communication skills such as public speaking.

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

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

▷ Period · 1988–2000
○ Subject · Music Studies
○ Summary · Studied music at different levels/degrees with private teachers and music schools on topics such as Jazz, improvisation, composition, electronic composition, piano, voice and percussion.

▷ Period · 1984–1985
○ Subject · Primary School Abroad Studies
○ Summary · 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 | 2002–2003
○ Name | SALTO
○ Summary | A spectral modeling based brass instrument real-time synthesizer (available as Open Source software through the CLAM webpage).
○ Tasks | Developer and software designer

▷ Period | 2003–2005
○ Name | SMSTools
○ Summary | An offline application for sound analysis, synthesis and transformations (available as Open Source software through the CLAM webpage).
○ Tasks | Main Developer and software designer

▷ Period | 2004–2006
○ Name | Network Editor
○ Summary | A rapid prototyping interface for developing audio applications (available as Open Source software through the CLAM webpage).
○ Tasks | Developer and software designer

▷ 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–
○ 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

PROFESSIONAL ACTIVITIES

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

▷ Period | 2010
○ Activity | General Conference Chair for 4th ACM Conference on Recommender Systems (Barcelona, Spain)

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

▷ Period | 2008-2010
○ Activity | Senior Program Committee member for the ACM Recommender Systems Conference (Recsys)

▷ Period | 2010
○ Activity | Program Committee member for the ACM SIGIR Conference

▷ Period | 2009
○ Activity | Reviewer for several journals including Intelligent Sytems Journal, IEEE Transactions on the Web, IEEE Transactions on Knowledge and Data Engineering

▷ Period | 2008
○ Activity | Invited to ACM SIGMM's 2008 Retreat in Vancouver (Canada). Around forty leading researchers from around the world were invited to discuss the future of the Multimedia field. The previous of such retreats was organized in 2003.

▷ Period | 2008
○ Activity | Program Committee member for the ESAIR (Exploiting Semantic Annotations in Information Retrieval) Workshop. In conjunction with the Web Search and Data Mining Conference.

▷ Period | 2008
○ Activity | Invited talk in the "Future of Web Search Workshop" organized by Yahoo!

▷ Period | 2006–2007
○ Activity | Associate Editor for EURASIP Journal on Audio, Speech, and Music Processing

▷ Period | 2006
○ Activity | Local Arrangements Chair for the ACM Multimedia Conference in Santa Barbara, California. Also member of the Arts Program Organizing Committee.

▷ Period	2006
○ Activity	General Chair for the ACM Workshop on Audio and Music for Multimedia. In conjunction with the ACM Multimedia Conference.
▷ Period	2005–
○ Activity	Reviewer for the International Conference on Music Information Retrieval (ISMIR)
▷ Period	2006
○ Activity	Reviewer for the 6th International Conference on New Interfaces for Musical Expression (NIME 06)
▷ Period	2005
○ Activity	Audio Engineering 119th Convention in New York, USA: Organizer and panel co-chair on the Workshop entitled "Academia meets the Industry II: the Future of Music and Audio Research". With Rob Maher, Karlheinz Brandenburg, William Maartens, John Strawn, Nick Zackarov, Morton Lave, Karsten Nielsen, and Nicola Bernardini.
▷ Period	2005
○ Activity	International Computer Music Conference (ICMC 05) in Barcelona, Spain: Member of the Local Committee and Program Committee.
▷ Period	2005
○ Activity	Audio Engineering 118th Convention in Barcelona, Spain: Organizer and panel co-chair on the Workshop entitled "Academia meets the Industry: the Future of Music and Audio Research". With Jens Blauert, Karlheinz Brandenburg, William Maartens, John Strawn, Jiry Houpaniemi, Morton Lave, Karsten Nielsen, and Nicola Bernardini.
▷ Period	2005
○ Activity	Chair of the 1st Workshop on The Future of Music Workshop with George Tzanetakis, Miller Pucket, Roger Dannenberg, and Ross Bencina.
▷ Period	2004
○ Activity	International Conference on Music Information Retrieval (ISMIR 04) in Barcelona, Spain: Member of the Local Committee. Organizer (with George Tzanetakis) of a Tutorial on Frameworks for Music Information Retrieval.
▷ Period	2004
○ Activity	Invited talk at the University of Padova: "Content based audio and music processing"
▷ Period	2004
○ Activity	International Conference on the Web Delivery of Music (Wedelmusic 04): Member of the Program Committee

▷ Period	1999-2000
○ Activity	Participant on behalf of the CUIDADO European Project in the MPEG7 standarisation taskforce, proposing and defending through core experiments a description scheme for musical timbre.
▷ Period	1999
○ Activity	Workshop on Digital Audio for directors of European Opera Houses in the Barcelona Liceu.

User Modeling, Recommender Systems and Web Science

Book Chapters:

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

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

Articles in Peer-reviewed International Conferences:

▷ 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. Barcelona, Spain

▷ J. Bachs, X. Amatriain [2010]

Geolocated Movie Recommendations based on Expert Collaborative Filtering. in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ T. Cebrián, M. Planagumà, P. Villegas, X. Amatriain [2010]

Music recommendations with temporal context awareness. in the 2010 ACM Recsys Conference. Barcelona, Spain

▷ 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. Barcelona, Spain

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

Temporal Diversity in Recommender Systems. in the 2010 ACM SIGIR Conference. Geneva, Switzerland

▷ Xavier Amatriain, Karen Church and Josep M. Pujol[2010]

Being Social: Research in Context-aware and Personalized Information Access @ Telefonica. in the 2010 ACM SIGIR Conference. Geneva, Switzerland

▷ 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. Toronto, Canada.

▷ 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. Porto, Portugal

▷ 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
.	
▷ 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.
▷ 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

Immersive Environments and VR

Book Chapters:

▷ Amatriain, X. Castellanos, J. Hollerer, T. Kuchera-Morin, J. Pope, S.T. Wakefield, G. Wolcott, W. [2008]	*Experiencing Audio and Music in a Fully Immersive Environment* in Sense of Sounds, R. Kronland-Martinet, S. Ystad and K. Jensen (eds). Springer Verlag, LNCS series.

Articles in Journals:

▷ 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

Articles in Peer-reviewed International Conferences:

▷ Hollerer, T. Kuchera-Morin J. Amatriain, X. [2007]

The Allosphere: A Large-Scale Immersive Surround-View Instrument. Proceedings of the 2007 Emerging Display Technologies Workshop @ SIGGRAPH.

▷ Amatriain, X. Hollerer, T. Kuchera-Morin J. Pope, S.T. [2007]

Immersive Audio and Music in the Allosphere. Proceedings of the 2007 ICMC Conference.

Multimedia Systems and Software

Articles in Journals:

▷ 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. Arumi, P., Garcia P. [2008]

A Framework for Efficient and Rapid Development of Cross-platform Audio Applications. In ACM Multimedia Systems Journal, 14(1). June 2008.

▷ 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.

Articles in Peer-reviewed International Conferences:

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

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

▷ P. Arumi, X. Amatriain [2009]

A Timeliness Approach to Synchronous Dataflows for Callback-based Multimedia Systems, in Sixteenth Multimedia Computing and Networking Conference (MMCN'09).

▷ Norman, A. Amatriain, X. [2007]

Data Jockey, a tool for Active Listening. Proceedings of the 2007 ICMC Conference.

▷ Amatriain, X. Arumi, P. Garcia, D. [2006]

CLAM: A Framework for Efficient and Rapid Development of Cross-platform Audio Applications. Proceedings of ACM Multimedia 06.

▷ Pope, S.T. Amatriain, X. Putnam, L. Castellanos, J. Avery, R. [2006]

Metamodels and Design Patterns in CSL 4. Proceedings of International Computer Music Conference (ICMC 06).

▷ Arumi, P. Garcia, D. Amatriain, X. [2006]

A Dataflow Pattern Language for Sound and Music Computing. Proceedings of Pattern Languages of Programming (PloP 06).

▷ Amatriain X., Massaguer J., Garcia D. Mosquera I. [2005]	*The CLAM Annotator: A Cross-platform Audio Descriptors Editing Tool*. Proceedings of the 6th International Conference on Music Information Retrieval, London, England.
▷ Amatriain, X. Arumi, P. [2005]	*Developing Cross-platform Audio and Music Applications with the CLAM Framework*. Proceedings of 2005 ICMC Conference, Barcelona, Spain.
▷ Arumi, P. Amatriain, X. [2005]	*CLAM, An Object-Oriented Framework for Audio and Music* Proceedings of 3rd International Linux Audio Conference; Karlsruhe, Germany
▷ Amatriain, X. de Boer, M. Robledo, E. Garcia, D. [2002]	*CLAM: An OO Framework for Developing Audio and Music Applications* . Proceedings of the 17th Annual Conference on Object-Oriented Programming, Systems, Languages and Applications, OOPSLA' 02.
▷ Amatriain, X. de Boer, M. Robledo, E. Garcia, D. [2002]	*CLAM: Yet Another Library for Audio and Music Processing?*. Proceedings of the 17th Annual Conference on Object-Oriented Programming, Systems, Languages and Applications, OOPSLA' 02.

Other Publications:

▷ Amatriain, X. [2005]	*An Object-Oriented Metamodel for Digital Signal Processing with a focus on Audio and Music*. Ph.D. Dissertation. UPF. Barcelona;
▷ Geiger, G. Mora, A. Rubio, X. Amatriain, X. [2003]	*AGNULA: A GNU Linux Audio Distribution*. Proceedings of II Free Software Symposium UPC.

Audio And Music Processing

Book Chapters:

▷ Amatriain, X. Bonada, J. Loscos, A. Serra, X. [2002]	*Chapter 10. Spectral Processing* In DAFX: Digital Audio Effects. Udo Zoelzer (ed.). pp.554. John Wiley & Sons.
▷ Gouyon, F. Amatriain, X. Bonada, J. Cano, P. Gomez, E. Herrera, P. Loscos, A. [2006]	*Content processing of musical audio signals* in Sound to sense, sense to sound: A state-of-the-art. Leman, M. Cirotteau D. (eds) . John Wiley & Sons.

Articles in Journals:

▷ Amatriain, X. Bonada, J. Loscos, A. Arcos, J. Verfaille, V. [2003]	*Content-based Transformations* in Journal of New Music Research 32(1)

Articles in Peer-reviewed International Conferences:

▷ Gomez, E. Gouyon, F. Herrera, P. Amatriain, X. [2003]

Using and enhancing the current MPEG-7 standard for a music content processing tool. Proceedings of Audio Engineering Society, 114th Convention

▷ Amatriain, X. Herrera, P. [2002]

Transmitting Audio Content as Sound Objects. In Proceedings of AES22 International Conference on Virtual, Synthetic and Entertainment Audio.

▷ Garcia, D. Amatriain, X. [2002]

XML as a means of control for audio processing, synthesis and analysis. In Proceedings of the MOSART Workshop on Current Research Directions in Computer Music.

▷ Amatriain, X. Bonada, J. Loscos, A. Serra, X. [2002]

Spectral Modeling for Higher-level Sound Transformation. In Proceedings of MOSART Workshop on Current Research Directions in Computer Music.

▷ Amatriain, X. Herrera, P. [2002]

Audio Content Transmission. In Proceedings of COST G6 Conference on Digital Audio Effects.

▷ Herrera, P. Amatriain, X. Battle, E. Serra, X. [2002]

Toward Instrument Segmentation for Music Content Description: a Critical Review of Instrument Classification Techniques . In Proceedings of 1st International Symposium on Music Information Retrieval.

▷ Amatriain, X. [1998]

METRIX: A Musical Data Definition Language and Data Structure for a Spectral Modeling Based Synthesizer. In Proceedings of COST G6 Conference on Digital Audio Effects. Barcelona, Spain

Directed Student Projects

<u>PhD Thesis:</u>

▷ Pau Arumi (UPF) | Real-time Multimedia Computing on Off-The-Shelf Operating Systems: From Timeliness Datafow Models to Pattern Languages

<u>MSc Thesis:</u>

▷ Alex Norman (MAT Program, UCSB) | Data Jockey: A tool for meta-data enhanced digital DJing and active listening

▷ David Garcia (TICMA Master, UPF) | Visual Prototyping for Audio Applications

▷ Daniel Mintz (MAT Program, UCSB) | Toward Timbral Synthesis: a new method for synthesizing sound based on timbre description schemes

▷ Jorge Castellanos (MAT Program, UCSB) | Design of a Framework for Adaptive Spatial Audio Rendering

▷ Miquel Ramirez Javega (CS Program, UPF) | Content-based Music Recommender System

▷ Xavier Oliver Duocastella (CS Program, UPF) | Networked CLAM

▷ David Sanchez Mendoza (CS Program, UPF) | Emulating Electric Guitar Effects With Neural Networks

▷ Oscar Bendicho (CS Program, UPF) | Sms Audio Plug-IN

▷ Alberto de Blas Garcia (CS Program, UPF) | Music Collector a simple suite to collect audio

▷ Marcos Alonso Ruiz (CS Program, UPF) | Emotional Expressiveness Model for a Singing Voice Synthesizer

▷ Nir Lipovetsky (CS Program, UPF) | Probabilistic Model in CLAM. Musical Recognition by means of Hiddden Markov Models

▷ Ismael Mosquera Rivera (CS Program, UPF) | Voice to MIDI Conversion System

▷ Sandra Gilabert Sanchez (CS Program, UPF) | Formant following in Singing Voice

▷ Alvaro Martinez (CS Program, UPF) | Natural Language Techniques for Audio Content Management: Lyrics and Label Analysis

▷ Sira Ferradans Ramonde (CS Program, UPF)	Study and Development of a Music Segmentation System by Means of the Singing Voice
▷ Jesus Barcons Palau (CS Program, UPF)	Sinte Sailor (a 2D Timbre Navigation Interface)
▷ Magda Teruel (CS Program, UPF)	METRIX-ML: XML Musical Description Language for Instruments and Scores
▷ Javier Agenjo (CS Program, UPF)	A Modular Melody Analyzer/Generator
▷ Xavier Rubio (CS Program, UPF)	A real-time control flow system for audio synthesis and processing
▷ Albert Mora (CS Program, UPF)	Development of an analysis, transformation and synthesis environment using the CLAM library
▷ David Garcia (CS Program, La Salle)	XML/MPEG-7 Support for an Audio and Music Processing Library
▷ Pau Arumi (CS Program, UPC)	CLAM : C++ Library for Audio and Music
▷ Miguel Ramirez (CS Program, UPF)	CLAM Visualization Module: Design of an OO visualization module for a cross-platform audio processing environment
▷ Javier Palau (CS Program, UPF)	Low-level structures with STL for an audio application development environment

RECOMMENDATIONS

The following are public recommendations that have been issued by current and former colleagues in LinkedIn. They can be retrieved in the corresponding LinkedIn page. More formal and individualized recommendations may be available upon request.

Research Scientist @ Telefonica Research:

▷ Oriol Lloret, Senior Strategy Manager, Telefonica I+D (colleague)	Xavier is a non-typical academic researcher. Very open minded he usually helps the people around him to think out of the box through his constructive critical thinking. IMHO a profile like him is critical for any organization that wants to make the difference in the market, rethinking itself constantly.
▷ Ruben Gonzalez Blanco, Head of Technology Strategy and Architecture, Telefonica I+D (colleague)	Xavier is a software engineering fan very passionate about developing software He is always in contact will the last advances in software engineering and development. It is a pleasure discussing with him about software, he always makes sensible advises you can trust, and you can learn from then.
▷ Josep M. Pujol, Researcher, Telefonica Research (colleague)	Xavier's quality I admire the most is his ability to get the global picture of any situation. Where others drawn on details or fail to understand the actual implications of the problem at hand Xavier is able to get it and act effectively upon it. Xavier is also extremely supportive and open to collaboration, even when there is not direct benefit. By his actions, he clearly distance himself from those zero-sum minded persons which fail to understand that the whole is more the the sum of its parts. Working with Xavier is an enriching and fruitful experience both at the professional and the personal level.
▷ Joachim Neumann, Researcher, Telefonica R&D (colleague)	Xavier is an astonishingly complete researcher. While being a leading researcher in recommender systems, he is well capable of surprising you with his profound knowledge in other fields. He is fun to work with and has excellent academic teaching skills. In short: a great colleague.
▷ Jose Ramon Gomez Utrilla, Advertising Division Head, Telefonica I+D (colleague)	Xavier has brought to the company seniority, common sense in important decisions, and a great committment for cultural change. Apart from that, he is willing to participate both in technical tasks applying the good practices he masters, as well as in research visionary initiatives. But, above all, Xavi is a great mate!!
▷ David Bartolome Sedano, Strategy and Innovation, Telefonica I+D (colleague)	Xavier is an open-minded colleague with a lot of interest to change our work environment and get an innovative space in the company. Very collaborative and highly recomendable professional

▷ Paulo Villegas, Technology expert, Telefonica I+D (colleague)	Xavier is one of the most dynamic persons I know, he has an incredible ability to either start or get involved in many different activities at the same time and actually produce work on all of them. He has also expertise in a wide range of scientific & technical fields, and is always ready to use it to help others. He can adapt without hassle to an ample range of work requirements, from pure scientific/academic work to system development, and is resilient to stressful timetables.
▷ Oscar Amat, Project Manager, Telefonica I+D (colleague)	Xavier has proved to be a valuable source of information both on technology and methodology and he couples that with sincere enthusiasm on those subjects. On top of that, he is reliable and a hard worker and goes far beyond buzzwords –strangely enough, he also manages to keep the outside view and focus in mind.
▷ Toni Cebrian, R+D Engineer, Telefonica I+D (colleague)	Xavier is one of those rare cases in which great technical skills in research and software development are perfectly combined with an outstanding organizational wisdom. We all benefit from his technical expertise and the initiatives he has started to improve our working environment. He is also an excellent person you can count on.
▷ Alberto Lumbreras, Research Engineer, Telefonica R&D (colleague)	Xavier is for sure one of the cornerstones of Telefonica I+D. On one hand, he is putting enormous effort on connecting both scientific groups and engineering ones. Without Xavier, we would be two unconnected groups in the same company. Not only that, he exceeds the excellence in leading innovation on new ways of working in the company, being agile methodologies a good example. On the other hand, he is always willing to help you, no matter what it is. An excellent and lovely person, always in the mood, and definetly one of the top valuable persons in Telefonica I+D.
▷ Alonso Alvarez, Technology Advisor - Technology Observatory, TID - Telefonica I+D (colleague)	Xavier is a great professional with an impressive technological background. His future vision has been one of the most valuable contributions to our Technological Think Tanks.
▷ Neal Lathia, Research Intern, Telefonica (colleague)	Xavier is a creative, intelligent researcher who is passionate about his work and an excellent team member to work with. I had a great time as an intern working with him and I learned a lot from him, both about research and what it means to be a good researcher.

▷ Fernando Ramos, Research Intern, Telefonica (colleague)	I have worked directly with Xavier for 6 months, during my excellent internship in Telefonica Research Labs, in beautiful Barcelona. Xavier was a great person to work with. I was not working in my area of research, so it was my first experience on issues like data mining and recommender systems. For that reason, Xavier's help was extremely useful. He was always available, helpful, and considerate. I have learned a lot during this internship, and I am now using some of the tools I learned in my own research. Besides work, he is also a very interesting person to have a chat and spend time with. It was a pleasure working with him, and it will certainly be great if we have more collaborations in the future.

Research Director @ UCSB:

▷ Forrest Brewer, Professor, University of California (colleague)	I worked with Xavier on the initial design and specification of the Allosphere project at UCSB. This project mounts a 10m sphere with limited reflectivity and a walkway through the middle to provide eye resolution, 4pi steradian, immersive 3-d video with 300+ channel sound. Xavier directed much of the project including selection of the sphere panels and supplier, creation of the mounting infrastructure and room preparation for the project. Because of rather limited funding, very creative ways to meet the project requirement were required, while keeping costs to a minimum. It is important to note that while this design was underway, the administrative creation of the Media-Arts and Technology program (the parent organization) was going on as well. Thus project and program leadership were centered in very few people. The project is nearing completion on campus but would have stalled long ago except for the efforts of Xavier.
▷ Chandra Krintz, Assoc. Professor, UC Santa Barbara (colleague)	Xavier is an excellent colleague and collaborator. He has great vision yet the engineering experience and expertise to see a project through successfully and efficiently. Xavier is very enjoyable to interact and work with and is extremely professional. Xavier is also able effectively to explain complex ideas and topics to others and to communicate his ideas through writing. I am fortunate to have had the opportunity to work with Xavier on research and engineering of systems at UCSB.
▷ Stephen Pope, Software Developer, Consultant, Music Researcher, Lab manager, UCSB & FASTLab Inc (colleague)	I knew Xavier's work on his PhD thesis before I ever met him, and worked hard to bring him to UCSB. He was an exemplary team partner, project manager, and leader of the younger team members. He's a wizard-level C++ programmer and knows pretty much everything about multimedia signal processing. I wish he was still here; need I say more?

Associate Professor @ UPF:

▷ Joan Codina, assistant professor, Universitat Pompeu Fabra (colleague)	I think that Xavier did a good job in transforming the way of teaching some subjects and to make the University aware of the open source comunity

▷ Nacho Lasheras, Student, Universitat Pompeu Fabra (colleague)	I took three courses with Xavier as professor and we were both members of the University LUG. He seemed happy to teach, and I enjoyed his courses a lot (the topics may have helped a little bit, too). I don't know personally (I was more interested in videogame programming) but, at the last course, a lot of people wanted him to be his thesis director, because most of his alumni delivered excellent thesis.

Project Director @ CLAM & MTG:

▷ Miguel Ramirez, Student, Universitat Pompeu Fabra (colleague)	Xavier was my team manager during my spell in the CLAM project, and all I have to say is that he's set, for me, the golden standard for qualifying someone as an .ªwesome project manager".
▷ Hernan Ordiales, Google Summer of Code Student, CLAM (C++ Library for Audio and Music)	First, I have to say that I admired Xavier's CLAM related work since even before I join the project in 2007. As project manager, what to say, I always loved the atmosphere around this project, he always manages to keep the group motivated, set the right directions, help you when you need it or come with kind advices and ideas for you or any other team member. As a developer... for sure I'll be redundant about how superb skilled he is, but I had the opportunity to appreciate more his skills related to software development and audio signal-processing and I have to say they're awesome. It's one of my best references in technology in general.
▷ Jordi Massaguer Pla, Software Developer, Universitat Pompeu Fabra (colleague)	Xavier manages very well people and technology. As a person, he makes working for him nice and makes you feel part of the group/project and so be very productive (and feel happy about it). Technically he is usually an expert on the projects he manage, as he cares about it and also likes this part, too.

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, Vst, AU, DirectX, PortAudio, libsndfile, xercesc, OpenSoundControl, PortMidi, Torch...

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

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

- Operating Systems: GNU/Linux (preffered OS: expert user/administration skills), OSX, Microsoft Windows

LANGUAGES

- Spanish: mother tongue

- Catalan: mother tongue

- English: Proficiency

- French: advanced

- German: notions

- Italian: notions

ORGANIZATIONAL SKILLS

I am very used to organizing and leading technical teams. I also become very involved in the organizations I work with. I have always been part of committees and working group related to improving educational quality, innovation and strategical planning, methodologies...

HOBBIES

I love music. I played semi-professionally with the Maijalas band. I have also composed and performed computer music in the past. Currently, apart from playing piano and guitar whenever I find some time, I enjoy listening to music all day and going to live performances whenever I can. I am also very interested in digital and web culture in general and I am present in most online social networks such as Twitter, Facebook, LinkedIn, Lastfm, Plaxo, Blip. My blog (technocalifornia.blogspot.com) also takes part of my free time. I enjoy reading both essays and novels and I also like writing.

But most of all, I enjoy having some time with my family and going out and traveling with them.

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

- Youtube: http://www.youtube.com/user/xamat

Barcelona, March 2010
Xavier Amatriain