



Xavier Serra is a Professor at the Universitat Pompeu Fabra in Barcelona, where he leads the Music Technology Group within the Department of Information and Communication Technologies. He earned his PhD in Computer Music from Stanford University in 1989, focusing on spectral processing of musical sounds, a foundational work in the field. His research spans computational analysis, description, and synthesis of sound and music signals, blending scientific and artistic disciplines. Dr. Serra is very active in the fields of Audio Signal Processing, Sound and Music Computing, Music Information Retrieval and Computational Musicology at the local and international levels, being involved in the editorial board of several journals and conferences and giving lectures on current and future challenges of these fields. He received an Advanced Grant from the European Research Council for the CompMusic project, promoting multicultural approaches in music information research. Currently, he directs the UPF-BMAT Chair on AI and Music, dedicated to fostering Ethical AI initiatives that can empower the music sector. More information in: <https://www.upf.edu/web/xavier-serra>

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PERSONAL INFORMATION

LAST NAME: Serra
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EDUCATION

1989 PhD in Music Technology, Stanford University, USA. (October)
1983 Master in Music, Florida State University, USA. (June)
1981 Bachelor in Biology (Licenciatura), Universitat de Barcelona, Spain. (June)
1970-1981 Music studies at the Conservatori Superior Municipal de Música de Barcelona.

PHD THESIS

Title: “A System for Sound Analysis/Transformation/Synthesis based on a Deterministic plus Stochastic Decomposition”

Thesis supervisor: Dr. John Chowning

Jury of thesis defense: Dr. Julius O. Smith III, Dr. Earl Schubert, Dr. Max V. Mathews

CURRENT PROFESSIONAL SITUATION

INSTITUTION: Universitat Pompeu Fabra, Barcelona
DEPARTMENT: Department of Information and Communication Technologies
POSITION AND DATE OF START: Full Professor since 30/11/2017
ADDRESS: Roc Boronat 138, 08018 Barcelona
TELEPHONE: (34) 935422164
EMAIL: xavier.serra@upf.edu
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EMPLOYMENT HISTORY

2017 - Full Professor (Catedrático) at UPF
1996-2017 Associate Professor (Profesor Titular) at UPF
1995-1996 Visiting Professor (Profesor Visitante) at UPF
1991-1994 Post-doc at Phonos Foundation
1989-1991 Chief Engineer at Yamaha Music Technologies USA, Inc.

CURRENT MANAGEMENT RESPONSIBILITIES AT UPF

2023 - Director of the UPF-BMAT Chair on AI and Music.
2018 - Member of the Faculty Commission of the UPF.
2008 - Coordinator of the Master in Sound and Music Computing of the Department of Information and Communication Technologies.
2008 - Member of the Postgraduate and Doctoral Studies Commission of the Department of Information and Communication Technologies.
2008 - Member of the Faculty Commission of the Department of Information and Communication Technologies.

1994 - Founder and Director of the Music Technology Group (MTG).

CURRENT TEACHING ACTIVITIES

- 2021 - Music Technology Lab. Undergraduate course of the Department of Information and Communication Technologies, Universitat Pompeu Fabra.
- 2018 - Sound, Speech and Music Processing. Undergraduate course of the Department of Information and Communication Technologies, Universitat Pompeu Fabra.
- 2017 - Signals and Systems I. Undergraduate course of the Department of Information and Communication Technologies, Universitat Pompeu Fabra.
- 2014 - Audio and Music Processing for Music Applications. MOOC on Coursera.
- 2008 - Audio and Music Processing for Music Applications. Master course of the Department of Information and Communication Technologies, Universitat Pompeu Fabra.

OTHER CURRENT PROFESSIONAL RESPONSIBILITIES

- 2021 - Associate Editor of *Frontiers in Audio and Acoustic Signal Processing*.
- 2018 - Member of the Advisory Board of RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion, of the University of Oslo (Norway).
- 2017 - Co-founder and Chief Research Officer of Music Muni Labs.
- 2013 - Member of the International Advisory Council of the Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT) of McGill University (Montreal, Canada).
- 2011 - President of Phonos Foundation.
- 2008 - Member of the International Society for Music Information Retrieval.
- 2008 - Member of the Scientific Committee of the Sound and Music Computing Conference.
- 2005 - Member of the European Association for Signal Processing.
- 1999 - Member of the editorial board of the *Journal of New Music Research*.
- 1998 - Member of the Scientific Committee of the Digital Audio Effects Conference.

PAST MANAGEMENT RESPONSIBILITIES AT UPF

- 2016-2020 Scientific Director of the Maria de Maeztu Strategic program of the Department of Information and Communication Technologies.
- 2004-2020 Member of the Commission for Information Resources and Technology Strategies.
- 2013-2016 Member of the Postgraduate and Doctoral Studies Commission.
- 2009-2013 Member of the Culture Activities Commission.
- 2009-2013 Member of the Permanent Commission of the Department of Information and Communication Technologies.
- 2009-2013 Vice-president of the Research Commission of the Department of Information and Communication Technologies.
- 2004-2007 Director of the Department of Information and Communication Technologies.
- 2000-2004 Director of the Audiovisual Institute.
- 1999-2004 Director of the PhD program of the Department in Information and Communication Technologies.
- 1999-2004 Member of the Research Policy Commission.

OTHER PAST MANAGEMENT RESPONSIBILITIES

- 2003-2010 Vice-president of the Phonos Foundation.
- 2002-2005 Head of the Department of Sonology of the Escola Superior de Música de Catalunya.
- 1992-1999 Executive Director of the Phonos Foundation.

OTHER PAST PROFESSIONAL RESPONSIBILITIES

- 2009-2021 Co-founder and Board member of Reactable Systems Inc.

- 2015-2017 Member of the Special Area Team on Acoustic, Sound and Music Signal Processing of the European Association for Signal Processing.
- 2001-2017 Associate Professor of the Department of Information and Communication Technologies of the UPF.
- 2006-2012 Co-founder and Scientific advisor of Barcelona Music and Audio Technologies Inc.
- 1991-2009 Invited researcher and teacher at the Center for Computer Research in Music and Acoustics from Stanford University.
- 1997-2008 Scientific reviewer of the International Computer Music Conference.
- 1983-2008 Member of the International Computer Music Association.
- 1998-2002 Spanish delegate and vice-president of the Executive Committee of the G6 Action “Digital Audio Effects” of the European Program COST.

EXPERIENCE IN ORGANIZATION OF R+D ACTIVITIES

- 2022 Co-organizer of the CompMusic workshop 2022. IIT Madras, Chennai, India, December 12-16.
- 2022 Scientific Program Chair of the 23rd International Society for Music Information Retrieval Conference (ISMIR). Bangalore, India, December 4-8.
- 2021 Co-Chair of the Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE). UPF, Barcelona, November 15-19.
- 2021 Co-Chair of the Web Audio Conference (WAC). UPF, Barcelona, July 5-7.
- 2019 Organizer of the Barcelona Music Technology Forum. UPF, Barcelona, June 27-28.
- 2018 Organizer of the European Music Research Conference. UPF, Barcelona, June 11-13.
- 2016 Organizer of the Seminar on Music Knowledge Extraction Using Machine Learning. UPF, Barcelona, December 4.
- 2016 Organizer of the Data-driven Knowledge Extraction Workshop. UPF, Barcelona, Spain, June 28-29.
- 2016 Member of Program Committee of the Summer School on Music Science and Technology Research (MuSTeR). Indian Institute of Science, Bangalore, India, May 9 –12.
- 2013 Chair of the 3rd CompMusic Workshop (Chennai, India, December 13-14).
- 2012 Chair of the 2nd CompMusic Workshop (Istanbul, Turkey, July 12-13).
- 2012 Chair of the 1st CompMusic Workshop (Gurgaon, India, January 20).
- 2010 General Chair of the 7th Sound and Music Computing Conference (Barcelona, July 21-24).
- 2009 Scientific Programme Chair of the 6th Sound and Music Computing Conference (Porto, July 23-29).
- 2007 Co-organizer of the Workshop on Music, Brain and Cognition at NIPS (Whistler, Canada)
- 2006 President of the Organizing Committee of the Summer School in Sound and Music Computing (Barcelona, July 24-28).
- 2005 Member of the Organizing Committee of the 118th Audio Engineering Society Convention (Barcelona, May 28-31).
- 2005 President of the Program Committee of the International Computer Music Conference (Barcelona, September 5-9)
- 2004 President of the Organizing Committee of the International Conference in Music Information Retrieval (Barcelona, October 10-14)
- 2001 President of the Organizing Committee of the Workshop on Current Research Directions in Computer Music (Barcelona, November 14-16)
- 1998 President of the Organizing Committee of the International Conference on Digital Audio Effects (Barcelona, November 19-21)

PERSONAL DISTINCTIONS AND AWARDS

- 2019 ICREA Academia Prize. Generalitat de Catalunya.
- 2018 Google Research Award for Freesound Datasets.
- 2017 Proof of Concept Grant for TECSSOME. European Research Council.
- 2016 “Teaching activity at Master level” Prize given by UPF Board of Trustees.
- 2016 Best paper award at 6th International Workshop Folk Music Analysis, June 15-17.
- 2017 Proof of Concept Grant for CAMUT. European Research Council.
- 2013 Best paper award at 14th International Workshop on Content-based Multimedia Indexing, June 15-17.
- 2013 ICREA Academia Prize by the Generalitat de Catalunya.

- 2010 Advanced Grant for CompMusic. European Research Council.
- 2009 Google Research Award for Freesound.
- 2008 ICREA Academia Prize by the Generalitat de Catalunya.
- 2007 Universitat Pompeu Fabra Medal.
- 2007 Google Research Award for Freesound.
- 2005 City of Barcelona Prize in Multimedia for the Freesound project.
- 1997 Swets & Zeitlinger Distinguished Paper Award at the International Computer Music Conference.
- 1994 Grant from the Catalan Government to spend half a year in the USA.
- 1992 Postdoctoral Scholarship from the Spanish Ministry of International Affairs to return to Spain (2 years).
- 1989 Research and Teaching assistantship from Stanford University (6 years).
- 1983 Scholarship from Comité Conjunto Hispano Norteamericano para Asuntos Educativos y Culturales to start PhD at Stanford University (2 years).
- 1981 Scholarship from Caixa de Barcelona to study the Master at Florida State University (2 years).
- 1983 Pi Kappa Lambda, Phi Kappa Phi (academic distinctions at Florida State University).

ACADEMIC MERITS

- 3 Spanish Research "Sexenios": 01/01/1996 to 31/12/2001; 01/01/2002 to 31/12/2008; 01/01/2009 to 31/12/2014
- 4 Spanish Teaching "Quinquenios": 01/01/1995 to 31/12/1999; 01/01/2000 to 31/12/2004; 01/01/2005 to 31/12/2009; 01/01/2010 to 31/12/2014
- 3 Autonomic Research "Sexenios": 01/01/1996 to 31/12/2001; 01/01/2002 to 31/12/2008; 01/01/2009 to 31/12/2014
- 4 Autonomic Teaching "Quinquenios": 01/01/1995 to 31/12/1999; 01/01/2000 to 31/12/2004; 01/01/2005 to 31/12/2009

DISTINCTIONS AND AWARDS GIVEN TO THE RESEARCH GROUP

- 2016 3rd price of the Knowledge Transfer category by the Board of Trustees of the UPF.
- 2013 ACM Multimedia Open-Source Competition Award.
- 2008 Golden Nica Award of the Prix Electronica for the Reactable.
- 2008 Honorary Mention of the Prix Electronica for Freesound.
- 2008 Two D&AD yellow pencil awards for the Reactable.
- 2008 BMW Initiative Award.
- 2007 UPF Innovation Award.
- 2007 Reactable chosen the most innovative instrument at MIDEM.
- 2007 City of Barcelona Price in multimedia for the Reactable.
- 2006 2nd prize of the Semantic Web Challenge for Foafing the Music.

RELEVANT TALKS AND SEMINARS

- June 9th, 2023. "Sustaining music in the digital arena." European Forum on Music (Budapest, Hungary). Invited participation in Panel.
- May 31st, 2023. "Computational Approaches for Enhancing Multicultural Musicality: Understanding Auditory Patterns and Promoting Learning." International Academic Communication Month on Computational Analysis of World Traditional Music (Shandong, China). Invited Talk.
- May 23rd, 2023. "Retos y Oportunidades de la Inteligencia Artificial en el sector de la música." Convención de la Asociación Española de Editores de Música (Sitges, Spain). Keynote talk.
- April-May 2023: "Trends and Challenges in Music Technology Research." Central Conservatory of Music (Beijing, China). 4 invited seminars.
- March 26, 2023. "Computational Approaches for Enhancing Multicultural Musicality: Understanding Auditory Patterns and Promoting Learning." International Conference on New Music Concepts (Treviso, Italy). Keynote talk.
- November 9th, 2022: "Sound and music technologies of relevance to mobile devices." Huawei Future Device Technology Summit Program (Helsinki, Finland). Invited talk.
- June 15th, 2022: "Computational Approaches for Educating a Multicultural Musicality." Analytical Approaches

- to World Music (AAWM). The University of Sheffield (UK). Keynote talk.
- May 12th, 2022: "AI Challenges in Audio and Music Technologies." ISE 2022 (Barcelona, Spain). Invited talk.
- February 11th, 2022. "Enhancing musicality: scientific, technological and practical challenges." 26th International Symposium on Frontiers of Research in Speech and Music. Indian Institute of Information Technology Pune (India). Keynote talk.
- January 4th, 2022. "Audio Quality and its Impact on Sound and Music Processing." Video/Audio Quality in Computer Vision Workshop @ WACV2022 (Hawaii, USA). Keynote talk.
- July 14th, 2021: "From sound analysis/synthesis to music understanding." Goethe Institut – Arte Scienza Festival (Rome, Italy). Invited talk.
- July 12th-13th, 2021: "Music Technology Research: from sound analysis/synthesis to music understanding." Conservatorio di Musica Luigi Canepa (Sassari, Italy). Invited talk.
- June 9th, 2021: "CompMusic: Computational models for the discovery of the World's Music." MIRAGE Symposium #1: Computational Musicology. RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion (Oslo, Norway). Invited talk.
- February 10th, 2021: "The complexity of timbre analysis and the approaches brought about by machine learning." Colloque sur l'analyse et la description du timbre en musique (Saint-Étienne, France). Invited talk.
- April 16th, 2020: "Signal Processing and Machine Learning Challenges in Sound and Music Computing." ICASSP 2020 (Barcelona, Spain). Invited ETON talk.
- December 2nd-6th, 2019: Workshop on Computational Musicology and Indian Music, IIT-B (Mumbai, India). Teacher.
- December 8th, 2019: "Current Trends and Challenges in Music Information Processing." IIT-Dharwad (Dharwad, India). Invited talk.
- September 28th, 2019: "From Digital to Human Intelligence in Music Understanding Research." Imrotech 2019 (Athens, Greece), Invited talk.
- September 24th, 2019: "Gathering, Analyzing, and Structuring the Digital Artifacts of a Musical Culture: a Research Perspective." CMO Workshop (Istanbul, Turkey), Invited talk.
- March 3rd, 2018: "Computational studies of several non-western musical repertoires." Eastman School of Music, University of Rochester (New York), Invited talk.
- March 2nd, 2018: "Music Information Retrieval approaches for Music Understanding." Department of Electrical and Computer Engineering, University of Rochester (New York), Invited talk.
- September 3rd, 2017: "CompMusic project: motivations, results, reflections." 16th Brazilian Symposium on Computer Music (São Paulo, Brasil), Keynote.
- March 22nd, 2017. Presentation of CompMusic at the International Musicological Society 20th Quinquennial Congress (Tokyo, Japan). Invited talk.
- October 27th, 2016: Presentation of CompMusic at the conference on "Frontier Research and Science Diplomacy" organized by the European Research Council (Brussels, Belgium), Invited talk.
- July 1st, 2016: "The computational study of a musical culture through its digital traces." Conference of the International Musicological Society (Stavanger, Norway), Keynote.
- June 29th, 2016: "Machine learning approaches for structuring large sound and music collections." Data-driven Knowledge Extraction Workshop, UPF, Barcelona, June 28th-29th 2016.
- June 28th, 2016: "The MdM Knowledge Extraction Strategic Research Program at DTIC-UPF." Data-driven Knowledge Extraction Workshop, UPF, Barcelona, June 28th-29th 2016.
- May 9th-12th, 2016: "Audio Signal Processing for Music Applications." Summer School on Music Science and Technology Research (MuSTeR), Indian Institute of Science (Bangalore, India), Organizer and teacher.
- May 7th, 2016: "CompMusic: Technologies for exploring and teaching Indian Classical Music." IIT Bombay, (Mumbai, India), Invited talk.
- February 24th, 2016: "CompMusic project." Yıldırım Beyazıt Üniversitesi (Ankara, Turkey). Invited talk.
- February 23rd, 2016: "Music Information Retrieval from a Cultural Perspective." Bilkent University (Ankara, Turkey). Invited talk.
- February 22nd, 2016: "Music Information Retrieval from a Cultural Perspective." Middle East Technical University (Ankara, Turkey). Invited talk.
- February 18th, 2016: "Introduction to CompMusic and Dunya." Istanbul Technical University Turkish Music Conservatory, (Istanbul, Turkey). Invited talk.
- February 17th, 2016: "Music Information Retrieval from a Cultural Perspective." Boğaziçi University (Istanbul, Turkey). Invited talk.

- February 16th, 2016: “Introduction to CompMusic and Dunya.” Yıldız Technical University (Istanbul, Turkey). Invited talk.
- November 30th, 2015: “The AudioCommons Initiative and the technologies for facilitating the reuse of open audio content.” Digital Audio Effects Conference (Trondheim, Norway). Tutorial.
- October 1st, 2015: “Music Information Retrieval from a Multicultural Perspective.” IRCAM (Paris, France). Invited talk.
- August 7th, 2015: “Music Information Retrieval from a Multicultural Perspective.” SoundCloud (Berlin, Germany). Invited talk.
- June 4th, 2015: “Research highlights in my journey within the field of Sound and Music Computing.” Universitat Pompeu Fabra (Barcelona). Invited talk.
- May 17th, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Fudan University (Shanghai, China), Invited talk.
- May 18th, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Shanghai Conservatory of Music (Shanghai, China). Invited talk.
- May 19th, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Ningbo University (Ningbo, China). Invited talk.
- May 21st, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Peking University (Beijing, China). Invited talk.
- May 22nd, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” China Conservatory, University (Beijing, China). Invited talk.
- May 23rd, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Peking University Chinese Music Institute (Beijing, China). Invited talk.
- May 25th, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” Communication University of China (Beijing, China). Invited talk.
- May 27th, 2015: “Computational Methods for Jingju Music Research: the CompMusic project.” National Academy of Chinese Theatre Arts (Beijing, China). Invited talk.
- May 7th, 2015. “Music Information Research from a Cultural Perspective.” 138th International AES Convention (Warsaw, Poland). Tutorial.
- April 6th, 2015: “Music Information Retrieval from a Multicultural Perspective.” Stanford University (California, USA). Invited talk.
- April 3rd, 2015: “Music Information Retrieval from a Multicultural Perspective.” University of California in Santa Barbara (California, USA). Invited talk.
- January 28th, 2015: “Music Information Retrieval from a Multicultural Perspective.” CalArts (Valencia, California, USA). Invited talk.
- January 26th, 2015: “Music Information Retrieval from a Multicultural Perspective.” University of California in San Diego (California, USA). Invited talk.
- October 13th, 2014: “Rhythm analysis in the CompMusic project.” Rhythm Workshop, NYU Abu Dhabi (Abu Dhabi, United Arab Emirates). Invited talk.
- June 26th, 2014: “Exploiting Cultural Specificity in Music Information Research.” 21st International Symposium on Methodologies for Intelligent Systems (Roskilde, Denmark). Keynote.
- June 11th, 2014. “Introduction to CompMusic and Dünya.” CompMusic Seminar. Culture specific approaches in music technology: Turkish music case (Istanbul, Turkey). Invited talk.
- May 12th, 2014: “Introduction to CompMusic.” CompMusic Seminar: Computational analysis of Indian art music (Mumbai, India). Invited talk.
- January 27th, 2014: “Creating Research Corpora for the Computational Study of Music: the case of the CompMusic Project.” AES 53rd International Conference on Semantic Audio (London, UK). Invited talk.
- December 17th, 2013: “Computational description of Carnatic and Hindustani music.” 87th Annual Conference of the Music Academy Madras (Chennai, India). Invited talk.
- November 30th, 2013: “Heu complert, ara ja sou lliures.” Universitat Pompeu Fabra (Barcelona, Spain). Graduation speech.
- November 4th, 2013: “Music Information Research: State of the Art and Future Challenges.” University of Sao Paulo (Brazil). Invited talk.
- September 2nd, 2013: “Singing voice synthesis in the context of music technology research.” 8th ISCA Speech Synthesis Workshop (Barcelona, Spain). Keynote.
- July 31st, 2013: “Exploiting Domain Knowledge in Music Information Research.” SMAC Stockholm Music

- Acoustics Conference 2013 & SMC Sound and Music Computing Conference 2013 (Stockholm, Sweden).
Keynote.
- March 19th, 2013: "Opportunities and Challenges in Rhythm Research Using Data-driven and Culture Specific Approaches." Rhythm Workshop, NYU Abu Dhabi (Abu Dhabi, United Arab Emirates). Invited talk.
- February 5th, 2013: "Information Technologies and World Music." Digitalia (Salvador, Brazil). Invited talk.
- November 5th, 2012: "Computational Models for the Discovery of the World's Music." ERC Workshop (Barcelona, Spain). Invited talk.
- September 9th 2012: "Sound Synthesis for Computer Games." IEEE Signal Processing Society Summer School on Game Audio, Middle East Technical University (Ankara, Turkey). Invited seminar.
- July 6th 2012: "The Need for Multicultural Web Technologies." WebVisions (Barcelona, Spain). Invited talk.
- May 2012: Invited talks on CompMusic at Taiwan Normal University (Taipei, Taiwan), National Taiwan University (Taipei, Taiwan), Academia Sinica (Taipei, Taiwan), Beijing University of Post and Telecommunication (Beijing, China), Institute of Acoustics Chinese Academy of Sciences (Beijing, China), China Conservatory of Music (Beijing, China), Renmin University of China (Beijing, China), Institute of Computer Science & Technology, Peking University (Beijing, China), Tsinghua University (Beijing, China).
- April 23rd 2012: "Knowledge Transfer Practices in Music Technology Research." Training workshop: Establishing relationships with industry, CIRMMT, McGill University (Canada). Invited talk.
- March 3rd 2012: "Instruments musicals, tecnologia i context cultural." Museu de la Música, Curs d'Organologia (Barcelona, Spain). Invited talk.
- February 29th 2012: "Information technologies for the discovery of culture specific music repertoires." Harmony and variation in music information retrieval Symposium (Utrecht, Netherlands). Invited talk.
- January 19th 2012: "CompMusic: Computational models for the discovery of the world's music." Frontiers of Research in Speech and Music (FRSM) (Gurgaon, India). Keynote talk.
- November 18th 2011: "Tecnología Musical, Redes Sociales y Multiculturalidad." Dept. de Teoria de la Señal, Telemática y Comunicaciones, University of Granada (Spain). Invited talk.
- July 18th 2011: "Com serà la Música de la Web 3.0?." Festa de la Ciència, (Barcelona, Spain). Invited talk.
- November 9th 2011: "The need of a multicultural approach in IT research." European Computer Science Summit (ECSS) (Milan, Italy). Keynote talk.
- July 11th 2011: "Multiculturalism in Music Information Research." Telefonica Multimedia Workshop, Telefònica I+D (Barcelona, Spain). Invited talk.
- May 2011: "CompMusic: Computational models for the discovery of the world's music." Queen Mary (London, UK). Invited talk.
- May 2011: Invited talks on CompMusic in India, at IIT-Madras, IISC-Bangalore, IIIT-Hyderabad, Jadavpur University, IIT-Bombay.
- February 2011: Invited talks on CompMusic in Turkey, at Bogaziçi University, Istanbul Technical University, Yildiz Technical University, Koç University, Chamber of EE at Izmir.
- January 2011: "Audio Content Analysis and Retrieval." Winter School on Speech and Audio Processing 2010 (Bombay, India). Invited talk.
- September 22nd 2010: "Research approaches and challenges in Sound and Music Computing." Electronics Meets Challenges of the 21st Century (Warsaw, Poland). Invited talk.
- March 20th 2010: "New audio technologies for new architectural spaces." Smart Geometry Conference (Barcelona, Spain). Invited talk.
- December 14th 2009: "Music creation technology and its impact on social networks." TEDx Barcelona (Spain). Invited talk.
- November 21st, 2009: 10th Festival International de Artes Digitais, Porto, Portugal, 2009. "Technology Trends, Social Context and their Impact on the Musical Culture." Invited talk.
- November 2nd, 2009: "The Music Technology Group of the Universitat Pompeu Fabra in Barcelona." SIGMUS Symposium, Tokyo, Japan, 2009. Invited talk.
- October 30th, 2009: "The discipline formerly known as MIR." 2nd Workshop on the Future of MIR, Kobe, Japan, 2009. Invited talk.
- October 22nd, 2009. "Scientific and Technological Challenges of Musical Interest." Dotzè Congrés Internacional de l'Associació Catalana d'Intel·ligència Artificial, Cardona, Spain, 2009. Invited talk.
- September 8th, 2009: "Freesound.org and the collaborative production of sounds." Google Tech Talk, California, 2009. Invited talk.
- May 16th, 2009: "Els Instruments Electrònics del Segle XX: una història d'amor entre música i tecnologia."

- CosmoCaixa, Barcelona 2009. Invited talk.
- March 16th, 2009: "Technologies to Support the Collaborative Production of Sounds: The Example of Freesound.org." Unlocking Audio 2, London, 2009.
- December 22nd, 2008: "Trends in Sound and Music Computing." AES Portugal 2008, Lisbon, Portugal. Keynote.
- November 2nd, 2008: "Music Content Description." Telefónica I+D, Barcelona, 2008. Invited talk.
- November 17th, 2008: "A Tutorial on Sound and Music Computing." November 17th, International Conference for High Performance Computing, Networking, Storage and Analysis (SC2008) Austin, Texas, USA. 2008. Invited tutorial.
- November 13th, 2008: "La Música en la Nova Societat Tecnificada." Innova Música, Andorra, 2008. Keynote.
- September 25th, 2008: "Explotació de la producció col·laborativa de continguts multimèdia." 22@Update Breakfast 2008. Invited talk.
- September 27th, 2008: "Research in Music Technology: Artistic and Scientific Challenges." Music, Science and the Brain Workshop, Plymouth, UK, 2008. Invited talk.
- June 7th 2008: "Technological innovation in the current social context: Who is really in control?." June 7th 2008. International Conference New Interfaces for Musical Expression (NIME 2008) (Genova, Italy). Keynote.
- May 20th 2008: "La tecnología musical: entre el arte y la ciencia." Science Museum of Pamplona, 2008. Invited talk.
- April 9th 2008: "Sound Analysis and Synthesis for Multimedia Applications." Media Technology Days at the University of Linköping, 2008. Invited talk.
- January 8th 2008: "Technologies for Describing and Sharing Sounds: the Freesound example." Communia Workshop, Torino, Italy, 2008. Invited talk.
- November 9th 2007: "Informàtica i Música." CosmoCaixa, Barcelona 2006. Invited talk.
- July 10th 2007: Google Tech Talk, Mountain View, California, USA, 2007. "From Sound Synthesis to Sound Retrieval and Back." Invited talk.
- July 7th 2007: "State of the Art and Future Directions in Musical Sound Synthesis." Politecnico of Milan, Italy, 2007. Invited talk.
- May 12th 2007: "Spectral Models of Audio Signals: Music Applications." Helmholtz Workshop, 2007, Berlin, Germany. Invited talk.
- June 2nd 2006: "From Sound to Meaning: Current Directions in Music Technology Research." Formation and Deformation of the visual and acoustic space, Rome, 2006. Invited talk.
- December 19th 2005: "Bridging the Music Semantic Gap." IST Info-Day 2005, Brussels, Belgium. Invited talk.
- December 14th 2005: "From the Fourier Transform to the Development of Musical Applications based on Spectral Models of Audio Signals." University of Belfast, UK, 2005. Invited talk.
- Museu de la Música, Barcelona, 2004. "Els Instruments Electrònics del segle XX." Invited talk.
- September 10th 2003: "Spectral Modeling Synthesis: Past and Present." DAFX 2003, London, UK. Keynote.
- May 8th 2003. "Computer Music Research: Past and Present." University of Oslo, Norway, 2003. Invited talk.
- December 1999: "Current approaches to the spectral modeling of musical sounds". Diderot Forum, Viena, Austria, 1999. Invited talk.
- June 28th 1999: "Panorama del Tratamiento Digital del Sonido". Primeras Jornadas de Artes Digitales: Imagen, Música y Multimedia, 1999, Universidad de Morón, Buenos Aires, Argentina. Invited talk.
- May 9th 1999: "Trends in Sound Synthesis and Processing Research". 106th AES Convention, Munich, Germany, 1999. Invited talk.
- August 12th 1999: "Virtual Worlds/Real Sounds." SIGGRAPH, Los Angeles, USA, 1999. Tutorial.
- 1997: "Integrating Complementary Spectral Models in the Analysis, Transformation and Synthesis of Musical Sounds". Tempo Reale, Florence, Italy. Invited talk.
1996. "Beyond Sampling." International Symposium on Electronic Arts, Rotterdam, Netherlands. Talk.
1995. "De la Realidad a la Virtualidad: Direcciones Actuales de la Síntesis Digital del Sonido". Intermusic, Valencia, Spain. Invited talk.
- August 2nd 1994. "Current Directions in Digital Synthesis". I Brazilian Symposium on Computer Music. 1994, Caxambu, Brazil. Invited talk.
1994. "Técnicas de Análisis y Síntesis de Sonido Basadas en Modelos Espectrales." Festival el Callejón del Ruido, Guanajuato, Mexico, Invited talk.
1994. "L'ordinador dins la música: Perspectives Actuals." UAB, Sabadell, Spain, Invited talk.
1994. "Du réel au virtuel: Orientations actuelles de la synthèse sonore numérique." FAUST, Toulouse, France, Invited talk.

COMPETITIVE RESEARCH PROJECTS

Soundlights

Funding Agency: Ajuntament de Barcelona - BITHabitat
Partners: Music Technology Group - Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 12/01/2023 to 11/01/2024
Funding: 38.000 €

Maria de Maeztu – Essentia API

Funding Agency: Universitat Pompeu Fabra – Department of Information and Communication Technologies
Partners: Music Technology Group - Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 12/01/2023 to 11/01/2026
Funding: 40.000 €

Maria de Maeztu - Freesound

Funding Agency: Universitat Pompeu Fabra – Department of Information and Communication Technologies
Partners: Music Technology Group - Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 06/01/2023 to 05/01/2026
Funding: 50.000 €

SGR-Cat

Funding Agency: Generalitat de Catalunya – Departament de Recerca i Universitats
Partners: Music Technology Group - Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 31/03/2023 to 30/03/2028
Funding: 60.000 €

Grup Associació TECNIO

Funding Agency: Generalitat de Catalunya – Departament Empresa i Ocupació
Partners: Music Technology Group - Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 01/01/2023 to 31/12/2023
Funding: 16.393 €

AI models for Sound and Music Applications

Funding agency: MCIN/AEI/10.13039/501100011033 and European Union "NextGeneration EU"/PRTR
Partners: Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 01/12/2022 to 30/11/2024
Funding: 133.400 €

Challenges and Opportunities in Music Tech

Funding agency: EU-Creative Europe (as part of MusicAire project)
Partners: Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Duration: 01/7/2022 to 31/04/2023
Funding: 30.000 €

AI system for automatic audibility estimation of background music in audiovisual productions (LoudSense)

Funding agency: Generalitat de Catalunya - Acció
Partners: BMAT (Coordinator), Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra

Duration: 01/5/2021 to 30/04/2023

Funding: 80.000 €

Next generation of music monitoring technology (NextCore)

Funding agency: Ministerio de Ciencia e Innovación

Partners: BMAT (Coordinator), Universitat Pompeu Fabra

Principal Investigator at UPF: Xavier Serra

Reference: RTC2019-007248-7

Duration: 01/10/2020 to 31/09/2023

Funding: 223.973 €

Artificial intelligence to support musical experiences: towards a data-driven, human-centred approach (Musical AI)

Funding agency: Ministerio de Ciencia e Innovación

Partners: Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Reference: PID2019-111403GB-I00

Duration: 01/06/2020 to 31/05/2024

Funding: 215.017 €

Infrastructure for data capture, processing, visualization and listening

Funding agency: Ministerio de Ciencia, Innovación y Universidades

Partners: Department of Information and Communication Technologies, Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Reference: EQC2018-004236-P

Date: 7/12/2018

Funding: 217.009 €

Musical Bridges: Bridging cultures through music understanding

Funding agency: RecerCaixa

Partners: Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Duration: 01/03/2018 to 31/12/2021

Funding: 86.283 €

New Frontiers in Music Information Processing (MIP-Frontiers)

Funding agency: EC-Horizon 2020

Partners: Queen Mary University of London (Coordinator), Universitat Pompeu Fabra, Institut Mines-Telecom, Universitat Linz, Sony Europe Limited, Doremir Music Research AB, Roli Ltd

Principal Investigator at UPF: Xavier Serra

Reference: H2020 – 765068

Duration: 01/04/2018 to 28/02/2022

Funding: 743.618 €

Technologies for Supporting Online Music Education (TECSOME)

Funding agency: European Research Council, PoC

Partners: Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Reference: H2020 – 768530

Duration: 01/10/2017 to 31/03/2019

Funding: 150.000 €

Infrastructure for data management and visualization

Funding agency: Ministerio de Economía y Competitividad

Partners: Department of Information and Communication Technologies, Universitat Pompeu Fabra

Principal Investigator: Xavier Serra
Reference: UNPF15-EE-3293
Date: 29/06/2016
Funding: 359.000 €

DTIC-MdM Strategic Program on Data-Driven Knowledge Extraction

Funding agency: Ministerio de Economía y Competitividad
Partners: Department of Information and Communication Technologies, Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Reference: MDM-2015-0502
Duration: 01/01/2016 to 31/12/2019
Funding: 2.000.000 €

Music Information Gathering, Structuring and Processing for Semantic Audio Applications (MINGUS)

Funding agency: Ministerio de Economía y Competitividad
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Reference: TIN2015-69935-P MINECO/FEDER
Duration: 01/01/2016 to 31/12/2018
Funding: 37.873 €

Audio Commons: An Ecosystem for Creative Reuse of Audio Content

Funding agency: EC-ICT
Partners: Universitat Pompeu Fabra (Coordinator), Queen Mary University of London (UK), University of Surrey (UK), Jamendo SA (Luxemburg), AudioGaming (France), Waves Audio LTD (Israel)
Principal Investigator: Xavier Serra
Reference: H2020 – 6888382
Duration: 01/02/2016 to 31/01/2019
Funding: 765.000 €

Culture Aware Music Technologies (CAMUT)

Funding agency: European Research Council, PoC
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Reference: H2020 – 680608
Duration: 02/11/2015 to 01/05/2017
Funding: 150.000 €

Musical Building Blocks for Digital Makers and Content Creators (MusicBricks)

Funding agency: EC-ICT
Partners: Sigma Orionis SA (France) (Coordinator), Stromatolite Design Lab (UK), Universitat Pompeu Fabra (Spain), Technische Universitaet Wien (Austria), Institut de Recherche et Coordination Acoustique/Musique (France), Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V. (Germany)
Principal Investigator at UPF: Xavier Serra
Reference: H2020 - 644871
Duration: 01/01/2015 to 30/06/2016
Funding: 143.125 €

Auditory-motor patterning in Music performance via Multimodal Analysis of Playing technique (MUSMAP)

Funding agency: EC-ICT
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Reference: H2020 – 331270
Duration: 01/04/2014 to 31/03/2017
Funding: 221.191 €

Análisis de Señal para el Descubrimiento de Repertorios de Música Tradicional (SIGMUS)

Funding agency: Ministerio de Economía y Competitividad

Partners: Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Reference: TIN2012-36650

Duration: 01/01/2013 to 31/12/2015

Funding: 103.428 €

Computational models for the discovery of the world's music (CompMusic)

Funding agency: European Research Council, AdG

Partners: Universitat Pompeu Fabra

Principal Investigator: Xavier Serra

Reference: FP7-267583

Duration: 01/07/2011 to 30/06/2017

Funding: 2.443.200 €

Roadmap for Music Information Research (MIReS)

Funding agency: EC-ICT

Partners: Stromatolite Design Lab (UK), Universitat Pompeu Fabra (Spain) (Coordinator), Österreichische Studiengesellschaft für Kybernetik (Austria), Institut de Recherche et Coordination Acoustique/Musique (France), Instituto de Engenharia de Sistemas e Computadores do Porto (Portugal), Queen Mary, University of London (UK), Barcelona Music and Audio Technology (Spain)

Principal Investigator at UPF: Xavier Serra

Reference: FP7-287711

Duration: from 01/10/2011 to 31/03/2013

Funding: 105.359 €

Social Interaction and Entrainment using Music PeRformance Experimentation (SIEMPRE)

Funding agency: EC-ICT

Partners: Università degli Studi di Genova (Italy) (Coordinator), Universitat Pompeu Fabra (Spain), Queen's University Belfast (UK), University de Geneva (Switzerland), Doundazione Instituto Italiano di Tecnologia (Italy)

Principal Investigator at UPF: Xavier Serra

Reference: FP7-250026

Duration: 01/05/2010 to 30/06/2013

Funding: 296.982 €

Descripción y Recuperación de Información Musical y Sonora (DRIMS)

Funding agency: Ministerio de Ciencia e Innovación

Partners: Universitat Pompeu Fabra (Coordinator), Universidad de Alicante

Principal Investigator: Xavier Serra

Reference: TIN2009-14247-C02-01

Duration: 01/01/2010 to 31/12/2012

Funding: 190.575 €

Classical Planet

Funding agency: Plan Avanza del Ministerio de Industria

Partners: Fundación Isaac Albéniz (Coordinator), Fundación Instituto de Música de Cámara de Madrid, Universitat Pompeu Fabra

Principal Investigator at UPF: Xavier Serra

Reference: TSI-070100-2009-407

Duration: from 01/07/2009 to 31/01/2012

Funding: 51.400 €

Música 3.0: Creación, Interacción, Socialización

Funding agency: Plan Avanza del Ministerio de Industria
Partners: Universitat Pompeu Fabra (Coordinator), Barcelona Music and Audio Technologies
Principal Investigator: Xavier Serra
Reference: TSI-070100-2008-318
Duration: 01/01/2008 to 30/06/2011
Funding: 442.756 €

Estándares globales entre el mundo real y los mundos virtuales (Metaverse 1)

Funding agency: Ministerio de Industria, Turismo y Comercio
Partners: Industrial partners: Philips (Coordinator), Alcatel-Lucent, OrangeLabs, Technicolor, others; Research partners: UPF, INRIA, Utrecht Uni., others
Principal Investigator at UPF: Xavier Serra
Reference: TSI-020400-2008-98
Duration: 01/01/2008 to 31/12/2009
Funding: 207.622 €

Sound and Music for Everyone Everyday Everywhere Every way (SAME)

Funding agency: EC-IST
Partners: Università degli Studi di Genova (Italy) (Coordinator), Nokia Research Center (Finland), Kungliga Tekniska Högskolan (Sweden), Universitat Pompeu Fabra (Spain), Helsinki University of Technology (Finland), Institut de Recherche et Coordination Acoustique/Musique (France)
Principal Investigator at UPF: Xavier Serra
Reference: FP6-215749
Duration: 01/01/2008 to 31/12/2010
Funding: 315.000 €

Platform for search of Audiovisual Resources across Online Spaces (PHAROS)

Funding agency: EC-IST
Partners: Engineering – Ingegneria Informatica (Italy) (Coordinator), France Telecom (France), Fast Search & Transfer (FAST) (Norway), L3S Research Center (Germany), Fraunhofer IDMT (Germany), Ecole Polytechnique Fédérale de Lausanne (Switzerland), The Knowledge Media Institute, Open University (U.K.), Universitat Pompeu Fabra (Spain), VTT Technical Research Centre (Finland), Circom Regional - France, Metaware (Italy), Web Models (Italy), SAIL LABS Technology (Austria)
Principal Investigator at UPF: Xavier Serra
Reference: FP6-45035
Duration: 01/01/2007 to 31/12/2009
Funding: 468.440 €

Procesamiento Semántico de Música Digital (PROSEMUS)

Funding agency: Ministerio de Educación y Ciencia
Partners: Universitat Pompeu Fabra (Coordinator), Universidad de Alicante
Principal Investigator: Xavier Serra
Reference: TIN2006-14932-C02-01
Duration: 26/12/2006 to 25/12/2009
Funding: 157.300 €

Collaborative Authoring of Localized Cultural Heritage Contents over the Next Generation of Mashup Web Services (Variazioni)

Funding agency: EC – eContentPlus
Partners: Fundación Isaac Albéniz (Coordinator), Germinus XXI, University of Florence, Rigel Engineering, Universitat Pompeu Fabra, Lithuanian Academy of Music and Theatre, Koninklijk Conservatorium Brussel, Escola Superior de Música e das Artes do Espectáculo do Porto, Sibelius Academy, Association Européenne des Conservatoires, Exitech
Principal Investigator at UPF: Xavier Serra

Reference: ECP- 2005 - CULT- 038264

Duration: 01/09/2006 to 31/03/2009

Funding: 261.210 €

Sistemas de Trabajo en Red con Conciencia de Contenido enfocados hacia la Asistencia Avanzada y Adaptada (CANTATA)

Funding agency: Ministerio de Industrial, Turismo y Comercio

Partners: Bosch Security Systems, Philips Electronics Netherlands, Philips Medical Systems, Philips Consumer Electronics, TU/e, Multitel, ACIC, Barco, Traficon, IBBT, VTT, Solid, Antro, Capacity Networks, I&IMS, Telefónica, VICOMTech, Universitat Pompeu Fabra, CRP Henri Tudor, Codasystem, Kingston University, University of Cork, INRIA

Principal Investigator at UPF: Xavier Serra

Reference: FIT-350200-2006-33

Duration: 01/07/2006 to 30/06/2009

Funding: 312.000 €

The Platform for Search of Audiovisual Resources Across Online Spaces (SALERO)

Funding agency: EC – IST

Partners: Joanneum Research (Coordinator), NXN Software GMBH, TVC Netmedia Audiovisual S.L., Cinesite (Europe) Ltd, Fundació Barcelona Media Universitat Pompeu Fabra, Universitat Ramon Llull, Dublin Institute of Technology, Taideteollinen Korkeakoulu, The University of Glasgow, Leopold-Franzens Universität Innsbruck

Principal Investigator at UPF: Xavier Serra

Reference: FP6-45035

Duration: 01/01/2007 to 31/12/2009

Funding: 468.440 €

Music Open Distance Exchange Model (MODEM)

Funding agency: EC – Leonardo

Partners: I.T.C.G. “Atilio Deffenu” di Olbia (Coordinator), Universitat Pompeu Fabra, Steinberg France, Istituto di Scienze e Tecnologie de l’Informazione di Pisa, MIDIware (Roma, Scienter /Bologna), Sintagma (Roma), MI-7 (Malmo), Brighton Art Ltd (Brighton)

Principal Investigator at UPF: Xavier Serra

Reference: I/05/B/F/PP-154059

Duration: 01/10/2005 to 30/09/2007

Funding: 50.000 €

Emergent music cognition in natural and artificial interactive systems (EmCAP)

Funding agency: EC – IST

Partners: University of Plymouth (Coordinator), Universitat Pompeu Fabra, Magyar Tudományos Akadémia Pszichológiai Kutatóintézet, Universiteit van Amsterdam

Principal Investigator at UPF: Xavier Serra

Reference: FP6-013123

Duration: 01/10/2005 to 30/09/2008

Funding: 275.106 €

Processing Music (PROMUSIC)

Funding agency: Ministerio de Ciencia y Tecnología

Partners: Universitat Pompeu Fabra (Coordinator), IIIA-CSIC

Principal Investigator: Xavier Serra

Reference: TIC 2003-07776-C02

Duration: 01/12/2003 to 31/11/2006

Funding: 160.800 €

Semantic Interaction with Musical Audio Content (SIMAC)

Funding agency: EC – IST

Partners: Universitat Pompeu Fabra (Coordinator), Matrix Data; ÖFAI-Austrian Research Institute for Artificial Intelligence, Philips Research Eindhoven, QMUL - Queen Mary University of London.

Principal Investigator: Xavier Serra

Reference: FP6-507142

Duration: 01/01/2004 to 31/04/2006

Funding: 584.944 €

Browsing, Listening, Interacting, Performing, Sharing on Future HiFi Systems (Semantic-HIFI)

Funding agency: EC – IST

Partners: Institut de Recherche et Coordination Acoustique/ Musique (F) (Coordinator), Fraunhofer Gesellschaft, Institute for Digital Media Technology/Institute for Integrated Circuits (D), Sony France (F), Universitat Pompeu Fabra (SP), Ben Gurion University (IS), Native Instruments (D), Sony NSC Europe (B), Sony Deutschland (D)

Principal Investigator at UPF: Xavier Serra

Reference: FP6-507913

Duration: 01/12/2003 to 31/11/2006

Funding: 217.280 €

European Multilingual Digital Data Collection for Multimedia Content in Music Heritage (HARMOS)

Funding agency: EC- eContent

Partners: Fundación Isaac Albéniz (FIA) (Spain) (Coordinador), Universitat Pompeu Fabra (Spain), OrbiTeam (DE), Association of European Conservatoires (AEC), Lituianian Academy of Music (LI), Koninklijk Conservatorium Brussel, Hochschule für Musik Köln (DE), Royal College of Music (UK), The Higher School of Music of Catalonia, ESMuC (Spain); Escola Superior de Música e Artes do Espectáculo del Instituto Politécnico do Porto (Portugal)

Principal Investigator at UPF: Xavier Serra

Reference: EDC 11189-HARMOS/2877

Duration: 01/04/2004 to 31/03/2006

Funding: 211.765 €

Sound to Sense, Sense to Sound (S2S^2)

Funding agency: EC – IST

Partners: Media Innovation Unit - Firenze Tecnologia (Italy) (Coordinator); Kungl Tekniska Högskolan (Sweden); CSC DEI, Università di Padova (Italy); DI-VIPS, Università di Verona (Italy); DIST, Università di Genova (Italy); Helsinki University of Technology (Finland); PECA DEC, Ecole Normale Supérieure, (France); IPEM (Belgium); LEAD (France); Universitat Pompeu Fabra (Spain); OFAI Austrian Research Institute for Artificial Intelligence (Austria)

Principal Investigator at UPF: Xavier Serra

Reference: FP6-003773

Duration: from 01/06/2004 to 31/05/2007

Funding: 106.380 €

Entorno de programación para el procesamiento del contenido musical (AUDIOCLAS)

Funding agency: Ministerio de Ciencia y Tecnología - PROFIT

Partners: Universitat Pompeu Fabra (España) (Coordinator), Tape Gallery (Inglaterra), Duy S.A. (España)

Principal Investigator: Xavier Serra

Reference: TIC2003-07776-CO2

Duration: 01/12/2003 to 30/11/2006

Funding: 184.920 €

Xarxa de Centres de Suport a la Unnivació Tecnològica

Funding company: CIDEM, Departament d'Indústria, Comerç i Turisme de la Generalitat de Catalunya

Principal Investigator: Xavier Serra

Reference: XIT/2002

Duration: 30/12/2001 to 31/12/2002

Funding: 60.101 €

A GNU/Linux Audio distribution (AGNULA)

Funding agency: EC - IST

Partners: IRCAM (Institut de Recherche et Coordination Acoustique/Musique), Kung Tekniska Högskolan (KTH), Music Acoustics Group, Stockholm, Free Software Foundation Europe, Red Hat France, Universitat Pompeu Fabra.

Principal Investigator at UPF: Xavier Serra

Reference: IST-2001-34879

Duration: from 01/04/2002 to 31/03/2004

Funding: 270.632 €

Xarxa de Centres de Suport a la Unniviació Tecnològica

Funding company: CIDEM, Departament d'Indústria, Comerç i Turisme de la Generalitat de Catalunya

Principal Investigator: Xavier Serra

Duration: 29/12/2000 to 28/12/2001

Funding: 60.101 €

The Digital Heritage of Opera in the Open Network Environment (OPENDRAMA)

Funding agency: EC - IST

Partners: Space (SPACE) (Coordinator), Teatro del maggio Musicale Fiorentino - Fondazione (COMUNALE), English Opera North (EON), Ministero per i Beni e le Attività Culturali - Discoteca di Stato (DDS), Dynamic S.r.l. (DYNAMIC), Politecnico di Milano - HOC Hypermedia Open Center (POLIMI) The University of Glasgow - Centre for Music Technology (U.GLASGOW), Europe Online S.A. (EOL), System Simulation Ltd. (SSL), Universitat Pompeu Fabra.

Principal Investigator at UPF: Xavier Serra

Reference: IST-2000-28197

Duration: from 01/11/2001 to 31/10/2003

Funding: 196.782 €

Transformación de Audio basado en Contenido (TABASCO)

Funding agency: Ministerio de Ciencia y Tecnología

Partners: Universitat Pompeu Fabra (Coordinator), IIIA-CSIC

Principal Investigator: Xavier Serra

Reference: TIC-2000-1094-C02-01

Duration: from 01/01/2001 to 31/12/2003

Funding: 82.639 €

Music Orchestration Systems in Algorithmic Research and Technology (MOSART)

Funding agency: EC-Human Potential Programme

Partners: University of Copenhagen (Coordinator), Norwegian University of Science and Technology, Royal Institute of Technology, University of Aarhus, Danish Technical University, University of Sheffield, University of Nijmegen, Austrian Research Institute for Artificial Intelligence, Università degli Studi di Padova, University of Genova, Centro Nazionale Universitario di Calcolo Elettronico, Centre Nationale de la Recherche Scientifique, Universitat Pompeu Fabra.

Principal Investigator at UPF: Xavier Serra

Reference: HPRN-CT-2000-00115

Duration: from 01/09/2000 to 31/08/2003

Funding: 100.198 €

Content-based Unified Interfaces and Descriptors for Audio & Music (CUIDADO)

Funding agency: EC-IST

Partners: IRCAM (Coordinator), Sony CSL, Oracle, CreamWare, Ben Gurion University, Universitat Pompeu Fabra, Artspages International AS.

Principal Investigator at UPF: Xavier Serra

Reference: IST-1999-20194

Duration: from 01/01/2001 to 31/12/2003
Funding: 394.319 €

Recognition and Analysis of Audio (RAA)

Funding agency: EC-IST
Partners: JOANNEUM RESEARCH (Austria) (Coordinator), HS-ART Digital, Nederlands Omroepproductie Bedrijf, Academy of Athens, Taurus Media Technik, Filmkunst-Musikverlags-und Produktions-gesellschaft, Universitat Pompeu Fabra
Principal Investigator at UPF: Xavier Serra
Reference: IST-1999-12585
Duration: from 01/02/2000 to 31/07/2002
Funding: 355.478 €

Content-based Unified Interfaces for Digital Audio/music Description/processing (CUIDAD)

Funding agency: EC-Esprit
Partners: IRCAM (Paris) (Coordinator), York Music Technology Group (England), SONY CSL (Paris), SIM (Berlin), INA – GRM (Paris), Nokia Research Center (Finland), Universitat Pompeu Fabra.
Principal Investigator at UPF: Xavier Serra
Reference: Esprit-28793
Duration: 1/09/1998 to 01/03/2000
Funding: 6.000 €

First Cost-G6 Workshop on digital audio effects DAFX98

Funding agency: EC-Cost
Partners: Universitat Pompeu Fabra
PI: Xavier Serra
Duration: 19/11/1998 to 21/11/1998
Reference: COST-MS-98-2069
Funding: 11.900 €

First Cost-G6 Workshop on digital audio effects DAFX98

Funding agency: Dirección General de Enseñanza Superior
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Reference: CO97-0555
Duration: 01/01/1998 to 31/12/1998
Funding: 9.015 €

Digital Audio Effects, COST-G6

Funding agency: EC-Cost
Partners: España, Francia, Alemania, Italia, Irlanda, Gran Bretaña, Suiza, Belgica
Spanish delegate: Xavier Serra
Duration: from 01/09/1997 to 31/08/2001

Audio Morphing

Funding agency: CIDEM, Generalitat de Catalunya
Partners: DUY S.A., Universitat Pompeu Fabra (Coordinator)
Principal Investigator: Xavier Serra
Duration: from 01/04/1996 to 31/03/1997

Estudio Integrado

Funding agency: CIRIT, Generalitat de Catalunya
Partners: DUY S.A., Universitat Pompeu Fabra (Coordinator)
Principal Investigator: Xavier Serra
Duration: from 01/09/1994 to 31/12/1995

RELEVANT FUNDED INDUSTRIAL PROJECTS

Research contract

Funding company: Motmo, Spain
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/12/2023 to 30/11/2024
Funding: 73.170 €

Research contract

Funding company: Odisei, Spain
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 02/06/2023 to 01/06/2024
Funding: 60.000 €

Research contract

Funding company: Moises, Brasil
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 04/05/2023 to 03/02/2024
Funding: 27.000 €

Research contract

Funding company: Yamaha, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/04/2023 to 31/03/2024
Funding: 35.000 €

Research contract

Funding company: Trinity College, UK
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 05/11/2022 to 04/10/2023
Funding: 85.000 €

Research contract

Funding company: Trinity College, UK
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 05/05/2022 to 04/11/2022
Funding: 42.500 €

Research contract

Funding company: Sony, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/04/2022 to 31/03/2026
Funding: 240.000 €

Research contract

Funding company: Yamaha, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 1/4/2022 to 31/3/2023
Funding: 128.700 €

Research contract

Funding company: Trinity College, UK

Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 1/4/2021 to 30/03/2022
Funding: 85.000 €

Research contract

Funding company: Yamaha, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 1/4/2021 to 31/3/2022
Funding: 128.700 €

Research contract

Funding company: Kakao, Korea
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/3/2021 to 31/2/2022
Funding: 99.000 €

Research contract

Funding company: Heardis!, Germany
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/12/2020 to 31/09/2021
Funding: 92.000 €

Research contract

Funding company: Trinity College London, UK
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/04/2020 to 31/03/2021
Funding: 92.000 €

Research contract

Funding company: Kakao, Korea
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 13/01/2020 to 12/01/2021
Funding: 95.000 €

Research contract

Funding company: Huawei, Germany
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/10/2019 to 31/03/2021
Funding: 217.000 €

Research contract

Funding company: Kakao, Korea
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 09/01/2019 to 08/01/2020
Funding: 95.000 €

Research contract

Funding company: Flits, Germany
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/7/2018 to 31/06/2019
Funding: 100.000 €

Research contract

Funding company: Kakao, Korea
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 09/01/2018 to 08/01/2019
Funding: 90.000 €

Research contract

Funding company: La Cúpula, Spain
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/05/2018 to 30/04/2019
Funding: 100.000 €

Pablo2

Funding company: Korg, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/10/2015 to 31/09/2016
Funding: 105.000 €

Good-sounds

Funding company: Korg, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/2/2015 to 31/01/2016
Funding: 20.000 €

Pablo2

Funding company: Korg, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/10/2014 to 31/09/2015
Funding: 100.000 €

Pablo1

Funding company: Korg, Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/10/2013 to 31/09/2014
Funding: 100.000 €

ROMA

Funding company: Yamaha Corporation Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/04/2013 to 31/03/2014
Funding: 138.000 €

Monet

Funding company: Yamaha Corporation Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 06/04/2010 to 30/09/2012
Funding: 350.000 €

Vocaloid4

Funding company: Yamaha Corporation Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 06/04/2010 to 31/03/2011
Funding: 118.800 €

Vocaloid3

Funding company: Yamaha Corporation Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 01/04/2009 to 31/12/2009
Funding: 132.000 €

MinusOne

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 28/04/2009 to 27/04/2010
Funding: 112.000 €

Vocaloid2

Funding company: Yamaha Corporation Japan
Partners: Universitat Pompeu Fabra
Principal Investigator: Xavier Serra
Duration: from 11/04/2008 to 31/03/2009
Funding: 132.000 €

PhononDip

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 17/03/2008 to 17/09/2008
Funding: 66.000 €

Playable Audio 2

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 01/12/2007 to 31/03/2008
Funding: 27.395 €

Playable Audio 1

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 26/09/2006 to 25/09/2007
Funding: 150.300 €

Violin Performer 2: Improving the algorithm of "Performance Modeling" for professional quality violin synthesis

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 01/2007 to 01/10/2008
Funding: 106.843 €

Violin Performer 1: Improving the algorithm of "Performance Modeling" for professional quality violin synthesis

Funding company: Yamaha Corporation Japan

Principal Investigator: Xavier Serra
Duration: from 26/09/2006 to 25/09/2007
Funding: 84.537 €

Daisy 4

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 01/03/2004 to 31/08/2005
Funding: 161.020 €

ESPR-ESSO

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: from 01/10/2003 to 28/02/2005
Funding: 232.363 €

Análisis y Identificación de Audio (AIDA)

Funding company: Sociedad Digital de Autores y Editores (SDAE)
Principal Investigator: Xavier Serra
Duration: from 01/07/2001 to 31/06/2004
Funding: 706.294 €

Daisy 2: Research in the area of digital sound processing and application software development technologies

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: 04/03/2001 to 04/03/2002
Funding: 377.779 €

Daisy 1: develop and establish a synthesis technology for vocal sound

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: 04/03/2000 to 04/03/2001
Funding: 221.834 €

Elvis: develop and establish a morphing technology for singer's voice

Funding company: Yamaha Corporation Japan
Principal Investigator: Xavier Serra
Duration: 04/11/1997 to 10/03/2000
Funding: 334.075 €

SUPERVISED PHD THESIS

Title: ‘Automatic Characterization and Generation of Music Loops and Instrument Samples for Electronic Music Production’

Student: Antonio Ramires

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: February 2023

Title: ‘Exploration of Music Collections with Audio Embeddings’

Student: Philip Tovstogan

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: July 2022

Title: ‘Representation Learning for Music Classification and Retrieval: Bridging the Gap between Natural

Language and Music Semantics'

Student: Minz Won

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: July 2022

Title: 'Training sound event classifiers using different types of supervision'

Student: Eduardo Fonseca

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: November 2021

Title: 'Music recommender systems: taking into account the artists' perspective'

Student: Andrés Ferraro

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: September 2021

Title: 'Improving sound retrieval in large collaborative collections'

Student: Xavier Favory

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: February 2021

Title: 'Deep Neural Networks for Music and Audio Tagging'

Student: Jordi Pons

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: November 2019

Title: 'The musical dimension of Chinese traditional theatre: An analysis from computer aided musicology'

Student: Rafael Caro Repetto

University: Universitat Pompeu Fabra

Department: Department d'Humanitats

Date: December 2018

Title: 'MIRages: an account of music audio extractors, semantic description and context-awareness, in the three ages of MIR'

Student: Perfecto Herrera Boyer

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: December 2018

Title: 'Automatic assessment of singing voice pronunciation: a case study with jingju music'

Student: Rong Gong

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: December 2018

Title: 'Knowledge Extraction and Representation Learning for Music Recommendation and Classification'

Student: Sergio Oramas

University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies

Date: December 2017

Title: 'Knowledge-based Probabilistic Modeling for Tracking Lyrics in Music Audio Signals'

Student: Georgi Dzhambazov

University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: December 2016

Title: 'Computational Analysis of Audio Recordings and Music Scores for the Description and Discovery of Ottoman-Turkish Makam Music'
Student: Sertan Sentürk
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: December 2016

Title: 'Towards a multimodal knowledge base for Indian art music: A case study with melodic intonation'
Student: Gopala Krishna Koduri
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: December 2016

Title: 'A Data-driven Bayesian Approach to Automatic Rhythm Analysis of Indian Art Music'
Student: Ajay Srinivasamurthy
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: October 2016

Title: 'Computational Approaches for Melodic Description in Indian Art Music Corpora'
Student: Sankalp Gulati
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: October 2016

Title: 'Descriptor Control of Sound Transformations and Mosaicing Synthesis'
Student: Graham Coleman
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: February 2016

Title: 'Expression Control of Singing Voice Synthesis: Modeling Pitch and Dynamics with Unit Selection and Statistical Approaches'
Student: Martí Umbert
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: January 2016

Title: 'Tag Recommendation using Folksonomy Information for Online Sharing Platforms'
Student: Frederic Font Corbera
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 11/06/2015

Title: 'Algorithms and representations for supporting online music creation with large-scale audio databases'
Student: Gerard Roma Trepas
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 5/6/2015

Title: 'Statistical modelling and resynthesis of environmental texture sounds'
Student: Stefan Kersten
University: Universitat Pompeu Fabra

Department: Department in Information and Communication Technologies
Date: 5/6/2015

Title: 'Computational Analysis of Expressivity in Classical Guitar Performances'
Student: Tan Özaslan
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 11/29/2013

Title: 'Statistical Distribution of Common Audio Features'
Student: Martin Haro
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 22/11/2013

Title: 'Melody Extraction from Polyphonic Music Signals'
Student: Justin Salamon
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: September 2013

Title: 'Non-stationary sinusoidal analysis'
Student: Saso Musevic
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 10/09/2013

Title: 'Audio Source Separation for Music in Low-latency and High-latency Scenarios'
Student: Ricard Marxer
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 9/09/2013

Title: 'From music similarity to music recommendation: Computational approaches based on audio and metadata analysis'
Student: Dmitry Bogdanov
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: September 2013

Title: 'Exploring interactions between music and language during the early development of music cognition. A computational modelling approach'
Student: Ines Salselas
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 26/04/2013

Title: 'Automatic Musical Instrument Recognition from Polyphonic Music Audio Signals'
Student: Ferdinand Fuhrmann
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 25/04/2012

Title: 'Semantic Annotation of Music Collections: A Computational Approach'
Student: Mohamed Sordo

University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 27/02/2012

Title: 'Automatic Classification of Musical Mood by Content Based Analysis'
Student: Cyril Laurier
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 19/10/2011

Title: 'Identification of Versions of the Same Musical Composition by Processing Audio Descriptions'
Student: Joan Serra
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 23/03/2011

Title: 'Musical expectation modelling from audio: a causal mid-level approach to predictive representation and learning of spectro-temporal events'
Student: Amaury Hazan
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 16/07/2010

Title: 'Enhancing Spectral Synthesis Techniques with Performance Gestures using the Violin as a Case Study'
Student: Alfonso Perez
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 13/11/2009

Title: 'Modeling instrumental gestures: an analysis/synthesis framework for violin bowing'
Student: Esteban Maestre
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 12/11/2009

Title: 'Audio content processing for automatic music genre classification: descriptors, databases, and classifiers'
Student: Enric Guaus
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 21/09/2009

Title: 'Voice Processing and Synthesis by Performance Sampling and Spectral Models'
Student: Jordi Bonada
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: December 2008

Title: 'Music Recommendation and Discovery in the Long Tail'
Student: Oscar Celma
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: December 2008

Title: 'Singing-Driven Interfaces for Sound Synthesizers'
Student: Jordi Janer

University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 14/03/2008

Title: 'Music Complexity: a multi-faceted description of audio content'
Student: Sebastian Streich
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 21/02/2007

Title: 'Structural Analysis and Segmentation of Music Signals'
Student: Bee Suan Ong
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 21/02/2007

Title: 'Content-Based Audio Search from Fingerprinting to Semantic Audio Retrieval'
Student: Pedro Cano
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 27/04/2007

Title: 'Spectral Processing of The Singing Voice'
Student: Alex Loscos
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 02/05/2007

Title: 'Tonal Description of music audio signals'
Student: Emilia Gomez
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 25/07/2006

Title: 'Computer Supported Cooperative Work for Music Applications'
Student: Alvaro Barbosa
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 03/07/2006

Title: 'A computational approach to rhythm description --- Audio features for the computation of rhythm periodicity functions and their use in tempo induction and music content processing'
Student: Fabien Gouyon
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 30/11/2005

Title: 'Digital Lutherie: Crafting musical computers for new musics' performance and improvisation'
Student: Sergi Jordà
University: Universitat Pompeu Fabra
Department: Department in Information and Communication Technologies
Date: 21/06/2005

Title: 'An Object-Oriented Metamodel for Digital Signal Processing with a focus on Audio and Music'
Student: Xavier Amatriain

University: Universitat Pompeu Fabra
 Department: Department in Information and Communication Technologies
 Date: 27/01/2005

PUBLICATIONS

- Narang J, De La Vega V, Lizarraga X, Mayor O, Parra H, Janer J, Serra X. ChoralSynth: Synthetic Dataset of Choral Singing. arxiv.org; 2023.
- Singh R, Zinemanas P, Serra X, Bello JP, Fuentes M. Flowgrad: Using Motion for Visual Sound Source Localization. ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings 2023; 2023.
- Valero-Mas JJ, Gallego AJ, Alonso-Jimenez P, Serra X. Multilabel Prototype Generation for data reduction in K-Nearest Neighbour classification. Pattern Recognition 2023; 135.
- Plaja-Roglans G, Nuttall T, Pearson L, Serra X, Miron M. Repertoire-Specific Vocal Pitch Data Generation for Improved Melodic Analysis of Carnatic Music. Transactions of the International Society for Music Information Retrieval 2023; 6(1): 13-26.
- Battle-Roca R, Herrera-Boyer P, Melendez-Catalan B, Molina E, Serra X. Towards a characterization of background music audibility in broadcasted TV. International Journal of Environmental Research and Public Health 2023; 20(1): 1-15.
- Srinivasamurthy A, Gulati S, Caro Repetto R, Serra X. Getting started on computational musicology and music information research: an indian art music perspective. In: Rao P.; Murthy H. A.; Prasann S. R. M.. Indian art music: a computational perspective. Sriranga Digital Software Technologies Pvt. Ltd., 2023; 2023. p. 3-38.
- Narang J, Miron M, Lizarraga X, Serra X. Analysis of Musical Dynamics in Vocal Performances. In: Aramaki M, Kronland-Martinet R, Ystad S, Hirata K, Kitahara T. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). Springer Science, Business Media Deutschland GmbH; 2023.
- Nuttall T, Plaja-Roglans G, Pearson L, Serra X. The Matrix Profile for Motif Discovery in Audio - An Example Application in Carnatic Music. In: Aramaki M, Kronland-Martinet R, Ystad S, Hirata K, Kitahara T. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). Springer Science, Business Media Deutschland GmbH; 2023.
- Kim H, Serra X. DiffVel: note-level MIDI velocity estimation for piano performance by a double conditioned diffusion model. In: AA. VV.. CMMR2023, the 16th International Symposium on Computer Music Multidisciplinary Research. Tokio: Springer; 2023. p. 1-12.
- Gusó E, Luberadzka J, Baig M, Sayin Saraç U, Serra X. An objective evaluation of Hearing Aids and DNN-based speech enhancement in complex acoustic scenes. In: AA. VV.. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA 2023). New Paltz (New York): IEEE; 2023. p. 1-5.
- Alonso-Jiménez P, Favory X, Foughmand H, Bourdalas G, Serra X, Lidy T, Bogdanov D. Pre-Training Strategies Using Contrastive Learning and Playlist Information for Music Classification and Similarity. In: AA. VV.. Proceedings 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2023). Island of Rhodes: IEEE Signal Processing Society; 2023. p. 1-5.
- Tamer NC, Özer Y, Müller M, Serra X. TAPE: An End-to-End Timbre-Aware Pitch Estimator. In: AA. VV.. Proceedings 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2023). Island of Rhodes: IEEE Signal Processing Society; 2023. p. 1-5.
- Singh R, Zinemanas P, Serra X, Bello JP, Fuentes M. FlowGrad: Using Motion for Visual Sound Source Localization. In: AA. VV.. Proceedings 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2023). Island of Rhodes: IEEE Signal Processing Society; 2023. p. 1-5.
- Weck B, Serra X. Data leakage in cross-modal retrieval training: A case study. In: AA. VV.. Proceedings 2023 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2023). Island of Rhodes: IEEE Signal Processing Society; 2023. p. 1-5.
- Tamer, NC, Özer Y, Müller M, Serra X. High-resolution violin transcription using weak labels. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-8.
- Ramonedá P, Valero-Mas JJ, Jeong D, Serra X. Predicting performance difficulty from piano sheet music images. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-8.

- Morsi A, Tatsumi K, Maezawa A, Fujishima T, Serra X. Sounds out of place? Score-independent detection of conspicuous mistakes in piano performances. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-7.
- Plaja-Roglans G, Miron M, Shankar A, Serra X. Carnatic singing voice separation using cold diffusion on training data with bleeding. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-8.
- Perez M, Kirchhoff H, Serra X. TRIAD: capturing harmonics with 3D convolutions. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-8.
- Alonso Jiménez P, Serra X, Bogdanov D. Efficient supervised training of audio transformers for music representation learning. In: -. Proceedings ISMIR 2023. 24rd International Society for Music Information Retrieval Conference. Milan: ISMIR; 2023. p. 1-8.
- Kim H, Miron M, Serra X. Score-Informed MIDI Velocity Estimation for Piano Performance by FiLM Conditioning. In: AA. VV.. Proceedings of the 2023 Sound & Music Computing Conference (SMC Conference 2023). Stockholm: 2023. p. 1-9.
- Marcos-Fernández J, Joglar-Ongay L, Serra X, Bogdanov D. Audio Analysis Applications in the Browser with *Essentia.js*. In: AA. VV.. Proceedings WAC2022. 7th International Web Audio conference. 1 ed. Cannes: 2022.
- Ramoneda P, Can Tamer N, Eremenko V, Serra X, Miron M. Score difficulty analysis for piano performance education based on fingering. In: Li H, Furui S (eds.). 2022 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP). 1 ed. Singapur: IEEE Signal Processing Society; 2022. p. 201-205.
- Ramires A, Juras J, Parker JD, Serra X. A study of control methods for percussive sound synthesis based on gans. In: Evangelista G, Holighaus N (eds.). Proceedings - Digital Audio Effects 20's Vienna (eDAFx2020) 1 ed. Viena: IEEE; 2022. p. 224-231.
- Narang J, Miron M, Srinivasamurthy A, Serra X. Analysis of musical dynamics in vocal performances using loudness measures. In: Evangelista G, Holighaus N (eds.). Proceedings - Digital Audio Effects 20's Vienna (eDAFx2020) 1 ed. Viena: IEEE; 2022. p. 33-39.
- Drysdale J, Hockman J, Ramires A, Serra X. Improved automatic instrumentation role classification and loop activation transcription. In: Evangelista G, Holighaus N (eds.). Proceedings - Digital Audio Effects 20's Vienna (eDAFx2020) 1 ed. Viena: IEEE; 2022. p. 264-271.
- Tamer NC, Ramoneda P, Serra X. Violin etudes: a comprehensive dataset for f0 estimation and performance analysis. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-8.
- Plaja-Roglans G, Miron M, Serra X. A diffusion-inspired training strategy for singing voice extraction in the waveform domain. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-9.
- Andrew Correira A, Bogdanov D, Alonso-Jiménez P, Serra X. *Essentia API*: a web API for music audio analysis. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022.
- Nuttall T, Plaja-Roglans G, Pearson L, Sierra X. In search of Sañcaras: tradition-informed repeated melodic pattern recognition in carnatic music. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-8.
- Alonso-Jiménez P, Serra X, Bogdanov D. Music representation learning based on editorial metadata from discogs. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-9.
- Tovstogan P, Serra X, Bogdanov D. Visualization of deep audio embeddings for music exploration and rediscovery. In: Michon R, Pottier L, Orlarey Y (eds.). Proceedings of the SMC 2022 Music technology and design. 1 ed. Saint-Étienne: Université Jean Monnet of Saint-Étienne (CLLA); 2022. p. 493-500.
- Bogdanov D, Lizarraga Seijas X, Alonso-Jiménez P, Serra X. MusAV: A dataset of relative arousal-valence annotations for validation of audio models. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-9.
- Cortès G, Ciurana A, Molina E, Miron M, Meyers O, Six J, Serra X. BAF: an audio fingerprinting dataset for broadcast monitoring. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-9.
- Morsi A, Serra X. Bottlenecks and solutions for audio to score alignment research. In: AA. VVV.. Proceedings 23rd International Society for Music Information Retrieval Conference (ISMIR 2022). 1 ed. Bengaluru: ISMIR; 2022. p. 1-8.

- Ramoneda P, Jeong D, Nakamura E, Serra X, Miron M. Automatic Piano Fingering from Partially Annotated Scores using Autoregressive Neural Networks. In: AA. VV.. Proceedings 30th ACM International Conference on Multimedia. MM'22 1 ed. Lisboa: ACM Multimedia; 2022. p. 1-9.
- Kim H, Ramoneda P, Miron M, Serra X. An overview of automatic piano performance assessment within the music education context. In: Cukurova M, Rummel N, Gillet D, McLaren B, Uhomoihi J. Proceedings of the 14th International Conference on Computer Supported Education (online streaming). 1 ed. Setúbal: Sciteppress; 2022. p. 465-474.
- Weck B, Pérez M, Kirchhoff H, Serra X. Matching Text and Audio Embeddings: Exploring Transfer-learning Strategies for Language-based Audio Retrieval. In: Lagrange M, Mesaros AM, Pellegrini T, Richard G, Serizel R, Stowell D (eds.). Proceedings of the 7th Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE 2022). 1 ed. Nancy: Dcase; 2022. p. 206-211.
- Perez M, Kirchhoff H, Serra X. A Comparison of Pitch Chroma Extraction Algorithms. In: Michon R, Pottier L, Orlarey Y (eds.). Proceedings of the SMC 2022 Music technology and design. 1 ed. Saint-Étienne: Université Jean Monnet of Saint-Étienne (CLLA); 2022. p. 224-231.
- Tovstogan P, Serra X, Bogdanov D. Similarity of nearest-neighbor query results in deep latent spaces. In: Michon R, Pottier L, Orlarey Y (eds.). Proceedings of the SMC 2022 Music technology and design. 1 ed. Saint-Étienne: Université Jean Monnet of Saint-Étienne (CLLA); 2022. p. 287-294.
- Zinemanas P, Rocamora M, Miron M, Font F, Serra X. An Interpretable Deep Learning Model for Automatic Sound Classification. *Electronics* 2021; 10(7): 1-23.
- Correya A, Marcos-Fernández J, Joglar-Ongay L, Alonso-Jiménez P, Serra X, Bogdanov D. Audio and Music Analysis on the Web using *Essentia.js*. *Transactions of the International Society for Music Information Retrieval* 2021; 4(1): 167-181.
- Weigl DM, Crawford T, Gkiokas A, Goebel W, Gómez E, Gutiérrez NF, Liem CCS, Santos P. FAIR Interconnection and Enrichment of Public-Domain Music Resources on the Web. *Empirical Musicology Review* 2021; 16(1): 16-33.
- Fonseca E, Favory X, Pons J, Font F, Serra X. FSD50K: an Open Dataset of Human-Labeled Sound Events. *IEEE-ACM transactions on audio, speech, and language processing* 2021; ().
- Srinivasamurthy A, Gulati S, Caro R, Serra X, Saraga: Open Datasets for Research on Indian Art Music. *Empirical Musicology Review* 2021; 16(1): 85-98.
- Narang J, Miron M, Lizarraga X, Serra X. Analysis of Musical Dynamics in Vocal Performances. In: Hirata K, Tojo S, Kitahara T (ed.). 15th International Symposium on Computer Music Multidisciplinary Research (CMMR 2021). 1 ed. Tokio: 2021. p. 99-108.
- Ferraro A, Serra X, Bauer C. Break the Loop: Gender Imbalance in Music Recommenders. In: Scholer F, Thomas P (eds.). CHIIR '21: Proceedings of the 2021 Conference on Human Information Interaction and Retrieval. 1 ed. New York: Association for Computing Machinery; 2021. p. 249-254.
- Won M, Choi K, Serra X. Semi-supervised Music Tagging Transformer. In: AA. VV.. Proceedings 22nd International Society for Music Information Retrieval Conference (ISMIR 2021) Online. 1 ed. 2021. p. 769-776.
- Won M, Salamon J, Bryan NJ, Mysore G, Serra X. Emotion Embedding Spaces for Matching Music to Stories. In: AA. VV.. Proceedings 22nd International Society for Music Information Retrieval Conference (ISMIR 2021) Online. 1 ed. 2021. p. 777-785.
- Chandna P, Ramires A, Serra X, Gómez E. Loopnet: Musical Loop Synthesis Conditioned On Intuitive Musical Parameters. In: Androutsos, Dimitri; Plataniotis, Kostas; Zhang, Xiao-Ping. Proceedings of the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2021. p. 3395-3399.
- Won M, Oramas S, Nieto O, Gouyon F, Serra X. Multimodal Metric Learning For Tag-Based Music Retrieval. In: Androutsos, Dimitri; Plataniotis, Kostas; Zhang, Xiao-Ping. Proceedings of the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2021. p. 591-595.
- Favory X, Drossos K, Virtanen T, Serra X. Learning Contextual Tag Embeddings for Cross-Modal Alignment of Audio and Tags. In: Androutsos, Dimitri; Plataniotis, Kostas; Zhang, Xiao-Ping. Proceedings of the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2021. p. 596-600.
- Fonseca E, Ortego D, McGuinness K, O'Connor NE, Serra X. Unsupervised Contrastive Learning of Sound Event Representations. In: Androutsos, Dimitri; Plataniotis, Kostas; Zhang, Xiao-Ping. Proceedings of the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2021. p. 371-375.
- Ferraro A, Kim Y, Lee S, Kim B, Jo N, Lim S, Lim S, Jang J, Kim S, Serra X, Bogdanov D. Melon Playlist Dataset: A Public Dataset for Audio-Based Playlist Generation And Music Tagging. In: Androutsos, Dimitri;

- Plataniotis, Kostas; Zhang, Xiao-Ping. Proceedings of the 46th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2021. p. 536-540.
- Zinemanas P, Rocamora M, Fonseca E, Font F, Serra X. Toward interpretable polyphonic sound event detection with attention maps based on local prototypes. In: Font F, Mesaros AM, PW Ellis D, Fonseca E, Fuentes M, Elizalde B (eds.). Proceedings of the 6th Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE 2021). 1 ed. Barcelona: Music Technology Group, Universitat Pompeu Fabra; 2021. p. 50-54.
- Weck B, Favory X, Drossos K, Serra X. Evaluating Off-the-Shelf Machine Listening and Natural Language Models for Automated Audio Captioning. In: Font F, Mesaros AM, PW Ellis D, Fonseca E, Fuentes M, Elizalde B (eds.). Proceedings of the 6th Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE 2021). 1 ed. Barcelona: Music Technology Group, Universitat Pompeu Fabra; 2021. p. 1-5.
- Fonseca E, Jansen A, Ellis DPW, Wisdom S, Tagliasacchi M, Hershey JR, Plakal M, Hershey S, Channing Moore, Serra X. Self-Supervised Learning from Automatically Separated Sound Scenes. In: IEEE Workshop. WASPAA 2021. 1 ed. Nova York: IEEE Workshop; 2021. p. 1-10.
- Ferraro A, Oramas S, Quadrana M, Serra X. Maximizing the Engagement: Exploring New Signals of Implicit Feedback in Music Recommendations. In: Santos R, Marinho L. Proceedings 14th ACM Conference on Recommender Systems (on line). 1 ed. Rio de Janeiro: Association for Computing Machinery; 2020. p. 1-6.
- Ferraro A, Bogdanov D, Serra X, Jeon JH, Yoon J. How Low Can You Go? Reducing Frequency and Time Resolution in Current CNN Architectures for Music Auto-tagging. In: Heusdens R, Richard C. Proceedings 28th European Signal Processing Conference (EUSIPCO 2020). 1 ed. Amsterdam: European Association for Signal Processing (EURASIP); 2020. p. 131-135.
- Ramires A, Chandna P, Favory X, Gómez E, Serra X. Neural Percussive Synthesis Parameterised by High-Level Timbral Features. In: AA. VV.. Proceedings ICASSP 2020 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. Barcelona: IEEE; 2020. p. 786-790.
- Won M, Chun S, Nieto O, Serra X. Data-Driven Harmonic Filters for Audio Representation Learning. In: AA. VV.. Proceedings ICASSP 2020 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. Barcelona: IEEE; 2020. p. 536-540.
- Alonso-Jiménez P, Bogdanov D, Pons J, Serra X. TensorFlow Audio Models in Essentia. In: AA. VV.. Proceedings ICASSP 2020 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. Barcelona: IEEE; 2020. p. 266-270.
- Alonso-Jiménez P, Bogdanov D, Serra X. Deep embeddings with Essentia models. In: AA. VV.. Proceedings International Society of Music Information Retrieval Conference (ISMIR 2020). 1 ed. Montréal: ISMIR; 2020.
- Eremenko V, Morsi, A, Narang J, Serra X. Performance assessment technologies for the support of musical instrument learning. In: AA. VV.. Proceedings of the 12th International Conference on Computer Supported Education. 1 ed. DBLP Thomsom Reuters; 2020. p. 629-640.
- Favory X, Font F, Serra X. Search Result Clustering in Collaborative Sound Collections. In: AA. VV.. Proceedings of the 2020 International Conference on Multimedia Retrieval (ICMR 20). 1 ed. Dublin: 2020. p. 1-8.
- Correya A, Bogdanov D, Jjoglar-Ongay L, Serra X. Essentia.js: a JavaScript library for music and audio analysis on the web. In: Laplante A, Fujinaga I. Proceedings of the 21st International Society for Music Information Retrieval Conference (ISMIR). 1 ed. Montreal: International Society for Music Information Retrieval (ISMIR); 2020. p. 605-612.
- Ramires A, Font F, Bogdanov D, Smith JBL, Yang Y, Ching J, Chen B, Wu Y, Wei-Han H, Serra X. The Freesound Loop dataset and annotation tool. In: AA. VV.. Proceedings of the 21th International Society for Music Information Retrieval Conference, ISMIR 2020. 1 ed. Montreal: ISMIR; 2020. p. 287-294.
- Ramires A, Bernardes G, Davies MEP, Serra X. TIV.lib: an open-source library for the tonal description of musical audio open-source library for the tonal description of musical audio. In: Gianpaolo Evangelista. Proceedings of the 23rd International Conference on Digital Audio Effects. 1 ed. 2020. p. 304-309.
- Ferraro, A.; Jeon, JH; Kim, B.; Serra, X.; Bogdanov, D.. Artist biases in collaborative filtering for music recommendation. In: ICML. Proceedings of the 37 th International Conference on Machine Learning. 1 ed. 2020.
- Tovstogan, P.; Serra, X.; Bogdanov, D.. Web interface for exploration of latent and tag spaces in music auto-tagging. In: ICML. Proceedings of the 37 th International Conference on Machine Learning. 1 ed. 2020.
- Zinemanas P, Hounie I, Cancela P, Font F, Rocamora M, Serra X. DCASE-models: a python library for computational environmental sound analysis using deep-learning models. In: Ono N, Harada N, Kawaguchi Y, Mesaros A, Imoto K, Koizumi Y, Komatsu T (eds.). Proceedings of the Fifth Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE 2020). 1 ed. Tokio: Zenodo; 2020. p. 240-244.

- Ferraro A, Jannach D, Serra X. Exploring longitudinal effects of session-based recommendations. In: Santos R, Marinho L. Proceedings RecSys '20: Fourteenth ACM Conference on Recommender Systems (on line). 1 ed. Rio de Janeiro: Association for Computing Machinery; 2020. p. 474-479.
- Favory X, Drossos K, Virtanen T, Serra X. COALA: Co-Aligned Autoencoders for Learning Semantically Enriched Audio Representations. In: -. Proceedings Self-supervision in Audio and Speech Workshop at the 37th International Conference on Machine Learning (ICML). 1 ed. Viena: -; 2020. p. 1-8.
- Won M, Chun S, Serra X. Toward Interpretable Music Tagging with Self-Attention. arXiv.org; 2019.
- Alonso-Jiménez P, Joglar-Ongay L, Serra X, Bogdanov D. Automatic Detection of Audio Problems for Quality Control in Digital Music Distribution. AES journal of the Audio Engineering Society, audio, acoustics, applications 2019; ().
- Fonseca, E.; Plakal M.; Ellis, D. P. W.; Font, F.; Favory, X.; Serra, X.. Learning Sound Event Classifiers from Web Audio with Noisy Labels. In: -. ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. The Institute of Electrical and Electronics Engineers, Inc.; 2019. p. 21-25.
- Pons J, Serra X. Randomly weighted CNNs for (music) audio classification. In: -. ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. The Institute of Electrical and Electronics Engineers, Inc.; 2019. p. 336-340.
- Pons J, Serrà J, Serra X. Training neural audio classifiers with few data. In: -. ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. The Institute of Electrical and Electronics Engineers, Inc.; 2019. p. 16-20.
- Fonseca E, Font F, Serra X. Model-agnostic Approaches to Handling Noisy Labels When Training Sound Event Classifiers. In: IEEE. 2019 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics. 1 ed. IEEE; 2019. p. 16-20.
- Yesiler F, Tralie C, Correya A, Silva DF, Tovstogan P, Gómez E, Serra X. Da-TACOS: A data set for cover song identification and understanding. In: -. 20th Conference of the International Society for Music Information Retrieval (ISMIR 2019). 1 ed. Society for Music Information Retrieval (ISMIR 2019); 2019. p. 327-334.
- Nuttall, T; García-Casado, M; Núñez-Tarifa, V; Caro Repetto, R; Serra, X. Contributing to new musicological theories with computational methods: the case of centonization in Arab-Andalusian music. In: -. 20th Conference of the International Society for Music Information Retrieval (ISMIR 2019). 1 ed. Society for Music Information Retrieval (ISMIR 2019); 2019. p. 223-228.
- Falcao F, Bozkurt B, Serra X, Andrade N, Baysal, O. A Dataset of rhythmic pattern reproductions and baseline automatic assessment system. In: -. 20th Conference of the International Society for Music Information Retrieval (ISMIR 2019). 1 ed. Society for Music Information Retrieval (ISMIR 2019); 2019. p. 439-445.
- Won M, Chun S, Nieto O, Serra X. Automatic music tagging with Harmonic CNN. In: -. 20th International Society for Music Information Retrieval Conference 1 ed. Society for Music Information Retrieval; 2019.
- Pons J, Serra X. musicnn: pre-trained convolutional neural networks for music audio tagging. In: -. 20th International Society for Music Information Retrieval Conference 1 ed. Society for Music Information Retrieval; 2019.
- Lluís F, Pons J, Serra X. End-to-End Music Source Separation: Is it Possible in the Waveform Domain?. In: -. Interspeech 2019. 1 ed. 2019.
- Bogdanov D, Won M, Tovstogan P, Porter A, Serra X. The MTG-Jamendo Dataset for Automatic Music Tagging. In: -. Machine Learning for Music Discovery Workshop, International Conference on Machine Learning (ICML 2019). 1 ed. 2019.
- Ciamarone L, Bozkurt B, Serra X. Automatic Dastgah Recognition using Markov Models. In: Aramaki M, Derrien O, Kronland-Martinert Ystad S. Proceedings of the 14th International Symposium on Computer Music Multidisciplinary Research. 1 ed. Les éditions de PRISM; 2019. p. 51-59.
- Demirel E, Bozkurt B, Serra X. Automatic chord-scale recognition using harmonic pitch class profiles. In: -. Proceedings of the 16th Sound & Music Computing Conference (SMC 2019). 1 ed. 2019. p. 72-79.
- Ferraro A, Bogdanov D, Serra S, Yoon J. Artist and style exposure bias in collaborative filtering based music recommendations. In: Miron, M.; Charisi, V.; Gómez, E.. Proceedings of the 1st Workshop on Designing Human-Centric MIR Systems. 1 ed. ACM FAT Network; 2019. p. 8-10.
- Joglar-Ongay L, Correya A, Alonso-Jiménez P, Serra X, Bogdanov D. Essentia in the browse. In: Xambó A, Martín SR, Roma G (EDS.). Proceedings of the International Web Audio Conference 2019. 1 ed. Norwegian University of Science and Technology; 2019. p. 114-115.
- Ferraro A, Bogdanov D, Serra X. Skip prediction using boosting trees based on acoustic features of tracks in sessions. In: -. WSDM Cup Workshop 2019. 1 ed. ACM; 2019.

- Rong Gong; Xavier Serra. Towards an efficient deep learning model for musical onset detection. arXiv.org; 2018.
- Oramas S, Barbieri F, Nieto O, Serra X. Multimodal Deep Learning for Music Genre Classification. Transactions of the International Society for Music Information Retrieval 2018; 1(1): 4-21.
- Oramas, Sergio; Espinosa-Anke, Luis; Gómez, Francisco; Serra, Xavier. Natural language processing for music knowledge discovery. Journal of New Music Research 2018; 47(4): 365-382.
- Rethage D, Pons J, Serra X. A Wavenet for speech denoising. In: -. 2018 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. 2018. p. 5069-5073.
- Caro R, Pretto N, Chaachoo A, Bozkurt B, Serra X. An open corpus for the computational research of Arab-Andalusian music. In: Caro R, Pretto N, Chaachoo A, Bozkurt B, Serra X. Digital Libraries for Musicology (DLfM) 2018. 1 ed. 2018. p. 78-86.
- Demirel E, Bozkurt B, Serra X. Automatic makam recognition using chroma features. In: AA. VV. International Workshop on Folk Music Analysis 2018. 1 ed. Aristotle University of Thessaloniki, Greece; 2018. p. 19-24.
- Gong, Rong; Serra, Xavier. Singing voice phoneme segmentation by hierarchically inferring syllable and phoneme onset positions. In: -. Proc. Interspeech 2018. 1 ed. ISCA.ORG; 2018. p. 716-720.
- Eremenko V, Demirel E, Bozkurt B, Serra X. Audio-aligned jazz harmony dataset for automatic chord transcription and corpus-based research. In: Gómez E Hu X, Humphrey E Benetos E (eds.). Proceedings of the 19th International Society for Music Information Retrieval Conference, ISMIR 2018. 1 ed. DBLP; 2018. p. 483-490.
- Pons J, Nieto O, Prockup M, Schmidt E M, Ehmann A F, Serra X. End-to-end learning for music audio tagging at scale. In: Gómez E Hu X, Humphrey E Benetos E (eds.). Proceedings of the 19th International Society for Music Information Retrieval Conference, ISMIR 2018. 1 ed. DBLP; 2018. p. 637-644.
- Favory, Xavier; Fonseca, Eduardo; Font, Frederic; Serra, Xavier. Facilitating the Manual Annotation of Sounds When Using Large Taxonomies. In: Balandin S, Cinotti T, Viola F, Tyutina T. Proceedings of the 23rd Conference of Open Innovations Association FRUCT. 1 ed. FRUCT; 2018. p. 447-451.
- Bozkurt B, Gulati S, Romani O, Serra X. MusicCritic: A technological framework to support online music teaching for large audiences. In: Forrest D. Proceedings of the International Society for Music Education 33rd World Conference on Music Education 1 ed. International Society for Music Education (ISME); 2018. p. 12-19.
- Ferraro A, Bogdanov D, Choi K, Serra X. Using offline metrics and user behavior analysis to combine multiple systems for music recommendation. In: -. RecSys 2018 Workshop on Offline Evaluation of Recommender Systems. 1 ed. 2018.
- Yesiler F, Bozkurt B, Serra X. Makam recognition using extended pitch distribution features and multi-layer perceptrons. In: AA. VV. The 15th International Sound & Music Computing Conference. 1 ed. 2018. p. 249-253.
- Fonseca E, Gong R, Serra X. A Simple Fusion of Deep and Shallow Learning for Acoustic Scene Classification. In: AA. VV. The 15th International Sound & Music Computing Conference. 1 ed. 2018. p. 265-272.
- Pretto N, Bozkurt B, Caro Repetto R, Serra X. Nawba Recognition for Arab-Andalusian Music Using Templates From Music Scores. In: AA. VV. The 15th International Sound & Music Computing Conference. 1 ed. 2018. p. 394-399.
- Fonseca E, Plakal M, Font F, Ellis D P W, Favory X, Pons J, Serra X. General-purpose Tagging of Freesound Audio with AudioSet Labels: Task Description, Dataset, and Baseline. In: -. Workshop on Detection and Classification of Acoustic Scenes and Events. 1 ed. 2018. p. 69-73.
- Ferraro A, Bogdanov D, Yoon J, Kim KS, Serra X. Automatic playlist continuation using a hybrid recommender system combining features from text and audio. In: -. Workshop on the RecSys Challenge 2018. 1 ed. 2018.
- Kim, J.; Won, M.; Serra, X.; Liem, C. C. S.. Transfer learning of artist group factors to musical genre classification. In: AA.VV.. WWW '18 Companion Proceedings of the The Web Conference 2018. 1 ed. New York: ACL; 2018. p. 1929-1934.
- Gong R, Serra X. Identification of potential Music Information Retrieval technologies for computer-aided jingju singing training. 5th China Conference on Sound and Music Technology; 2017.
- Srinivasamurthy A, Holzapfel A, Ganguli KK, Serra X. Aspects of tempo and rhythmic elaboration in hindustani music: A corpus study. Frontiers in Digital Humanities 2017; 4().
- Espinosa-Anke L, Oramas S, Saggion H, Serra X. ELMDist: A Vector Space Model with Words and MusicBrainz Entities. Lecture Notes in Computer Science / Artificial Intelligence 2017; 10577(): 355-366.
- Serra X. The computational study of a musical culture through its digital traces. Acta musicologica 2017; 89(1): 24-44.
- Fonseca E, Gong R, Bogdanov D, Slizovskaia O, Gomez E, Serra X. Acoustic scene classification by ensembling gradient boosting machine and convolutional neural networks. In: Virtanen T, Mesáros A, Heittola T, Diment

- A, Vincent E, Benetos E, Elizalde B. Proceedings of the Detection and Classification of Acoustic Scenes and Events 2017 Workshop. 1 ed. 2017. p. 37-41.
- Pons J, Slizovskaia O, Gong R, Gómez E, Serra X. Timbre Analysis of Music Audio Signals with Convolutional Neural Networks. In: -. 25th European Signal Processing Conference (EUSIPCO) Proceedings. 1 ed. 2017.
- Pons J, Serra X. Designing Efficient Architectures for Modeling Temporal Features with Convolutional Neural Networks. In: VV.AA.. 42th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2017) Proceedings. 1 ed. 2017. p. 2472-2476.
- Caro Repetto, Rafael; Zhang, Shuo; Serra, Xavier. Quantitative analysis of the relationship between linguistic tones and melody in jingju using music scores. In: AA.VV.. 4th International Workshop on Digital Libraries for Musicology. 1 ed. ACM; 2017. p. 41-44.
- Gong R, Caro-Repetto R, Serra X. Creating an A Cappella Singing Audio Dataset for Automatic Jingju Singing Evaluation Research. In: AA.VV.. 4th International Workshop on Digital Libraries for Musicology. 1 ed. ACM; 2017.
- Font F, Roma G, Serra X. Sound sharing and retrieval. In: Virtanen T, Plumbley MD, Ellis D (eds.). Computational Analysis of Sound Scenes and Events. 1 ed. Springer International Publishing; 2017. p. 279-301.
- Oramas S, Nieto O, Sordo M, Serra X. A Deep Multimodal Approach for Cold-start Music Recommendation. In: VV.AA.. DLRS 2017: Deep Learning for Recommender Systems Proceedings. 1 ed. 2017. p. 32-37.
- Srinivasamurthy A, Holzapfel A, Serra X. Informed Automatic Meter Analysis of Music Recordings. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 679-685.
- Gong R, Pons J, Serra X. Audio to Score Matching by Combining Phonetic and Duration Information. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 428-434.
- Fonseca E, Pons J, Favory X, Font F, Bogdanov D, Ferraro A, Oramas S, Porter A, Serra X. Freesound datasets: a platform for the creation of open audio datasets. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 486-493.
- Dzhambazov G, Holzapfel A, Srinivasamurthy A, Serra X. Metrical-accent Aware Vocal Onset Detection in Polyphonic Audio. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 702-708.
- Pons J, Gong R, Serra X. Score-informed Syllable Segmentation for A Cappella Singing Voice with Convolutional Neural Networks. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 383-389.
- Oramas S, Ferraro A, Correya A, Serra X. MEL: a music entity linking system. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017.
- Bogdanov D, Serra X. Quantifying music trends and facts using editorial metadata from the Discogs database. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 89-95.
- Caro Repetto, Rafael; Serra, Xavier. A Collection of music scores for corpus based jingju singing research. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 46-52.
- Zhang, Shuo; Caro Repetto, Rafael; Serra, Xavier. Understanding the expressive functions of jingju metrical patterns through lyrics text mining. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 397-404.
- Oramas S, Nieto O, Barbieri F, Serra X. Multi-label Music Genre Classification from Audio, Text and Images Using Deep Features. In: Cunningham SJ, Duan Z, Hu X, Turnbull D. Proceedings of the 18th International Society for Music Information Retrieval Conference. 1 ed. International Society for Music Information Retrieval; 2017. p. 23-30.

- Gong R, Obin N, Dzhabazov G, Serra X. Score-informed syllable segmentation for Jingju a cappella singing voice with Mel-frequency intensity profiles. In: Barbancho I, Tardón LJ, Peinado A (eds.). Proceedings of the 7th International Workshop on Folk Music Analysis. 1 ed. Málaga: Folk Music Analysis; 2017. p. 107-113.
- Atli HS, Sentürk S, Bozkurt B, Serra X. Synthesis of Turkish Makam Music Scores Using An Adaptive Tuning Approach. In: Barbancho I, Tardón LJ, Peinado A (eds.). Proceedings of the 7th International Workshop on Folk Music Analysis. 1 ed. Málaga: Folk Music Analysis; 2017. p. 66-71.
- Espinosa-Anke L, Oramas S, Saggion H, Serra X. ELMDist: A vector space model with words and MusicBrainz entities. In: -. The semantic web: ESWC 2017 Satellite Events. 1 ed. Springer; 2017.
- Pons Puig, Jordi; Nieto, Oriol; Prockup, Matthew; Schmidt, Erik M.; Ehmann, Andreas F.; Serra, Xavier. End-to-end learning for music audio tagging at scale. In: -. Workshop Machine Learning for Audio Signal Processing at NIPS 2017. 1 ed. 2017.
- Cavdir, D; Romaní Picas O; Bandiera G; Serra X.. Vibrato Analysis Dataset, Detection and Parameterization. Music Technology Group - Universitat Pompeu Fabra; 2016.
- Oramas S, Espinosa-Anke L, Sordo M, Saggion H, Serra X. Information extraction for knowledge base construction in the music domain. *Data & knowledge engineering* 2016; 106(): 70-83.
- Oramas, Sergio; Ostuni, Vito Claudio; Di Noia, Tommaso; Serra, Xavier; Di Sciascio, Eugenio. Sound and music recommendation with knowledge graphs. *ACM Transactions on Intelligent Systems and Technology* 2016; 8(2): 1-21.
- Pons J, Lidy T, Serra X. Experimenting with Musically Motivated Convolutional Neural Networks. In: VV.AA.. 2016 14th International Workshop on Content-Based Multimedia Indexing (CBMI) 1 ed. 2016. p. 1-6.
- Srinivasamurthy, A; Holzapfel A; Cemgil A. T; Serra X. A generalized Bayesian model for tracking long metrical cycles in acoustic music signals. In: VV.AA. 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. IEEE; 2016. p. 76-80.
- Oramas S, Espinosa-Anke L, Lawlor A, Serra X, Saggion H. Exploring Customer Reviews for Music Genre Classification and Evolutionary Studies. In: VV.AA. 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. IEEE; 2016.
- Gulati S, Serrà J, Ishwar V, Serra X. Discovering raga motifs by characterizing communities in networks of melodic patterns. In: VV.AA. 2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). 1 ed. IEEE; 2016. p. 286-290.
- Parekh, S; Font F; Serra X.. Improving Audio Retrieval through Loudness Profile Categorization. In: AA.VV.. 2016 IEEE International Symposium on Multimedia (ISM). 1 ed. 2016. p. 565-568.
- Dzhabazov G, Goranchev K, Serra X. Sing Master: An Intelligent Mobile Game for Teaching Singing. In: -. 8th International Conference on Games and Virtual Worlds for Serious Applications. 1 ed. 2016.
- Caro Repetto, Rafael; Serra, Xavier. Melodic transformation processes in the arrangements of Jingju Banshi. In: VV.AA.. Fourth International Conference On Analytical Approaches To World Music (AAWM 2016) Proceedings. 1 ed. 2016.
- Oramas S, Espinosa-Anke L, Sordo M, Saggion H, Serra X. ELMD: An Automatically Generated Entity Linking Gold Standard Dataset in the Music Domain. In: -. LREC 2016 - Language Resources and Evaluation Conference. 1 ed. 2016. p. 3312-3317.
- Dzhabazov G, Serra X. Singing voice separation by harmonic modeling. In: VV.AA.. Music Information Retrieval Evaluation eXchange (MIREX) Proceedings. 1 ed. New York: ISMIR; 2016.
- Dzhabazov G, Srinivasamurthy A, Sentürk S, Serra X. On the Use of Note Onsets for Improved Lyrics-to-audio Alignment in Turkish Makam Music. In: VV.AA.. Music Information Retrieval Evaluation eXchange (MIREX) Proceedings. 1 ed. New York: ISMIR; 2016.
- Gómez E, Schedl M, Serra X, Hu X. Music Information Retrieval: Overview, Recent Developments and Future Challenges. In: VV.AA.. Music Information Retrieval Evaluation eXchange (MIREX) Proceedings. 1 ed. New York: ISMIR; 2016.
- Gulati S, Serrà J, Ishwar V, Serra X. Discovering Raga Motifs by Characterizing Communities in Networks of Melodic Patterns. In: -. Proceedings of 41st IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2016). 1 ed. 2016. p. 286-290.
- Gulati S, Serrà J, Ishwar V, Sentürk S, Serra X. Phrase-based raga recognition using vector space modeling. In: -. Proceedings of 41st IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2016). 1 ed. 2016. p. 66-70.

- Font F, Brookes T, Fazekas G, Guerber M, La Burthe A, Plans D, Plumbey M, Shaashua M, Wang W, Serra X. Audio Commons: bringing Creative Commons audio content to the creative industries. In: -. Proceedings of 61st AES Conference on Audio for Games. 1 ed. 2016.
- Itou, Katunobu; Caro Repetto, Rafael; Serra, Xavier. Melody Transcription Framework using Score Information for Noh Singing. In: -. Proceedings of International Conference on Creative Content Technologies. 1 ed. 2016. p. 36-41.
- Sentürk S, Koduri GK, Serra X. A score-informed computational description of svaras using a statistical model. In: Großmann Rolf, Hajdu Georg. Proceedings of the 13th Sound and Music Computing Conference 1 ed. 2016. p. 427-433.
- Sentürk S, Serra X. Composition Identification in Ottoman-Turkish Makam Music Using Transposition-Invariant Partial Audio-Score Alignment. In: Großmann Rolf, Hajdu Georg. Proceedings of the 13th Sound and Music Computing Conference 1 ed. 2016. p. 434-441.
- Gong R, Yang Y, Serra X. Pitch contour segmentation for computer-aided jinju singing training. In: Großmann Rolf, Hajdu Georg. Proceedings of the 13th Sound and Music Computing Conference 1 ed. 2016. p. 172-178.
- Dzhambazov G, Miron M, Serra X. Lyrics to audio alignment in polyphonic audio. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016.
- Dzhambazov G, Miron M, Serra X. Lyrics to audio alignment for karaoke in pop music. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016.
- Ganguli KK, Gulati S, Rao P, Serra X. Data-driven Exploration of Melodic Structures in Hindustani Music. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016.
- Font F, Serra X. Tempo Estimation for Music Loops and a Simple Confidence Measure. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016.
- Bandiera G, Romaní Picas O, Serra X. Good-sounds.org: a framework to explore goodness in instrumental sounds. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016.
- Bogdanov D, Porter A, Herrera P, Serra X. Cross-collection evaluation for music classification tasks. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016. p. 379-385.
- Gulati S, Serrà J, Ganguli K K, Sentürk S, Serra X. Time-Delayed Melody Surfaces for Raga Recognition. In: Devaney J, Mandel MI, Turnbull D, Tzanetakis G (eds.). Proceedings of the 17th International Society for Music Information Retrieval Conference ISMIR 2016. 1 ed. ISMIR; 2016. p. 751-757.
- Porter A, Bogdanov D, Serra X. Mining metadata from the web for AcousticBrainz. In: VV.AA. Proceedings of the 3rd International workshop on Digital Libraries for Musicology. 1 ed. ACM; 2016. p. 53-56.
- Karakurt A, Sentürk S, Serra X. MORTY: A Toolbox for Mode Recognition and Tonic Identification. In: VV.AA. Proceedings of the 3rd International workshop on Digital Libraries for Musicology. 1 ed. ACM; 2016. p. 9-16.
- Dzhambazov, Georgi Bogomilov; Yang, Yile; Caro Repetto, Rafael; Serra, Xavier. Automatic Alignment of Long Syllables In A cappella Beijing Opera. In: Beauguitte P, Duggan B, Kelleher J (eds.). Proceedings of the 6th International Workshop on Folk Music Analysis. 1 ed. Dublin Institute of Technology; 2016. p. 88-91.
- Sentürk S, Serra X. A Method for Structural Analysis of Ottoman-Turkish Makam Music Scores. In: Beauguitte P, Duggan B, Kelleher J (eds.). Proceedings of the 6th International Workshop on Folk Music Analysis. 1 ed. Dublin Institute of Technology; 2016. p. 39-46.
- Caro Repetto, Rafael; Serra, Xavier. NACTA: construyendo el futuro de la tradición del jingju. In: AA.VV.. XIV Congreso de la Sociedad de Etnomusicología, IX congreso de IASPM España. 1 ed. 2016.
- Font F, Serrà J, Serra X. Analysis of the impact of a tag recommendation system in a real-world folksonomy. ACM Transactions on Intelligent Systems and Technology 2015; 7(1).
- Ostuni VC, Di Noia T, Di Sciascio E, Oramas S, Serra X. A Semantic Hybrid Approach for Sound Recommendation. In: -. 24th International World Wide Web Conference (WWW 2015). 1 ed. 2015. p. 85-86.
- Zhang, Shuo; Caro Repetto, Rafael; Serra, Xavier. Predicting Pairwise Pitch Contour Relations Based on Linguistic Tone Information in Beijing Opera Singing. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 107-113.

- Bogdanov D, Porter A, Serra X. Taming wild horses with Essentia Music Extractor. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 1-2.
- Gulati S, Serrà J, Serra X. Improving Melodic Similarity in Indian Art Music Using culture-Specific Melodic Characteristics. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 680-686.
- Caro Repetto, Rafael; Gong, Rong; Kroher, Nadine; Serra, Xavier. Comparison of the singing style of two jingju schools. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 507-513.
- Dzhambazov G, Sentürk S, Serra X. Searching Lyrical Phrases in A-Capella Turkish Makam Recordings. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 687-693.
- Srinivasamurthy A, Holzapfel A, Cemgil AT, Serra X. Particle Filters for Efficient Meter Tracking with Dynamic Bayesian Networks. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 197-203.
- Porter A, Bogdanov D, Kaye R, Tsukanov R, Serra X. AcousticBrainz: a community platform for gathering music information obtained from audio. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 786-792.
- Gupta S, Srinivasamurthy A, Kumar M, Murthy H, Serra X. Discovery of Syllabic Percussion Patterns in Tabla Solo Recordings. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 786-391.
- Sentürk S, Ferraro A, Porter A, Serra X. A Tool for The Analysis and Discovery of Ottoman-Turkish Makam Music. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015.
- Oramas S, Sordo M, Espinosa-Anke L, Serra X. A Semantic-based Approach for Artist Similarity. In: Muller M, Wiering F. Proceedings of 16th International Society for Music Information Retrieval (ISMIR) Conference. 1 ed. International Society for Music Information Retrieval; 2015. p. 100-106.
- Romaní Picas O, Parra Rodriguez H, Dabiri D, Tokuda H, Hariya W, Oishi K, Serra X. A real-time system for measuring sound goodness in instrumental sounds. In: -. Proceedings of AES 138th Convention. 1 ed. 2015.
- Gulati S, Serrà J, Serra X. An evaluation of methodologies for melodic similarity in audio recordings of Indian art music. In: -. Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2015). 1 ed. 2015. p. 678-682.
- Gulati S Serrà J, Ishwar V, Sentürk S, Serra X. Phrase-based Raga Recognition Using Vector Space Modeling. In: -. Proceedings of Music Information Retrieval Evaluation eXchange (MIREX 2015). 1 ed. 2015. p. 66-70.
- Dzhambazov G, Serra X. Modeling of Phoneme Durations for Alignment between Polyphonic Audio and Lyrics. In: -. Proceedings of Sound and Music Computing Conference 2015. 1 ed. 2015. p. 281-286.
- Roma G, Serra X. Querying Freesound with a microphone. In: -. Proceedings of WAC 2015 - 1st Web Audio Conference. 1 ed. 2015. p. 1-3.
- Roma G, Serra X. Music performance by discovering community loops. In: -. Proceedings of WAC 2015 - 1st Web Audio Conference. 1 ed. 2015. p. 1-4.
- Gulati S, Bellur A, Salamon J, Ranjani H G, Ishwar V, Murthy H, Serra X. Automatic Tonic Identification in Indian Art Music: Approaches and Evaluation. *Journal of New Music Research* 2014; 43(1): 53-71.
- Font F, Serrà J, Serra X. Class-based tag recommendation and user-based evaluation in online audio clip sharing. *Knowledge-based systems* 2014; 67(): 131-142.
- Serra X. Computational approaches to the art music traditions of India and Turkey. *Journal of New Music Research* 2014; 43(1): 1-2.
- Bogdanov D, Wack N, Gómez E, Gulati S, Herrera P, Mayor O, Roma G, Salamon J, Zapata J, Serra X. ESSENTIA: an open source library for audio analysis. *SIGMM Records* 2014; 6(1).
- Font F, Oramas S, Fazekas G, Serra X. Extending tagging ontologies with domain specific knowledge. *CEUR Workshop Proceedings* 2014; 1272(): 209-212.
- Srinivasamurthy A, Holzapfel A, Serra X. In Search of Automatic Rhythm Analysis Methods for Turkish and Indian Art Music. *Journal of New Music Research* 2014; 43(1): 94-114.
- Koduri G K, Ishwar V, Serrà J, Serra X. Intonation analysis of ragas in Carnatic music *Journal of New Music Research* 2014; 43(1): 72-93.

- Sentürk S, Holzapfel A, Serra X. Linking Scores and Audio Recordings in Makam Music of Turkey. *Journal of New Music Research* 2014; 43(1): 34-52.
- Tian M, Srinivasamurthy A, Sandler M, Serra X. A Study of Instrument-wise Onset Detection in Beijing Opera Percussion Ensembles. In: AA.VV. 2014 International Conference on Acoustics, Speech, and Signal Processing (ICASSP). 1 ed. IEEE; 2014. p. 2159-2163.
- Srinivasamurthy, A; Serra X.. A Supervised Approach to Hierarchical Metrical Cycle Tracking from Audio Music Recordings. In: AA.VV. 2014 International Conference on Acoustics, Speech, and Signal Processing (ICASSP). 1 ed. IEEE; 2014. p. 5217-5221.
- Caro Repetto R, Serra X. Creating a Corpus of Jingju (Beijing Opera) Music and Possibilities for Melodic Analysis. In: -. 15th International Society for Music Information Retrieval Conference. 1 ed. 2014. p. 313-318.
- Urbano J, Bogdanov D, Herrera P, Gómez E, Serra X. What is the Effect of Audio Quality on the Robustness of MFCCs and Chroma Features?. In: -. 15th International Society for Music Information Retrieval Conference. 1 ed. 2014. p. 573-578.
- Zhang S, Caro Repetto R, Serra X. Study of the Similarity Between Linguistic Tones and Melodic Pitch Contours in Beijing Opera Singing. In: -. 15th International Society for Music Information Retrieval Conference. 1 ed. 2014. p. 343-348.
- Uyar B, Atli H S, Sentürk S, Bozkurt B, Serra X. A Corpus for Computational Research of Turkish Makam Music. In: VV.AA.. 1st International Digital Libraries for Musicology workshop. 1 ed. 2014. p. 1-7.
- Atli HS, Uyar B, Sentürk S, Bozkurt B, Serra X. Audio Feature Extraction for Exploring Turkish Makam Music. In: VV.AA.. 3rd International Conference on Audio Technologies for Music and Media. 1 ed. 2014.
- Sentürk S, Gulati S, Serra X. Towards Alignment of Score and Audio Recordings of Ottoman-Turkish Makam Music. In: VV.AA.. 4th International Workshop on Folk Music Analysis. 1 ed. 2014. p. 57-60.
- Dzhambazov G, Sentürk S, Serra X. Automatic lyrics-to-audio alignment in classical Turkish music. In: VV.AA.. 4th International Workshop on Folk Music Analysis. 1 ed. 2014. p. 61-64.
- Font F, Serrà J, Serra X. Audio clip classification using social tags and the effect of tag expansion. In: VV.AA.. AES 53rd International Conference on Semantic Audio. 1 ed. 2014. p. 157-165.
- Serra X. Creating Research Corpora for the Computational Study of Music: the case of the CompMusic Project. In: VV.AA.. AES 53rd International Conference on Semantic Audio. 1 ed. 2014. p. 1-9.
- Oramas S, Sordo M, Serra X. Automatic Creation of Knowledge Graphs from Digital Musical Document Libraries. In: VV.AA.. Conference in Interdisciplinary Musicology. 1 ed. 2014.
- Srinivasamurthy, Ajay; Koduri, Gopala Krishna; Gulati, Sankalp; Ishwar, Vignesh; Serra, Xavier. Corpora for Music Information Research in Indian Art Music. In: VV.AA.. International Computer Music Conference/Sound and Music Computing Conference. 1 ed. 2014. p. 1029-1036.
- Gulati S, Serrà J, Ganguli K K, Serra X. Landmark Detection in Hindustani Music Melodies. In: VV.AA.. International Computer Music Conference/Sound and Music Computing Conference. 1 ed. 2014. p. 1062-1068.
- Gulati S, Serrà J, Ishwar V, Serra X. Mining Melodic Patterns in Large Audio Collections of Indian Art Music. In: VV.AA.. International Conference on Signal Image Technology & Internet Based Systems - Multimedia Information Retrieval and Applications. 1 ed. 2014. p. 264-271.
- Font F, Oramas S, Fazekas G, Serra X. Extending Tagging Ontologies with Domain Specific Knowledge. In: VV.AA.. International Semantic Web Conference. 1 ed. Riva del Garda: 2014. p. 209-212.
- Gulati S, Serrà J, Ishwar V, Serra X. Melodic Pattern Extraction in Large Collections of Music Recordings Using Time Series Mining Techniques. In: VV.AA. International Society for Music Information Retrieval Conference (ISMIR-2014). 1 ed. 2014.
- Srinivasamurthy A, Caro Repetto R, Sundar H, Serra X. Transcription and Recognition of Syllable based Percussion Patterns: The Case of Beijing Opera. In: Hsin-Min Wang; Yi-Hsuan Yang; Jin Ha Lee. Proceedings of the 15th Conference of the International Society for Music Information Retrieval. 1 ed. 2014. p. 431-436.
- Zhang, Shuo; Caro Repetto, Rafael; Serra, Xavier. Study of the similarity between linguistic tones and melodic pitch contours in Beijing Opera singing. In: Hsin-Min Wang; Yi-Hsuan Yang; Jin Ha Lee. Proceedings of the 15th Conference of the International Society for Music Information Retrieval. 1 ed. 2014. p. 343-348.
- Caro Repetto, Rafael; Serra, Xavier. Creating a corpus of Jingju (Beijing Opera) music and possibilities for melodic analysis. In: Hsin-Min Wang; Yi-Hsuan Yang; Jin Ha Lee. Proceedings of the 15th Conference of the International Society for Music Information Retrieval. 1 ed. 2014. p. 313-318.
- Sordo M, Chaachoo A, Serra X. Creating Corpora for Computational Research in Arab-Andalusian Music. In: AA. VV. Proceedings of the 1st International Workshop on Digital Libraries for Musicology 1 ed. ACM; 2014.

- Porter, A; Serra X.. An analysis and storage system for music research datasets. In: AA. VV. Proceedings of the 1st International Workshop on Digital Libraries for Musicology 1 ed. ACM; 2014. p. 1-3.
- Uyar B, Atli HS, Sentürk S, Bozkurt B, Serra X. A Corpus for Computational Research of Turkish Makam Music. In: AA. VV. Proceedings of the 1st International Workshop on Digital Libraries for Musicology 1 ed. ACM; 2014. p. 1-7.
- Sordo, M; Chaachoo A; Serra X.. Creating Corpora for Computational Research in Arab-Andalusian Music. In: AA. VV. Proceedings of the 1st International Workshop on Digital Libraries for Musicology 1 ed. ACM; 2014. p. 1-3.
- Urbano J, Schedl M, Serra X. Evaluation in Music Information Retrieval. *Journal of Intelligent Information Systems* 2013; (): 345-369.
- Font F, Serrà J, Serra X. Folksonomy-based tag recommendation for collaborative tagging systems. *Semantic Web and Information Systems* 2013; (2).
- Sordo M, Gouyon F, Sarmiento L, Celma Ò, Serra X. Inferring Semantic Facets of a Music Folksonomy with Wikipedia. *Journal of New Music Research* 2013; 42(4): 346-363.
- Serra, Xavier; Magas, Michela; Benetos, Emmanouil; Chudy, Magdalena; Dixon, Simon; Flexer, Arthur; Gómez Gutiérrez, Emilia; Gouyon, Fabien; Herrera Boyer, Perfecto; Jordà Puig, Sergi; Paytuvi, Oscar; Peeters, Geoffroy; Schlüter, Jan; Vinet, Hugues; Widmer, Gerhard. Roadmap for Music Information ReSearch. 1 ed. The MIREs Consortium; 2013.
- Sentürk S, Gulati S, Serra X. Score Informed Tonic Identification for Makam Music of Turkey. In: VV.AA. International Society for Music Information Retrieval Conference (ISMIR'13). 1 ed. 2013. p. 175-180.
- Bogdanov D, Wack N, Gómez E, Gulati S, Herrera P, Mayor O, Roma G, Salamon J, Zapata J, Serra X. Essentia: an Audio Analysis Library for Music Information Retrieval. In: VV.AA. International Society for Music Information Retrieval Conference (ISMIR'13). 1 ed. 2013. p. 493-498.
- Porter, A.; Sordo M.; Serra X.. Dunya: A System for Browsing Audio Music Collections Exploiting Cultural Context. In: VV.AA. International Society for Music Information Retrieval Conference (ISMIR'13). 1 ed. 2013. p. 101-106.
- Koduri, G. K.; Serra, X. A knowledge-based approach to computational analysis of melody in Indian art music. In: AA.VV. International Workshop on Semantic Music and Media, International Semantic Web Conference. 1 ed. 2013.
- Font F, Roma G, Serra X. Freesound Technical Demo. In: -. Proceedings of the 21st ACM international conference on Multimedia. 1 ed. ACM; 2013. p. 411-412.
- Bogdanov D, Wack N, Gómez E, Gulati S, Herrera P, Mayor O, Roma G, Salamon J, Zapata J, Serra X. ESSENTIA: An open-source library for sound and music analysis. In: -. Proceedings of the 21st ACM international conference on Multimedia. 1 ed. ACM; 2013. p. 855-858.
- Serra, Xavier. Exploiting Domain Knowledge in Music Information Research. In: Askenfelt, Anders; Bresin, Roberto (eds.). Proceedings of the Stockholm Music Acoustics Conference 2013. 1 ed. Verlag: Logos Verlag; 2013. p. 1-4.
- Ramirez R, Maestre E, Serra X. A Rule-Based Evolutionary Approach to Music Performance Modeling. *IEEE Transactions on Evolutionary Computation* 2012; 16(1): 96-107.
- Serrà Julià, Joan; Zanin, Massimiliano; Herrera Boyer, Perfecto; Serra, Xavier. Characterization and exploitation of community structure in cover song networks. *Pattern Recognition Letters* 2012; 33(1): 1032-1041.
- Koduri G K, Gulati S, Rao P, Serra X. Raga Recognition based on Pitch Distribution Methods. *Journal of New Music Research* 2012; 41(4): 337-350.
- Roma G, Herrera P, Zanin M, Toral SL, Font F, Serra X. Small world networks and creativity in audio clip sharing. *International Journal of Social Network Mining* 2012; 1(1): 112-127.
- Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Font Corbera, Frederic; Roma Trepas, Gerard; Herrera Boyer, Perfecto; Serra, Xavier. Characterization of the Freesound Online Community. In: AA.VV.. 2012 3rd International Workshop on Cognitive Information Processing (CIP 2012) IEEE ed. 2012. p. 279-284.
- Bellur A, Ishwar V, Serra X, Murthy H. Characterization of Intonation in Carnatic Music by Parametrizing Pitch Histograms. In: AA. VV.. Proceedings of 13th International Society for Music Information Retrieval Conference. 1 ed. Porto: 2012. p. 199-204.

- Özaslan, T.; Serra, X.; Arcos, J.L. Characterization of Embellishments in Ney Performances of Makam Music in Turkey. In: AA. VV.. Proceedings of 13th International Society for Music Information Retrieval Conference. 1 ed. Porto: 2012. p. 13-18.
- Salamon J, Gulati S, Serra X. A Multipitch Approach to Tonic Identification in Indian Classical Music. In: AA. VV.. Proceedings of 13th International Society for Music Information Retrieval Conference. 1 ed. Porto: 2012. p. 499-504.
- Bellur A, Ishwar V, Serra X, Murthy H. Extracting Semantic Information from an Online Carnatic Music Forum. In: AA. VV.. Proceedings of 13th International Society for Music Information Retrieval Conference. 1 ed. Porto: 2012. p. 355-360.
- Bellur A, Ishwar V, Serra X, Murthy H. Folksonomy-based tag recommendation for online audio clip sharing. In: AA. VV.. Proceedings of 13th International Society for Music Information Retrieval Conference. 1 ed. Porto: 2012. p. 73-78.
- Serra, X.. Opportunities for a Cultural Specific Approach in the Computational Description of Music. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Sordo M, Koduri GK, Sentürk S, Gulati S, Serra X. A Musically Aware System for Browsing and Interacting with Audio Music Collections. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Sordo M, Serrà J, Koduri GK, Serra X. A Method for Extracting Semantic Information from on-line Art Music Discussion Forums. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Koduri G K, Serrà J, Serra X. Characterization of Intonation in Kanataka Music by Parametrizing Context-based Svvara Distributions. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Bellur A, Ishwar V, Serra X, Murthy H. A Knowledge Based Signal Processing Approach to Tonic Identification in Indian Classical Music. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Gulati S, Salamon J, Serra X. A Two-stage Approach for Tonic Identification in Indian Art Music. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Font F, Serra X. Analysis of the Folksonomy of Freesound. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012. p. 48-54.
- Özaslan, T; Serra, X.; Arcos, J.L.. Signal Analysis of Ney Performances. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012. p. 93-94.
- Sentürk S, Holzapfel A, Serra X. An Approach for Linking Score and Audio Recordings in Makam Music of Turkey. In: Serra X, Rao P, Murthy, H, Bozkurt B. Proceedings of the 2nd CompMusic Workshop. 1 ed. Universitat Pompeu Fabra; 2012.
- Serra, X.. Data Gathering for a Culture Specific Approach in MIR. In: -. WWW 2012 21st World Wide Web Conference 2012: proceedings of the 21st international conference companion on World Wide Web. 1 ed. New York: ACM; 2012. p. 867-868.
- Ramirez R, Maestre E, Serra X. Automatic Performer Identification in Celtic Violin Audio Recording. Journal of New Music Research 2011; 40(2): 165-174.
- Serrà J, Kantz H, Serra X, Andrzejak RG. Predictability of music descriptor time series and its application to cover song detection. IEEE Transactions on Audio, Speech and Language Processing 2011; 20(2): 514-525.
- Bogdanov D, Serrà J, Wack N, Herrera P, Serra X. Unifying Low-level and High-level Music Similarity Measures. IEEE Transactions on Multimedia 2011; 13(4): 687-701.
- Bonada, J.; Serra X.; Amatriain X.; Loscos A. Spectral Processing. In: Zölzer, U. (ed.). DAFX Digital Audio Effects. 1 ed. John Wiley; 2011. p. 393-446.
- Nogueira, Waldo; Haro Berois, Martín; Herrera Boyer, Perfecto; Serra, Xavier. Music Perception with Current Signal Processing Strategies for Cochlear Implants. In: -. ISABEL '11 Proceedings of the 4th International Symposium on Applied Sciences in Biomedical and Communication Technologies 1 ed. New York: ACM; 2011.
- Akkermans, Vincent; Font, Frederic; Funollet, Jordi; de Jong, Bram; Roma, Gerard; Togias, Stelios; Serra, X.. Freesound 2 - An Improved Platform for Sharing Audio Clips. In: Klapuri, Anssi; Leider, Colby. Proceedings of the 12th International Society for Music Information Retrieval Conference, ISMIR 2011. 1 ed. 2011. p. 1-3.

- Serra, X.. A Multicultural Approach in Music Information Research. In: Klapuri, Anssi; Leider, Colby. Proceedings of the 12th International Society for Music Information Retrieval Conference, ISMIR 2011. 1 ed. 2011. p. 151-156.
- Koduri GK, Miron M, Serrà J, Serra X. Computational Approaches for the Understanding of Melody in Carnatic Music. In: Klapuri, Anssi; Leider, Colby. Proceedings of the 12th International Society for Music Information Retrieval Conference, ISMIR 2011. 1 ed. 2011. p. 263-268.
- Serrà J, Koduri GK, Miron M, Serra X. Assessing the Tuning of Sung Indian Classical Music. In: Klapuri, Anssi; Leider, Colby. Proceedings of the 12th International Society for Music Information Retrieval Conference, ISMIR 2011. 1 ed. 2011. p. 263-268.
- Font, F.; Serra X.. Extending Sound Sample Descriptions through the Extraction of Community Knowledge.. In: Konstan, J. (ed.); Conejo, R. (ed.); Marzo, J.L. (ed.); Oliver, N. (ed.). User Modeling, Adaptation and Personalization: UMAP 2011. 1 ed. 2011. p. 418-421.
- Ramirez R, Maestre E, Serra X. Automatic performer identification in commercial monophonic Jazz performances. *Pattern Recognition Letters* 2010; 31(12): 1514-1523.
- Roma Trepal, Gerard; Janer Mestres, Jordi; Kersten, Stefan; Schirosa, Mattia; Herrera Boyer, Perfecto; Serra, Xavier. Ecological acoustics perspective for content-based retrieval of environmental sounds. *EURASIP Journal on Audio, Speech, and Music Processing* 2010; ().
- Laurier, Cyril François; Meyers, Owen; Serrà Julià, Joan; Blech, Martin; Herrera Boyer, Perfecto; Serra, Xavier. Indexing Music by Mood: Design and Integration of an Automatic Content-based Annotator. *Multimedia Tools and Applications* 2010; 48(1): 161-184.
- Pratyush; Umbert, M.; Serra, X. A look into the past: Analysis of trends and topics in the Sound & Music Computing Conference. In: Gómez, E. (ed.); Herrera, P. (ed.); Ramírez, R. (ed.). *SMC 2010: 7th Sound and Music Computing Conference: Proceedings*. 1 ed. Barcelona: Universitat Pompeu Fabra; 2010. p. 1-6.
- Serrà J, Serra X, Andrzejak RG. Cross recurrence quantification for cover song identification. *New Journal of Physics* 2009; 11(): 093017-093017.
- Fuhrmann, Ferdinand; Herrera Boyer, Perfecto; Serra, Xavier. Detecting Solo Phrases in Music Using Spectral and Pitch-related Descriptors. *Journal of New Music Research* 2009; 38(4): 343-356.
- Maestre F, Ramírez R, Kersten S, Serra X. Expressive concatenative synthesis by reusing samples from real performance recordings. *Computer Music Journal* 2009; 33(4): 23-42.
- Janer J, Finney N, Roma G, Kersten S, Serra X. Supporting Soundscape Design in Virtual Environments with Content-based Audio Retrieval. *Journal of Virtual Worlds Research* 2009; 2(3): 4-6.
- Hazan, Amaury; Marxer Piñón, Ricard; Brossier, Paul; Purwins, Hendrick; Herrera Boyer, Perfecto; Serra, Xavier. What/when causal expectation modelling applied to audio signals. *Connection Science* 2009; 21(2-3): 119-143.
- Herrera Boyer, Perfecto; Serrà Julià, Joan; Laurier, Cyril François; Gaus, Enric; Gómez Gutiérrez, Emilia; Serra, Xavier. The Discipline formerly known as MIR. In: Hirata, Keiji (ed.); Tzanetakis, George (ed.); Yoshii, Kazuyoshi (ed.). *10th International Society for Music Information Retrieval Conference*. 1 ed. International Society for Music Information Retrieval; 2009.
- Martínez, E.; Celma, Ò.; Sordo, M.; De Jong, B.; Serra, X. Extending the folksonomies of freesound.org using content-based audio analysis. In: A.A.V.V. *6th Sound and Music Computing Conference*. 1 ed. 2009. p. 65-70.
- Janer J, Haro M, Roma G, Fujishima T, Kojima N. Sound Object Classification for Symbolic Audio Mosaicing: A Proof-of-Concept. In: A.A.V.V. *6th Sound and Music Computing Conference*. 1 ed. 2009. p. 297-302.
- Roma Trepal, Gerard; Herrera Boyer, Perfecto; Serra, Xavier. Freesound Radio: supporting music creation by exploration of a sound database. In: AAVV. *Computational Creativity Support Workshop CHI09*. 1 ed. 2009. p. 1-2.
- Eakin, R.T.; Serra, X. SMSPD, LIBSMS and a Real-Time SMS Instruments. In: AA.VV. *Proceedings of the 12th International Conference on Digital Audio Effects*. 1 ed. London: Queen Mary University of London; 2009. p. 387-394.
- Ramirez R, Hazan A, Maestre E, Serra X. A Genetic Rule-based Expressive Performance Model for Jazz Saxophone. *Computer Music Journal* 2008; 32(1): 338-350.
- Serrà, J.; Gómez, E.; Herrera, P.; Serra, X. Chroma Binary Similarity and Local Alignment Applied to Cover Song Identification. *IEEE Transactions on Audio, Speech and Language Processing* 2008; 16(6): 1138-1151.
- Purwins, Hendrick; Herrera Boyer, Perfecto; Grachten, Maarten; Hazan, Amaury; Marxer Piñón, Ricard; Serra, Xavier. Computational Models of Music Perception and Cognition I: The Perceptual and Cognitive Processing Chain. *Physics of Life Reviews* 2008; 5(3): 151-168.

- Purwins, Hendrick; Grachten, Maarten; Herrera Boyer, Perfecto; Hazan, Amaury; Marxer Piñón, Ricard; Serra, Xavier. Computational Models of Music Perception and Cognition II: Domain-Specific Music Processing. *Physics of Life Reviews* 2008; 5(3): 169-182.
- Serrà, J; Gómez E; Herrera P; Serra X. Statistical analysis of chroma features in western music predicts human judgments of tonality. *Journal of New Music Research* 2008; 37(4): 299-309.
- Serra, Xavier. De la cultura musical a la cultura del so en la societat tecnològica. In: -. II Congrés Internacional de Música a Catalunya [abstractes de les ponències i biografies dels ponents]. 1 ed. 2008. p. 679-683.
- Gouyon, Fabien; Herrera Boyer, Perfecto; Gómez Gutiérrez, Emilia; Cano, Pedro; Bonada, Jordi; Loscos, Àlex; Amatriain, Xavier; Serra, Xavier. Content Processing of Music Audio Signals. In: Polotti, P.; Rocchesso, D. (eds.). *Sound to Sense, Sense to Sound: A State of the Art in Sound and Music Computing*. 1 ed. Berlin: Logos; 2008. p. 83-160.
- Ramirez R, Maestre E, Pertusa A, Gómez E, Serra X. Performance-based Interpreter Identification in Saxophone Audio Recordings. *IEEE transactions on circuits and systems for video technology* 2007; 17(3): 356-364.
- Serra X, Bresin R, Camurri A. Sound and Music Computing: Challenges and Strategies. *Journal of New Music Research* 2007; 36(3): 185-190.
- Bonada, J.; Serra, X. Synthesis of the Singing Voice by Performance Sampling and Spectral Models. *IEEE signal processing magazine* 2007; 24(2): 67-79.
- Serra, X; Widmer, G.; Leman, M. A Roadmap for Sound and Music Computing. 1 ed. S2S Consortium; 2007.
- Ramirez R, Hazan A, Maestre E, Serra X. A Machine Learning Approach to Expressive Performance in Jazz Standards. In: Valery A. Petrushin and Latifur Khan (eds.). *Multimedia Data Mining and Knowledge Discovery*. 1 ed. London: Springer; 2007. p. 1-2.
- Serra Casals, Xavier. State of the Art and Future Directions in Musical Sound Synthesis. In: Institute of Electrical and Electronics Engineers, IEEE Signal Processing Society. *Proceedings of International Workshop on Multimedia Signal Processing*. 1 ed. Piscataway: IEEE; 2007. p. 1-2.
- Serra, X.. The Origins of DAFx and its Future within the Sound and Music Computing Field. In: AA.VV. *Proceedings of the 10th International Conference on Digital Audio Effects DAFx-07*. 1 ed. Talence: Université Bordeaux 1; 2007. p. 251-252.
- Gouyon, F.; Widmer, G.; Serra, X.; Flexer, A. Acoustic Cues to Beat Induction. A Machine Learning Perspective. *Music Perception* 2006; 24(2): 177-188.
- Celma Ò, Herrera P, Serra X. Bridging the Music Semantic Gap. *CEUR Workshop Proceedings* 2006; 187().
- Puiggròs M, Gómez Gutiérrez E, Ramírez R, Serra X, Bresin R. Automatic characterization of ornamentation from bassoon recordings for expressive synthesis. In: Baroni, M (ed.). *Proceedings of 9th International Conference on Music Perception and Cognition*. 1 ed. Society for Music Perception & Cognition; European Society for the Cognitive Sciences of Music; 2006. p. 1533-1538.
- Cano P, Gómez, E, Gouyon F, Herrera P, Koppenberger M, Ong B, Serra X, Streich S, Wack N. ISMIR 2004 Audio Description Contest. Music Technology Group - UPF; 2006.
- Ramirez R, Hazan A, Gomez E, Maestre E, Serra X. Discovering Expressive Transformation Rules from Saxophone Jazz Performances. *Journal of New Music Research* 2005; 34(4): 319-330.
- Cano, P., Koppenberger M., Wack N., G. Mahedero J., Masip J., Celma Ò., Garcia D., Gómez E., Gouyon F., Gaus E., Herrera P., Massaguer J., Ong B., Ramírez M., Streich S., Serra X.. An Industrial-Strength Content-based Music Recommendation System. In: Marchionini, G. (ed.). *28th Annual International ACM SIGIR Conference*. 1 ed. New York: Association for Computing Machinery; 2005.
- Celma Herrada, Òscar; Herrera Boyer, Perfecto; Serra, Xavier. Bridging the Music Semantic Gap. In: Gerig, G.; Duncan, J. (eds.). *Medical image computing and computer-assisted intervention - MICCAI 2005*. 1 ed. Berlin: Springer; 2005.
- Serra X. Towards A Roadmap for The Research in Music Technology. In: Suvisoft Oy Ltd (ed.). *Proceedings of International Computer Music Conference*. 1 ed. 2005.
- Cano, P.; Koppenberger, M.; Wack, N.; G. Mahedero, J.; Aussenac, T.; Marxer, R.; Masip, J.; Celma, O.; Garcia, D.; Gómez, E.; Gouyon, F.; Gaus, E.; Herrera, P.; Massaguer, J.; Ong, B.; Ramírez, M.; Streich, S.; Serra, X. Content-based Music Audio Recommendation. In: A.A.V.V. *Proceedings of the 13th annual ACM international conference on Multimedia*. 1 ed. 2005. p. 211-212.
- Herrera Boyer, Perfecto; Bello, Juan; Widmer, Gerhard; Sandler, Mark; Celma Herrada, Òscar; Vignoli, Fabio; Pampalk, Elias; Cano, Pedro; Pauws, Steffen; Serra, Xavier. SIMAC: Semantic interaction with music audio contents. In: IEE Visual Information Engineering (VIE) Professional Network. *The 2nd European Workshop on the Integration of Knowledge, Semantics and Digital Media Technology*. 1 ed. London: IEE; 2005. p. 1-2.

- Wright, M., Dannenberg R., Pope S., Rodet X., Serra X., & Wessel D.. Panel: Standards from the Computer Music Community. In: -. Proceedings of International Computer Music Conference. 1 ed. San Francisco: International Computer Music Association; 2004. p. 711-714.
- Serra, Xavier. Current Research in Music Technology at the Audiovisual Institute of the Pompeu Fabra University. In: -. Proceedings of International Computer Music Conference. 1 ed. San Francisco: International Computer Music Association; 2004.
- Serra X. Guest Editorial. Journal of New Music Research 2003; 32(1): 1-2.
- Serra X. The Musical Communication Chain and its Modeling. In: Assayag, G.; Feichtinger, Hans-Georg; Rodrigues, J. F. (eds.). Mathematics and music. A Diderot mathematical forum. 1 ed. Springer Verlag; 2002. p. 243-255.
- Amatriain X, Bonada J, Loscos A, Serra X. Spectral Processing. In: Udo Zölzer. DAFX: Digital audio effects. 1 ed. London: Wiley; 2002.
- Bonada, J.; Loscos, A.; Cano, P.; Serra, X.. Spectral Approach to the Modeling of the Singing Voice. In: -. Proceedings of 111th AES Convention. 1 ed. New York: 2001.
- Bonada, J.; Celma, O.; Loscos, A.; Ortolà, J.; Serra, X. Singing Voice Synthesis Combining Excitation plus Resonance and Sinusoidal plus Residual Models. In: Schloss, Andrew (ed.). Proceedings of International Computer Music Conference 2001. 1 ed. San Francisco, CA: International Computer Music Association; 2001. p. 17-22.
- Amatriain X, Bonada J, Loscos A, Serra X. Spectral Modeling for Higher-level Sound Transformation. In: VV.AA. Proceedings of MOSART Workshop on Current Research Directions in Computer Music. 1 ed. Barcelona: 2001.
- Wright M, Beauchamp J, Fitz K, Rodet X, Röbel A, Serra X. Analysis/synthesis comparison. Organised Sound 2000; 5(3): 173-189.
- De Boer, M.; Bonada J.; Cano, P.; Loscos, A.; Serra, X.. Singing Voice Impersonator Application for PC. In: AA.VV.. Proceedings of International Computer Music Conference 2000. 1 ed. 2000.
- Serra X. Musical activities at the Audiovisual Institute of the Pompeu Fabra University.. In: AA.VV.. Proceedings of International Computer Music Conference 2000. 1 ed. 2000.
- Loscos A, Cano P, Bonada J, De Boer M, Serra X. Voice Morphing System for Impersonating in Karaoke Applications. In: AA.VV.. Proceedings of International Computer Music Conference 2000. 1 ed. 2000.
- Serra, Xavier; Bonada, J.; De Boer, M.. Using the Sound Description Interchange Format within the SMS Applications. In: AA.VV.. Proceedings of International Computer Music Conference 2000. 1 ed. 2000.
- Herrera Boyer, Perfecto; Amatriain, Xavier Batlle, Eloi; Serra, Xavier. Towards Instrument Segmentation for Music Content Description: a Critical Review of Instrument Classification Techniques. In: AA.VV.. Proceedings of International Symposium on Music Information Retrieval. 1 ed. 2000.
- Herrera Boyer, Perfecto; Serra, Xavier; Peeters, Geoffroy. Audio descriptors and descriptor schemes in the context of MPEG-7. International Computer Music Conference Proceedings 1999; (): 581-584.
- Herrera Boyer, Perfecto; Serra, Xavier. Els nous mitjans per a l'experimentació musical: quan la tecnologia esdevé quelcom més que una eina. Transversal 1999; (8): 1-7.
- Herrera, Perfecto; Serra, Xavier; Peeters, Geoffroy. A proposal for the description of audio in the context of MPEG-7. In: AA.VV.. Proceedings of First International Workshop on Content-Based Multimedia Indexing. 1 ed. -: 1999.
- Herrera P, Serra X, Peeters G. Audio Descriptors and Descriptor Schemes in the Context of MPEG-7. In: AA.VV.. Proceedings of International Computer Music Conference 1999. 1 ed. 1999. p. 581-584.
- Resina E, Serra X. The Musicians' Software Mall A Set of Composition and Performance Oriented Applications for Sound Synthesis. In: AA.VV.. Proceedings of the International Computer Music Conference 1999. 1 ed. 1999. p. 197-200.
- Resina E, Serra X. Models Estructurals per a una Educació Musical Superior. CODEXXI: Revista de la Comunicació 1998; 1(): 219-230.
- Arcos, J L; Lopez de Mantaras R; Serra, X. Saxex: A Case-Based Reasoning System for Generating Expressive Musical Performances. Journal of New Music Research 1998; 27(3): 194-210.
- Serra X. Graduate Level Music Education in the Context of the Digital Arts A Practical Example. In: AA.VV. La terra Fertile. 1 ed. 1998.
- Amatriain, X., Bonada J., Serra X.. METRIX: A Musical Data Definition Language and Data Structure for a Spectral Modeling Based Synthesizer. In: Loureiro R, Garou B. Proceedings of COST G6 Conference on Digital Audio Effects 1998. 1 ed. Barcelona: 1998.

- Wright, M., Chaudhary A., Freed A., Wessel D., Rodet X., Woehrmann R., Serra X.. New Applications of the Sound Description Interchange Format. In: AA.VV.. Proceedings of International Computer Music Conference 1998. 1 ed. -: 1998.
- Arcos, J L; Lopez de Mantaras, R; Serra, X.. Integrating background musical knowledge in a CBR system for generating expressive musical performances. In: AA.VV.. Proceedings of the 15th National Conference on Artificial Intelligence. AAAI ed. 1998. p. 12-16.
- Serra X. Spectral Modeling of Musical Sounds. In: AA.VV.. Proceedings of the Fourth Meeting of the FWO Research Society on Foundations of Music Research. 1 ed. Ghent: University of Ghent; 1998.
- Serra, X.; Bonada, J.. Sound Transformations Based on the SMS High Level Attributes. In: Garau, B.; Loureiro Alonso, R. (eds.). Proceedings: 98 Digital Audio Effects Workshop Barcelona, November 19-21, 1998. 1 ed. Barcelona: Audiovisual Institute Pompeu Fabra University; 1998. p. 1-2.
- Serra, X. Perspectives actuals en la síntesi digital de sons musicals. *Formats* 1997; (1): 1-2.
- Serra Casals, Xavier. Musical Sound Modeling with Sinusoids Plus Noise. In: Roads, C.; Poli, G.D.; Piccilli, A.; Pope, S.T. (eds.). *Musical Signal Processing*. 1 ed. Lisse: Swets & Zeitlinger Publishers; 1997. p. 91-122.
- Loureiro R, Serra X. A Web Interface for a Sound Database and Processing System. In: AA.VV.. Proceedings of International Computer Music Conference 1997. 1 ed. International Computer Music Association; 1997.
- Arcos JL, López de Mantaras R, Serra X. Saxex: a Case-Based Reasoning System for Generating Expressive Musical Performances. In: AA.VV.. Proceedings of International Computer Music Conference 1997. 1 ed. International Computer Music Association; 1997. p. 194-210.
- Serra, Xavier; Bonada, Jordi; Herrera Boyer, Perfecto; Loureiro, Ramon. Integrating Complementary Spectral Models in the Design of a Musical Synthesizer. In: AA.VV.. Proceedings of International Computer Music Conference 1997. 1 ed. International Computer Music Association; 1997. p. 1-1.
- Serra Casals, Xavier.. Residual minimization in a musical signal model based on a deterministic plus stochastic decomposition. In: Quirt, J.D. (ed.). 128th meeting of the Acoustical Society of America. 1 ed. Woodbury: ASA; 1994. p. 1-2.
- Serra Casals, Xavier. Sound Hybridization Techniques Based on a Deterministic Plus Stochastic Decomposition Model. In: AA.VV.. Proceedings of the International Computer Music Conference ICM'94. 1 ed. -: 1994. p. 1-1.
- Serra X, Brncic G. Phonos: studio report. In: AA.VV.. Proceedings of the International Computer Music Conference ICM'94. 1 ed. -: 1994. p. 488-489.
- Serra, Xavier. L'ordinador: nova eina per a la música. *Revista musical catalana* 1992; (): 1-2.
- Serra, Xavier. SANSY: An Environment for the Transformation of Musical Sounds. *Leonardo Music Journal* 1991; 1(1): 81-88.
- Austin L, Boone C. Serra X. Transmission two: the great excursion (TT:TGE): the aesthetic, art and science of a composition for radio. *Leonardo Music Journal* 1991; 1(1): 81-88.
- Serra X, Smith JO. A Sound Decomposition System Based on a Deterministic plus Residual Model. *Journal of the Acoustical Society of America* 1990; Suppl. 1(): 1-2.
- Serra, Xavier. Current Directions in Computer Music Research, edited by Max V. Mathews and John R. Pierce. *Music Perception* 1990; 8(1): 107-110.
- Serra X, Smith JO. Spectral Modeling Synthesis: A Sound Analysis/Synthesis Based on a Deterministic plus Stochastic Decomposition. *Computer Music Journal* 1990; 14(4): 12-24.
- Serra, X.. A System for Sound Analysis/Transformation/Synthesis based on a Deterministic plus Stochastic Decomposition. Stanford University; 1989.
- Serra, Xavier. An Environment for the Analysis, Transformation and Resynthesis of Musical Sounds. CCRMA - Stanford University; 1988.
- Serra X, Wood P. Overview: Center for Computer Research in Music and Acoustics. CCRMA- Stanford University; 1988.
- Smith J, Serra X. PARSHL: An Analysis/Synthesis Program for non-Harmonic Sounds Based on a Sinusoidal Representation. In: -. Proceedings of the International Computer Music Conference. 1 ed. 1987. p. 290-297.
- Serra, Xavier. A Computer Model for Bar Percussion Instruments. In: -. Proceedings of the International Computer Music Conference. 1 ed. 1986. p. 257-262.

PATENTS

Inventors: Tokuda, H.; Hariya, W.; Oishi, K.; Parra, H.; Dabiri, D.; Serra, X.

Title: Musical tone evaluation device and program

Application number: JP2014-216990

Priority country: Japan

Priority date: 24/10/2014

Assignee: Korg

Companies exploiting it: Korg

Inventors: Yasuo Yoshioka, Hamamatsu (JP); Hiraku Kayama, Hamamatsu (JP); Xavier Serra, Barcelona (ES); Jordi Bonada, Barcelona (ES)

Title: Voice Converter with Extraction and Modification of Attribute Data

United States Patent number: US 7,149,682 B2

Date of Patent: Dec. 12, 2006

Filed: Oct. 29, 2002

Assignee: Yamaha Corporation (Hamamatsu, JP); Pompeu Fabra University (Barcelona, ES)

Companies exploiting it: Yamaha Corporation

Inventors: Hideki Kenmochi, Shimizu (JP); Xavier Serra, Barcelona (ES); Jordi Bonada, Barcelona (ES)

Title: Singing Voice Synthesizing Apparatus, Singing Voice Synthesizing Method, and Program for Realizing Singing Voice Synthesizing Method

United States Patent number: US 7,016,841 B2

Date of Patent: Mar. 21, 2006

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Assignee: Yamaha Corporation (Hamamatsu, JP)

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Inventors: Kawashima; Takahiro (Hamamatsu, JP), Yoshioka; Yasuo (Hamamatsu, JP), Cano; Pedro (Barcelona, ES), Loscos; Alex (Barcelona, ES), Serra; Xavier (Barcelona, ES), Schiementz; Mark (Barcelona, ES), Bonada; Jordi (Barcelona, ES)

Title: Voice converter for assimilation by frame synthesis with temporal alignment

United States Patent number: US 6,836,761 B1

Date of Patent: Dec. 28, 2004

Filed: October 20, 2000

Assignee: Yamaha Corporation (Hamamatsu, JP); Pompeu Fabra University (Barcelona, ES)

Companies exploiting it: Yamaha Corporation

Inventors: Yasuo Yoshioka, Hamamatsu (JP); Xavier Serra, Barcelona (ES)

Title: Converting Apparatus of Voice Signal by Modulation of Frequencies and Amplitudes of Sinusoidal Wave Components

United States Patent number: US 7,117,154 B2

Date of Patent: Oct. 3, 2006

Filed: Oct. 27, 1998

Assignee: Yamaha Corporation (Hamamatsu, JP); Pompeu Fabra University (Barcelona, ES)

Companies exploiting it: Yamaha Corporation

Inventors: Xavier Serra, Barcelona, Spain; Chris Williams, San Rafael, Calif.; Robert Gross, Raleigh, N.C.; Erling Wold, El Cerrito, Calif.

Title: Method of an Apparatus for Analyzing and Synthesizing a Sound by Extracting and Controlling a Sound Parameter

United States Patent number: 5.536.902

Date of Patent: Jul. 16, 1996

Filed: Apr. 14, 1993

Assignee: Yamaha Corporation, Japan

Countries extended to: Europe, Asia
Companies exploiting it: Yamaha Corporation

Inventors: Xavier Serra; Julius O. Smith
Title: Musical Synthesizer Combining Deterministic and Stochastic Waveforms
United States Patent number: 5.029.509
Date of Patent: Jul. 9, 1991
Filed: Nov. 3, 1989
Assignee: Stanford University, Stanford, Calif.
Countries extended to: Europe, Asia
Companies exploiting it: Yamaha Corporation