audio commons

Deliverable D7.7
Report on dissemination and publication of results

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Executive Summary

This deliverable summarises all dissemination activities carried out during the project, as well as AudioCommons contribution to other initiatives.

It comprises of four sections:

(i) **Publications of results,** listing by year and in alphabetical order the contributions published in academic venues (e.g Journals or Conference Proceedings).

(ii) **Conferences,** listing in temporal order the academic events attended to disseminate publications and outcomes (e.g. presentations, demonstrators, workshops, data challenges).

(iii) **Dissemination events,** listing those events primarily aimed at sharing the results of the Audio Commons project among the other collaborators (internal meetings), to broad audiences (talks, panels, performances), to music technology practitioners (workshops, hack days), to potential partners (industry days), and to those taking part in evaluation activities (user studies).

(iv) **Web engagement**, listing the information gathered by the analytics of our website and our reflective report on its impact; the dissemination promoted by the blog posts; the activity generated by our use of the social media Twitter.

(v) **Published tools and demonstrators**, comprising a list of the technology developed during the project and 3rd party technology that started integrating content from the Audio Commons content providers during the lifetime of the project.

This deliverable is transversal to several tasks of this work package, providing means and suggestion to interpret the work conducted by the different working groups with respect to the communities that were touched by the dissemination activity carried out.

Background

This section covers the background of this deliverable, belonging to WP7 Dissemination and Exploitation, transversal to the other work packages which operated in the project.

The main scope of this deliverable is to summarise all dissemination activities carried out during the project, as well as the AudioCommons outcomes and their contribution to other initiatives, including:

- Publications (QMUL, Surrey, MTG-UPF).
- Conferences (e.g. ISMIR, Audio Mostly, WAC, Ubimus, FRUCT).
- Trade shows attendances (e.g. Fast Industry Day, Sonar, Abbey Road Hackathon).
- Other dissemination events, which can be also found in other deliverables and in the general meeting presentations, as well as workshops.
- The tools and demonstrators developed by the project partners as well as those integrated into other technologies, not developed by the project.

Details about the technological contributions mentioned by this deliverable can be found also: (i) in the deliverables produced by WP2, specifically "D2.7 Service Integration guidelines" and "D2.8 Final Ontology specification"; (ii) in the latest deliverable produced by WP4 "D4.12 Release of the tool for the automatic semantic description of music samples"; (iii) the latest deliverable by WP3 "D5.8 Release of timbral characterisation tools for semantically annotating non-musical content".

Several collateral projects which integrated the AudioCommons technologies are also reported in "D6.12 Report on the evaluation of the ACE from a holistic and technological perspective".

In "D7.6 Exploitation and sustainability plan" we report our suggestions to bring our different contributions forward and include our work into a self-sustainable cycle. In "D3.5 Evaluation of the business models emerging from the ACE" we present different models which integrate of our technical contribution into a vision that takes into account the needs of the different parts of the ecosystem from a business perspective.

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1 Introduction

This deliverable covers the dissemination activities conducted during the three years of the AudioCommons project. It provides (i) a list of the academic publications produced during the project, (ii) a list of the conferences attended by those participating in the project with the relevant contribution presented, (iii) a list of additional dissemination events attended by the members of the Consortium, (iv) reflective feedback on the impact which the publication of material on the website had on those engaging with the Audio Commons Ecosystem. We provide a quantitative overview of the the results in the following table, which highlight the number of items produced by each of the above categories.

Dissemination activity	Number
Academic publications	
Journal papers and book chapters	10
Journal papers and book chapters (in press/submitted/in preparation)	7
Conference proceedings	58
Conference proceedings (submitted)	2
Datasets	33
Academic events	
Attended academic events (talks)	18
Attended academic events (posters, demonstrations, sessions)	14
Data challenges (organized with AC content)	3
Other dissemination events	
Project meetings	7
General audience and industry events	7
Workshops, Hackathon days	3
Performances	6
Web engagement	
Web blog posts	35
Tweets	53
Twitter followers	276

Dissemination through tools and demonstrators	
AC tools developed by industry partners	3
AC core tools developed by the consortium	7
Other AC demonstrators and tools developed by the consortium	10
Integration of AC content in 3rd party tools	6

1.1 Main objectives and goals

The main objective of this deliverable is to present an overview of the dissemination activity conducted during the three years of the AudioCommons project (2016-2019), providing references in support of the impact that AudioCommons achieved on the scientific community and actors or organisations belonging to the creative industries.

1.2 Terminology

AudioCommons: reference to the EC H2020 funded project AudioCommons, with grant agreement nr 688382.

Audio Commons Initiative: reference to the AudioCommons project core ideas beyond the lifetime and specific scope of the funded project. The term "Audio Commons Initiative" is used to imply i) our will to continue supporting the Audio Commons Ecosystem and its ideas after the lifetime of the funded project, and ii) our will to engage new stakeholders which are not officially part of the project consortium.

Audio Commons: generic reference to the Audio Commons core ideas, without distinguishing between the concept of the initiative and the actual funded project.

Audio Commons Ecosystem (ACE): set of interconnected tools, technologies, content, users and other actors involved in publishing and consuming Audio Commons content.

Audio Commons content (ACC): audio content released under Creative Commons licenses and enhanced with meaningful contextual information (e.g., annotations, license information) that enables its publication in the ACE.

Content creator: individual users, industries or other actors that create audio content and publish in the ACE through content providers.

Content provider: services that expose content created by content creators to the ACE.

Content user: individual users, industries or other actors that use the content exposed by content providers and created by content creators in their creative workflows.

Tool developer: individual users, industries or other actors that develop tools for consuming (and also potentially publishing) Audio Commons content.

Embeddable tools: tools for consuming Audio Commons content that can be embedded in existing production workflows of creative industries.

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2 Publication of results

We list below the material accepted for publication in academic venues. This information is also available on the website of the project, under the section Materials, where every entry is accompanied by a link where it is possible to download the relative publication. We list the publications from the most recent to the oldest.

2.1 Academic publications - journals and book chapters

2019 (2)

Estefanía Cano, Derry FitzGerald, Antoine Liutkus, Mark D. Plumbley and Fabian-Robert Stöter (2019). Musical Source Separation: An Introduction. In: IEEE Signal Processing Magazine . URL: http://epubs.surrey.ac.uk/849940/

Turchet, L., Barthet, M. (2019). Smart Musical Instruments: Key Concepts and Do It Yourself Tutorial. In: Foundations in Sound Design: an interdisciplinary approach, Vol 3 Embedded Media, Routledge (in press)

2018 (8)

Choi, K., Fazekas, G., Sandler, M., Cho, K. (2018). The Effects of Noisy Labels on Deep Convolutional Neural Networks for Music Tagging. In: IEEE Transactions on Emerging Topics in Computational Intelligence Vol. 2, No. 2. URL: https://ieeexplore.ieee.org/document/8323324

Liang, B., Fazekas, G., Sandler, M. (2018). Measurement, Recognition and Visualisation of Piano Pedalling Gestures and Techniques. In: Journal of the AES, Vol. 66, Issue 2. URL: http://www.aes.org/e-lib/browse.cfm?elib=19584

Stolfi, A., Sokolovskis, J. , Gorodscy, F. , Iazzetta, F., Barthet, M. (2018). Audio Semantics: Online Chat Communication in Open Band Participatory Music Performances. In: Journal of the Audio Engineering Society.

Turchet, L., Barthet, M. (2018). Co-design of Musical Haptic Wearables for Electronic Music Performer's Communication. In: IEEE Transactions on Human-Machine Systems. https://doi.org/10.1109/THMS.2018.2885408

Turchet, L., Barthet, M. (2018). Internet of Musical Things: Vision and Challenges. In: IEEE Access. 6, 61994-62017, https://doi.org/10.1109/ACCESS.2018.2872625

Turchet, L., McPherson, A., Barthet, M. (2018). Real-time hit classification in a Smart Cajón. In: Frontiers in ICT, 5, 16, https://doi.org/10.3389/fict.2018.00016

Turchet, L., McPherson, A., Barthet, M. (2018). Co-design of a Smart Cajón. In: Journal of the Audio Engineering Society, 66(4), 220-230, https://doi.org/10.17743/jaes.2018.0007

Xambó, A., Lerch, A., Freeman, J. (2018). Music Information Retrieval in Live Coding: A Theoretical Framework. In: Computer Music Journal.

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2.2 Academic publications - conference/workshop proceedings

2019 (1)

Ferraro, A., Bogdanov D., Serra X. (2019). Skip prediction using boosting trees based on acoustic feature of tracks in sessions. In: Proc. of the 12th ACM International Conference on Web Search and Data Mining, 2019 WSDM Cup Workshop.

2018 (30)

Bogdanov, D., Porter A., Urbano J., Schreiber H. (2018). The MediaEval 2018 AcousticBrainz Genre Task: Content-based Music Genre Recognition from Multiple Sources. In: MediaEval Workshop. URL: http://hdl.handle.net/10230/35744

Turchet L., Viola F., Fazekas G., Barthet M. (2018) Towards a Semantic Architecture for the Internet of Musical Things. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference. https://fruct.org/publications/fruct23/files/Tur2.pdf

Viola F., Turchet L., Antoniazzi F., Fazekas G. (2018) C Minor: a Semantic Publish/Subscribe Broker for the Internet of Musical Things. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference. https://fruct.org/publications/fruct23/files/Vio.pdf

Ceriani, M., Fazekas, G. (2018). Audio Commons Ontology: A Data Model for an Audio Content Ecosystem. In: Proc. of the 17th International Semantic Web Conference (ISWC). URL: https://link.springer.com/chapter/10.1007%2F978-3-030-00668-6_2

Choi, K., Fazekas, G., Sandler, M., Cho, K. (2018). A Comparison of Audio Signal Preprocessing Methods for Deep Neural Networks on Music Tagging. In: Proc. of the 26th European Signal Processing Conference (EUSIPCO). URL: https://arxiv.org/abs/1709.01922

Choobbasti, A., Gholamian, M., Vaheb, A., and Safavi, S. (2018). JSPEECH: A Multi-lingual conversational speech corpus. In: Proc. of the Speech and Language Technology Workshop (SLT).

Favory, X., Fonseca E., Font F., Serra X. (2018). Facilitating the Manual Annotation of Sounds When Using Large Taxonomies. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference. URL: https://arxiv.org/abs/1811.10988

Favory, X., Serra, X. (2018). Multi Web Audio Sequencer: Collaborative Music Making. In: Proc. of the Web Audio Conference (WAC). URL: https://webaudioconf.com/papers/multi-web-audio-sequencer-collaborative-music-making.pdf

Ferraro, A., Bogdanov D., Choi K., Serra X. (2018). Using offline metrics and user behavior analysis to combine multiple systems for music recommendation. In: Proc. of the Conference on Recommender Systems (RecSys), REVEAL Workshop. URL: https://drive.google.com/open?id=1_CCCZiyy7J962hcYOO3pqEvtYnd5VPSp

Ferraro, A., Bogdanov D., Yoon J., Kim K. S., Serra X. (2018). Automatic playlist continuation using a hybrid recommender system combining features from text and audio. In: Proc. of the Conference on Recommender Systems (RecSys), Workshop on the RecSys Challenge. URL: https://dl.acm.org/citation.cfm?doid=3267471.3267473

Fonseca, E., Gong R., & Serra X. (2018). A Simple Fusion of Deep and Shallow Learning for Acoustic Scene Classification. In: Proc. of the Sound and Music Computing Conference. URL: https://arxiv.org/abs/1806.07506

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Fonseca, E., Plakal M., Font F., Ellis D. P. W., Favory X., Pons J., Serra X. (2018). General-purpose Tagging of Freesound Audio with AudioSet Labels: Task Description, Dataset, and Baseline. In: Proc. of the Detection and Classification of Acoustic Scenes and Events Workshop (DCASE). URL: https://arxiv.org/abs/1807.09902

Milo, A., Barthet, M., Fazekas, G. (2018). The Audio Commons Initiative. In: Proc. of the Digital Music Research Network (DMRN).

Oramas, S., Bogdanov D., & Porter A. (2018). MediaEval 2018 AcousticBrainz Genre Task: A baseline combining deep feature embeddings across datasets. In: MediaEval Workshop. URL: http://hdl.handle.net/10230/35745

Pauwels, J., Xambó, A., Roma, G., Barthet, M., Fazekas, G. (2018). Exploring Real-time Visualisations to Support Chord Learning with a Large Music Collection. In: Proc. of the Web Audio Conference (WAC). URL: http://annaxambo.me/pub/Pauwels_et_al_2018_Exploring_real-time_visualisations.pdf

Pearce, A., Brookes, T., Mason, R. (2018). Searching Sound-Effects using Timbre. In: BBC Sounds Amazing.

Safavi, S., Pearce, A., Wang, W., Plumbley, M. (2018). Predicting the perceived level of reverberation using machine learning. In: Proc. of the Asilomar Conference on Signals, Systems, & Computers.

Safavi, S., Wang, W., Plumbley, M., Choobbasti, A., and Fazekas, G. (2018). Predicting the Perceived Level of Reverberation using Features from Nonlinear Auditory Model. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference.

Sheng, D., Fazekas, G. (2018). Feature Design Using Audio Decomposition for Intelligent Control of the Dynamic Range Compressor. In: IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). URL: http://www.mirlab.org/conference_papers/international_conference/ICASSP%202018/pdfs/0000621.pdf

Skach, S., Xambó, A., Turchet, L., Stolfi, A., Stewart, R., Barthet, M. (2018). Embodied Interactions with E-Textiles and the Internet of Sounds for Performing Arts. In: Proc.of the 12th International Conference on Tangible, Embedded, and Embodied Interaction. URL: https://dl.acm.org/citation.cfm?doid=3173225.3173272

Stolfi, A., Milo, A., Ceriani, M., Barthet, M. (2018). Participatory musical improvisations with Playsound.space. In: Proc. of the Web Audio Conference (WAC). URL: https://webaudioconf.com/papers/participatory-musical-improvisations-with-playsound-space.pdf

Stolfi, A., Milo, Viola, F., A., Ceriani, M., Barthet, M. (2018). Playsound.space: Inclusive Free Music Improvisations Using Audio Commons. In: Proc. of the New Interfaces for Musical Expression (NIME). URL: http://www.nime.org/proceedings/2018/nime2018_paper0050.pdf

Stolfi, A., Milo, Viola, F., A., Ceriani, M., Barthet, M. (2018). Playsound.space: An Ubiquitous System in Progress,. In: Proc. of the Eighth Workshop on Ubiquitous Music (UbiMus).

Turchet, L., Barthet, M. (2018). Jamming with a smart mandolin and Freesound. In: Proc. of the 23rd IEEE FRUCT Conference. URL: https://www.fruct.org/publications/fruct23/files/Tur.pdf

Turchet, L., Barthet, M. (2018). Ubiquitous Musical Activities with Smart Musical Instruments. In: Proc. of the Eighth Workshop on Ubiquitous Music (UbiMus).

Turchet, L., Barthet, M. (2018). Demo of interactions between a performer playing a Smart Mandolin and audience members using Musical Haptic Wearables. In: Proc. of the New Interfaces for Musical Expression (NIME). URL: http://www.nime.org/proceedings/2018/nime2018_paper0019.pdf

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Vaheb, A., Choobbasti, A., Mortazavi, S., and Safavi, S. (2018). Investigating Language Variability on the Performance of Speaker Verification Systems. In: Proc. of the 21st International Conference on Speech and Computer (SPECOM).

Viola, F., Stolfi, A., Milo, A., Ceriani, C., Barthet, M. (2018). Playsound.space: enhancing a live performance tool with semantic recommendations. In: Proc. of the Workshop on Semantic Applications for Audio and Music (SAAM). URL: https://dl.acm.org/citation.cfm?id=3243908

Xambó, A., Pauwels, J., Roma, G., Barthet, M., Fazekas, G. (2018). Jam with Jamendo: Querying a Large Music Collection by Chords from a Learner's Perspective. In: Proc. of the 13th International Audio Mostly Conference. URL: http://annaxambo.me/pub/Xambo_et_al_2018_Jam_with_Jamendo.pdf

Xambó, A., Roma, G., Lerch, A., Barthet, M., Fazekas, G. (2018). Live Repurposing of Sounds: MIR Explorations with Personal and Crowdsourced Databases. In: Proc. of the New Interfaces for Musical Expression (NIME). URL: http://www.musicinformatics.gatech.edu/wp-content_nondefault/uploads/2018/04/Xambo-et-al.-2018-Live-Repurposing-of-Sounds-MIR-Explorations-with-.pdf

2017 (15)

Bogdanov D., Serra X. (2017). Quantifying music trends and facts using editorial metadata from the Discogs database. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: http://hdl.handle.net/10230/32931

Bogdanov, D., Porter A., Urbano J., Schreiber H. (2017). The MediaEval 2017 AcousticBrainz Genre Task: Content-based Music Genre Recognition from Multiple Sources. In: MediaEval Workshop. URL: http://hdl.handle.net/10230/32932

Choi, K., Fazekas, G., Sandler, M., Cho, K. (2017). Convolutional Recurrent Neural Networks for Music Classification. In: Proc. of the 42nd IEEE International Conference on Acoustics. URL: https://arxiv.org/abs/1609.0424

Choi, K., Fazekas, G., Sandler, M., Cho, K. (2017). Transfer Learning for Music Classification and Regression Tasks. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: https://arxiv.org/abs/1703.09179

Fonseca, E., Gong R., Bogdanov D., Slizovskaia O., Gomez E., Serra, X. (2017). Acoustic Scene Classification by Ensembling Gradient Boosting Machine and Convolutional Neural Networks. In: Proc. of the Detection and Classification of Acoustic Scenes and Events Workshop (DCASE). URL: https://repositori.upf.edu/handle/10230/33454

Fonseca, E., Pons J., Favory X., Font F., Bogdanov D., Ferraro A., Oramas S., Porter A., Serra X. (2017). Freesound Datasets: A Platform for the Creation of Open Audio Datasets. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: http://hdl.handle.net/10230/33299

Font, F., Bandiera G. (2017). Freesound Explorer: Make Music While Discovering Freesound!. In: Proc. of the Web Audio Conference (WAC). URL: http://hdl.handle.net/10230/32538

Herremans, D., Yang, S., Chuan, C. H., Barthet, M., Chew, E. (2017). IMMA-Emo: A Multimodal Interface for Visualising Score- and Audio-synchronised Emotion Annotations. In: Proc. of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences. URL: https://doi.org/10.1145/3123514.3123545

Liang, B., Fazekas, G., Sandler, M. (2017). Recognition of Piano Pedalling Techniques Using Gesture

Data. In: Proc. of the ACM 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences, Aug. URL: https://dl.acm.org/citation.cfm?id=3123514.3123535

Page, K., Bechhofer, S., Fazekas, G., Weigl, D., Wilmering, T. (2017). Realising a Layered Digital Library: Exploration and Analysis of the Live Music Archive through Linked Data. In: Proc. of the ACM/IEEE Joint Conference on Digital Libraries (JCDL). URL: http://ieeexplore.ieee.org/document/7991563

Pauwels, J., Fazekas, G., Sandler, M. (2017). Exploring Confidence Measures and Their Application in Music Labelling Systems Based on Hidden Markov Models. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: https://ismir2017.smcnus.org/wp-content/uploads/2017/10/195_Paper.pdf

Pearce, A., Brookes, T., Mason, R. (2017). Timbral attributes for sound effect library searching. In: Proc. of the Audio Engineering Society Conference on Semantic Audio. URL: http://www.aes.org/e-lib/download.cfm/18754.pdf?ID=18754

Subramaniam, A., Barthet, M. (2017). Mood Visualiser: Augmented Music Visualisation Gauging Audience Arousal. In: Proc. of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences. URL: https://doi.org/10.1145/3123514.3123517

Stolfi, A., Barthet, M., Goródscy, F., de Carvalho Junior, A. D. (2017). Open Band: A Platform for Collective Sound Dialogues. In Proc. of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences. URL: https://doi.org/10.1145/3123514.3123526

Wilmering, T., Thalmann, F., Fazekas, G., Sandler, M. (2017). Bridging Fan Communities and Facilitating Access to Music Archives Through Semantic Audio Applications. In: Proc. of the 143st Convention of the Audio Engineering Society. URL: http://eecs.qmul.ac.uk/~gyorgyf/files/papers/wilmering2017aes.pdf

2016 (11)

Allik, A., Fazekas, G., Sandler, M. (2016). An Ontology for Audio Features. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: https://wp.nyu.edu/ismir2016/wp-content/uploads/sites/2294/2016/07/077_Paper.pdf

Allik, A., Fazekas, G., Sandler, M. (2016). Ontological Representation of Audio Features. In: Proc. of the 15th International Semantic Web Conference (ISWC). URL: https://link.springer.com/chapter/10.1007/978-3-319-46547-0_1

Bogdanov, D., Porter, A., Herrera, P., Serra, X. (2016). Cross-collection evaluation for music classification tasks. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: http://mtg.upf.edu/node/3498

Buccoli, M., Zanoni, M., Fazekas, G., Sarti A., Sandler, M. (2016). A Higher-Dimensional Expansion of Affective Norms for English Terms for Music Tagging. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: https://wp.nyu.edu/ismir2016/wp-content/uploads/sites/2294/2016/07/253_Paper.pdf

Choi, K., Fazekas, G., Sandler, M. (2016). Automatic Tagging Using Deep Convolutional Neural Networks. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: https://arxiv.org/abs/1606.00298

Choi, K., Fazekas, G., Sandler, M. (2016). Towards Playlist Generation Algorithms Using RNNs Trained on Within-Track Transitions. In: Proc. of the User Modeling, Adaptation and Personalization

Conference (UMAP), Workshop on Surprise, Opposition, and Obstruction in Adaptive and Personalized Systems (SOAP). URL: https://arxiv.org/abs/1606.0209

Font, F., Brookes, T., Fazekas, G., Guerber, M., La Burthe, A., Plans, A., Plumbley, M. D., Shaashua, M., Wang, W., Serra, X. (2016). Audio Commons: bringing Creative Commons audio content to the creative industries. In: Proc. of the 61st AES Conference on Audio for Games. URL: https://www.audiocommons.org/assets/files/audiocommons_aes_2016.pdf

Font, F., Serra, X. (2016). Tempo Estimation for Music Loops and a Simple Confidence Measure. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR). URL: http://mtg.upf.edu/node/3479

Juric D., Fazekas, G. (2016). Knowledge Extraction from Audio Content Service Providers' API Descriptions. In: Proc. of the 10th International Conference on Metadata and Semantics Research (MTSR). URL: http://link.springer.com/10.1007/978-3-319-49157-8

Porter, A., Bogdanov, D., Serra, X. (2016). Mining metadata from the web for AcousticBrainz. In: Proc. of the 3rd International Digital Libraries for Musicology workshop. URL: http://mtg.upf.edu/node/3533

Wilmering, T., Fazekas, G., Sandler, M. (2016). AUFX-O: Novel Methods for the Representation of Audio Processing Workflows. In: Proc. of the 15th International Semantic Web Conference (ISWC). URL: https://link.springer.com/chapter/10.1007/978-3-319-46547-0_24

2015 (1)

Font, F., Serra, X. (2015). The Audio Commons Initiative. In: Proc. of the International Society for Music Information Retrieval Conference (ISMIR, late-breaking demo). URL: https://www.audiocommons.org/assets/files/audiocommons_ismir_2015.pdf

2.3 Academic publications - in preparation, submitted and in press

Journal papers and book chapters in press (2)

Pearce, A., Brookes, T., Mason, R. (2019, in press). Modelling Timbral Hardness. In: Journal of Applied Sciences.

Xambó, A., Font, F., Fazekas, G., Barthet, M. (2019, in press). Leveraging Online Audio Commons Content For Media Production. In: Foundations in Sound Design: an interdisciplinary approach, Vol 1 Linear Media, Routledge

Submitted conference papers (2)

Fonseca, E., Plakal M., Font F., Ellis D. P. W., Favory X., Serra X. (submitted). Learning Sound Event Classifiers from Web Audio with Noisy Labels. In: Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). URL: https://arxiv.org/abs/1901.01189

Milo, A., Stolfi, A. , Barthet, M. (submitted). A crowdsourced audio approach to soundscape composition with Playsound. In: Proc. of the New Interfaces for Musical Expression (NIME).

Journal papers planned for submission (5)

AudioCommons WP leaders. (2019, planned). Audio Commons: Achievements and future perspectives (working title). In: -.

Ceriani, M., Viola, F., Rudan, S., Antoniazzi, F., Barthet, M., Fazekas G. (2019, planned). Building an Audio Content Ecosystem via Ontology-Mediated Integration of Heterogeneous Content Providers. In: Semantic Web Journal.

Milo, A., Xambo, A., Rudan, S., Fazekas, G., Barthet, M (2019, planned). Innovating for Creative Media Industry Workflows with Crowdsourced Online Content: The Case of Music Production. In: IEEE Transactions in Human-Machine Systems.

Pauwels, J., Xambó, A., Sandler, M., Barthet, M., Fazekas, G. (2019, planned). Suggesting New Practice Material to Music Learners Based on Chord Content. In: Journal of Technology, Music, and Education.

Milo, A., Xambo, A. Fazekas, G., Barthet, M. (2019, planned). On the use of Creative Commons content and technologies for soundscape composition. In: Computer Music Journal

2.4 Data sets

Deliverable "D1.4 Data Management Plan" provides a list of the **33 data sets accompanying the project**, accompanied by details specifying their content, sharing conditions, and handles to access the data.

3 Academic events

Below we provide a table with a summary of all the academic conferences attended by members of the AudioCommons project. In sections 3.1 and 3.2 we provide further details about our participation in each of these events, including in 3.1 events where we made oral presentations and in 3.2 the rest. In section 3.3 we report about data challenges that we organized.

Conference	Date	Location	Attendees
International Society for Music Information Retrieval Conference	October 26-30, 2015	Málaga, Spain	UPF, QMUL
DAFx	November 30 - December 3, 2015	Trondheim, Norway	UPF
Europeana Sounds Plenary	January 29, 2016	Lisbon, Portugal	CVSSP (Surrey)
AES Audio for Games	February 10-12, 2016	London, UK	UPF, QMUL
International Society for Music Information Retrieval Conference 2016	August 7-11, 2016	New York, USA	UPF, QMUL
3rd International Digital Libraries for Musicology workshop	August 12, 2016	New York, USA	UPF
IEEE International Conference on Acoustics, Speech and Signal Processing	March 5-9, 2017	New Orleans, USA	CVSSP (Surrey)
Audio Engineering Society Conference on Semantic Audio	June 22-24, 2017	Erlangen, Germany	IoSR (Surrey)
Web Audio Conference	August 21-23, 2017	London, UK	UPF, QMUL
Audio Mostly	August 23-26, 2017	London, UK	QMUL, Audiogaming
International Society for Music Information Retrieval Conference	October 23-27, 2017	Suzhou, China	UPF, QMUL
Workshop on Detection and Classification of Acoustic Scenes and Events	November 16-17, 2017	Munich, Germany	UPF
MediaEval Workshop	September 13-15, 2017	Dublin, Ireland	UPF
Tangible, Embedded, and Embodied Interaction conference	March 18-21, 2018	Stockholm, Sweden	QMUL

Sonorities Symposium	April 18-22, 2018	Belfast, Northern Ireland	QMUL
BBC Sounds Interesting Tech Exhibition	1-2 May, 2018	BBC New Broadcasting house, London, UK	Surrey
New Interfaces for Musical Expression	June 3-6, 2018	Blacksburg, VA, USA	QMUL
European Research Music Conference	June 11-13, 2018	Barcelona, Spain	UPF
Sound and Music Computing Conference	July 4-7, 2018	Limassol, Cyprus	UPF
Surrey Audio Day	July 6, 2018	Guildford, UK	Surrey
UbiMus Workshop	September 11-14, 2018	São João del Rei, Brazil	QMUL
Audio Mostly Conference	September 12-14, 2018	Wrexham, UK	QMUL
Web Audio Conference	September 19-21, 2018	Berlin, Germany	QMUL, UPF
International Society for Music Information Retrieval Conference	September 23-27, 2018	Paris, France	UPF, QMUL
International Open Data Conference	September 27-28, 2018	Buenos Aires, Argentina	CoDE (Surrey)
MediaEval Workshop	October 29-31, 2018	Sophia Antipolis, France	UPF
International Semantic Web Conference	October 8-12, 2018	Monterey, USA	QMUL
SAAM Workshop on Semantic Applications for Audio and Music	October 9, 2018	Monterey, USA	QMUL
1st International Workshop on Semantic Audio and the Internet of Things	November 14-15, 2018	Bologna, Italy	QMUL, UPF
Workshop on Detection and Classification of Acoustic Scenes and Events	November 19-20, 2018	Woking, UK	IoSR and CVSSP (Surrey), UPF

Digital Music Research Network Workshop	December 18, 2018	London, UK	QMUL, UPF

3.1 Attended academic events (talks)

International Conference on Digital Audio Effects		
Trondheim, Norway	UPF	November 30 - December 3, 2015
https://www.ntnu.edu/dafx15/proceedings#tutorials		
The International Conference on Digital Audio Effects (DAFx) is a well-known conference which gathers world experts in digital audio and digital music processing. In this edition of DAFx (which happened before AudioCommons officially started) Xavier Serra (UPF) imparted a tutorial called "The AudioCommons Initiative and the technologies for facilitating the reuse of open audio content".		

Talk in Europeana Sounds Plenary Meeting		
Lisbon, Portugal	CVSSP (Surrey)	January 29, 2016
http://www.eusounds.eu		

Mark Plumbley was part of the advisory board of Europeana Sounds, and EU project very much related to AudioCommons and finishing shortly after AudioCommons started. In this plenary meeting session, Mark Plumbley gave a talk about the AudioCommons project.
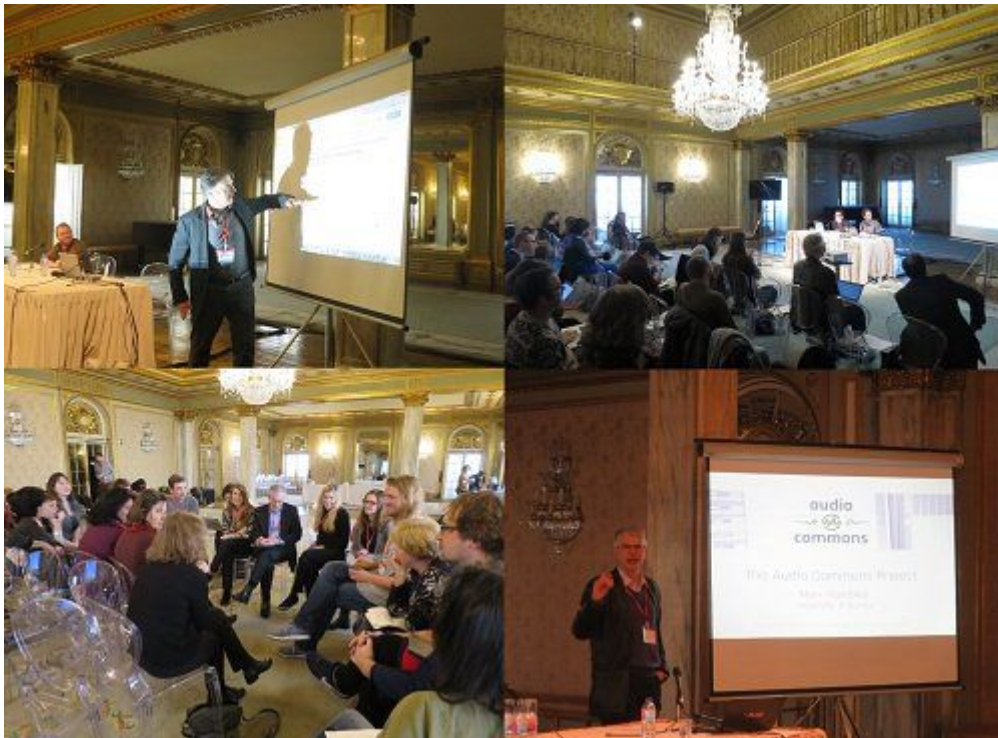
Audio Engineering Society 61st Conference on Audio for Games		
London, UK	UPF, QMUL	February 10-12, 2016
http://www.aes.org/conferences/61/papers.cfm		

The AES Conference on Audio for Games explores how games can get the most from their audio DSP, tools and workflow on console, PC and mobile platforms. As new applications arise in serious gaming and VR-based gaming, this conference explores the challenges and the solutions.

In this edition of the conference we published our position paper about the AudioCommons project and made an oral presentation to the audio for games community.

- Font, F., Brookes, T., Fazekas, G., Guerber, M., La Burthe, A., Plans, A., Plumbley, M. D., Shaashua, M., Wang, W., Serra, X. (2016). Audio Commons: bringing Creative Commons audio content to the creative industries.

International Society for Music Information Retrieval Conference		
New York, USA	UPF, QMUL	August 7-11, 2016
https://wp.nyu.edu/ismir2016/event/program/#Oralsession2Rhythm		

The annual Conference of the International Society for Music Information Retrieval (ISMIR) is the world's leading research forum on processing, analyzing, searching, organizing and accessing music-related data.

In this ISMIR edition Frederic Font (UPF) gave an oral presentation about our research for the automatic annotation of BPM for music loops and our developed confidence measure for BPM estimates.

- Font, F., Serra, X. (2016). Tempo Estimation for Music Loops and a Simple Confidence Measure.
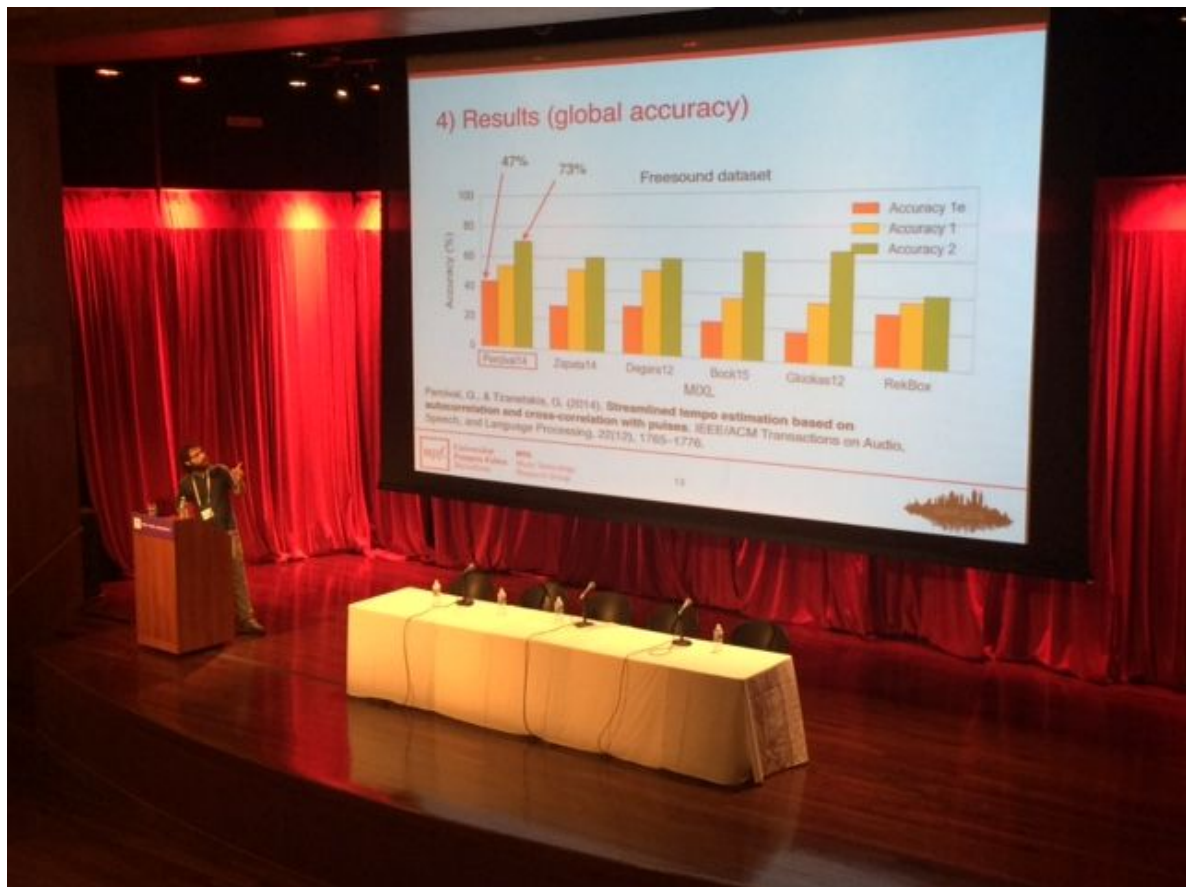
3rd International Digital Libraries for Musicology workshop		
New York, USA	UPF	August 12, 2016
https://dlfm.web.ox.ac.uk/workshops/dlfm-2016		

The Digital Libraries for Musicology (DLfM) workshop presents a venue specifically for those working on, and with, Digital Library systems and content in the domain of music and musicology.

In this conference, Alastair Porter (UPF) gave an oral presentation on a dataset of music metadata for automatic genre identification tasks collected from public resources on the Internet.

- Porter, A., Bogdanov, D., Serra, X. (2016). Mining metadata from the web for AcousticBrainz.

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Audio Engineering Society Conference on Semantic Audio		
Erlangen, Germany	IoSR (Surrey)	June 22-24, 2017
http://www.aes.org/conferences/2017/semantic/program.cfm		

An international conference organised by the Audio Engineering Society with a focus on semantic audio technologies, held at the Fraunhofer Institute in Erlangen, Germany.

In this conference, Andy Pearce (Surrey) gave an oral presentation about the D5.1 initial stage of research, identifying the timbral characteristics that are most commonly searched for on Freesound.

- Pearce, A., Brookes, T., Mason, R. (2017). Timbral Attributes for Sound Effect Library Searching.

MediaEval Workshop		
Dublin, Ireland	UPF	September 13-15, 2017
http://www.multimediaeval.org/mediaeval2017/acousticbrainz/index.html		

The Multimedia Evaluation Benchmark, MediaEval, offers challenges in the form of shared tasks. The goal of MediaEval is to develop and evaluate new algorithms and technologies for multimedia retrieval, access and exploration. MediaEval tasks are innovative, involving multiple modalities, (e.g., audio, visual, textual, and/or contextual) and focusing on the human and social aspects of multimedia. MediaEval's larger aim is to promote reproducible research that makes multimedia a positive force for society.

In the 2017 edition, we organized the AcousticBrainz Genre 2017 task, a genre classification challenge based on open music data available in the AcousticBrainz database under the CC0 license. We presented the outcomes of the 2017 edition of the task and a meta-analysis of all submitted solutions.

- Bogdanov, D., Porter A., Urbano J., Schreiber H. (2017). The MediaEval 2017 AcousticBrainz Genre Task: Content-based Music Genre Recognition from Multiple Sources.

| **International Society for Music Information Retrieval Conference**		
Suzhou, China	UPF, QMUL	October 23-27, 2017
https://ismir2017.smcnus.org/programschedule/		

The annual Conference of the International Society for Music Information Retrieval (ISMIR) is the world's leading research forum on processing, analyzing, searching, organizing and accessing music-related data.

In this ISMIR edition Dmitry Bogdanov (UPF) had an oral presentation about work on analysis of music metadata available in public databases under CC0 licenses.

- Bogdanov D., Serra X. (2017). Quantifying music trends and facts using editorial metadata from the Discogs database.

Workshop on Detection and Classification of Acoustic Scenes and Events		
Munich, Germany	UPF	November 16-17, 2017
http://www.cs.tut.fi/sgn/arg/dcase2017/workshop/		

The Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE) aims to bring together researchers from many different universities and companies with interest in the topic, and provide the opportunity for scientific exchange of ideas and opinions.

In this DCASE edition Eduardo Fonseca (UPF) had an oral presentation about ensembling gradient boosting machine and convolutional neural networks for acoustic scene classification, which is related to the Freesound Datasets platform:

- Fonseca E, Gong R, Bogdanov D, Slizovskaia O, Gomez E, Serra X. (2017) Acoustic scene classification by ensembling gradient boosting machine and convolutional neural networks.
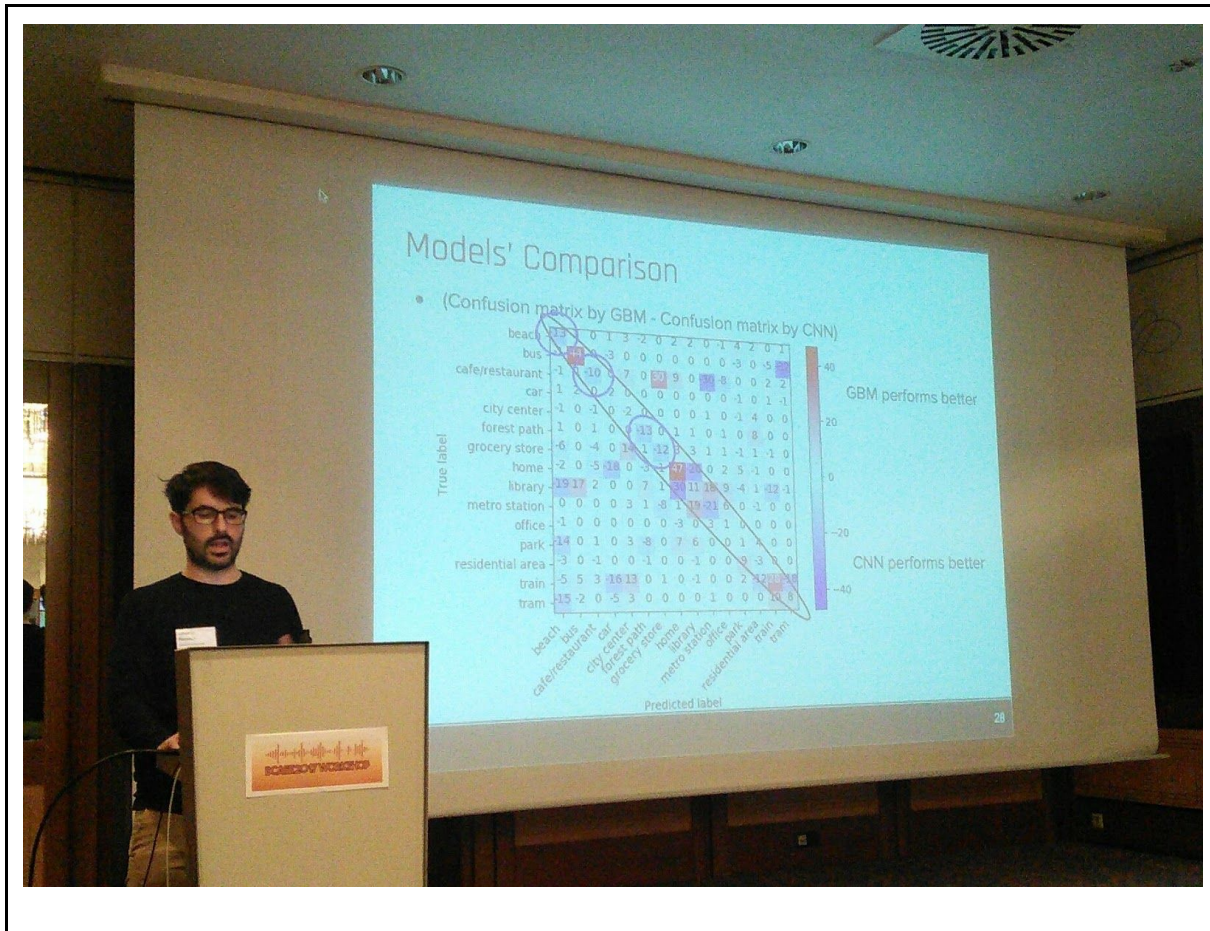
Eighth Workshop on Ubiquitous Music (UbiMus)			
São João del Rei, Brazil	QMUL		September 11-14, 2018

The workshop on Ubiquitous Music (UbiMus) started in 2010 to discuss issues related to technological ubiquity and its interdisciplinary relation with art and the music field. It covers issues that involve creativity, interaction, performance and relations with mobile technologies for educational and social purposes.

At this workshop edition, Ariane Stolfi (QMUL) presented the following paper on Playsound:

- Stolfi, A. D. S., Milo, A., Viola, F., Ceriani, M., & Barthet, M. (2018). Playsound.space: An Ubiquitous System in Progress. In *Proceedings of the 8th Workshop on Ubiquitous Music (UbiMus)* (pp. 45–53). Retrieved from https://alice.dcomp.ufsj.edu.br/ubimus/proceedings-2018.pdf

Mathieu Barthet (QMUL) presented a paper describing how the Audio Commons ecosystem could benefit smart musical instruments through Internet connectivity and embedded intelligence:

- Turchet, L., Barthet, M. (2018). Ubiquitous Musical Activities with Smart Musical Instruments. In *Proceedings of the 8th Workshop on Ubiquitous Music (UbiMus), pp. 157-164,* Retrieved from: *https://alice.dcomp.ufsj.edu.br/ubimus/proceedings-2018.pdf*

Ariane Stofli and Mathieu Barthet (QMUL) performed at one of the workshop concerts using the

Playsound tool developed during Audio Commons (Stolfi et al., NIME 2018):

- Stolfi, A. D. S., Milo, A. & Barthet, M. (2018). Cannibal Soundscapes.
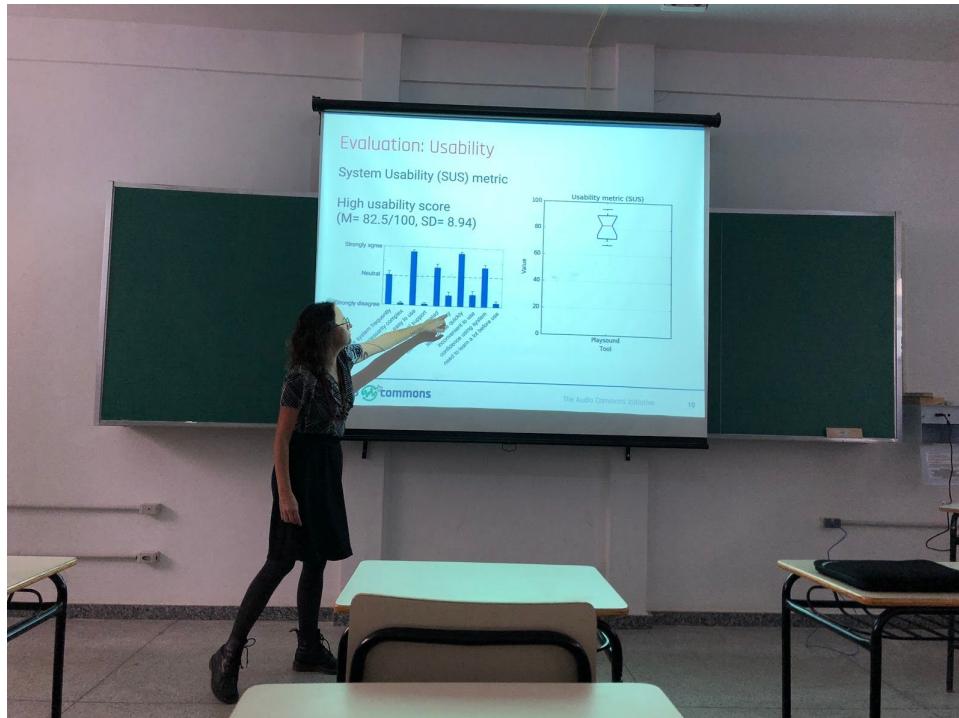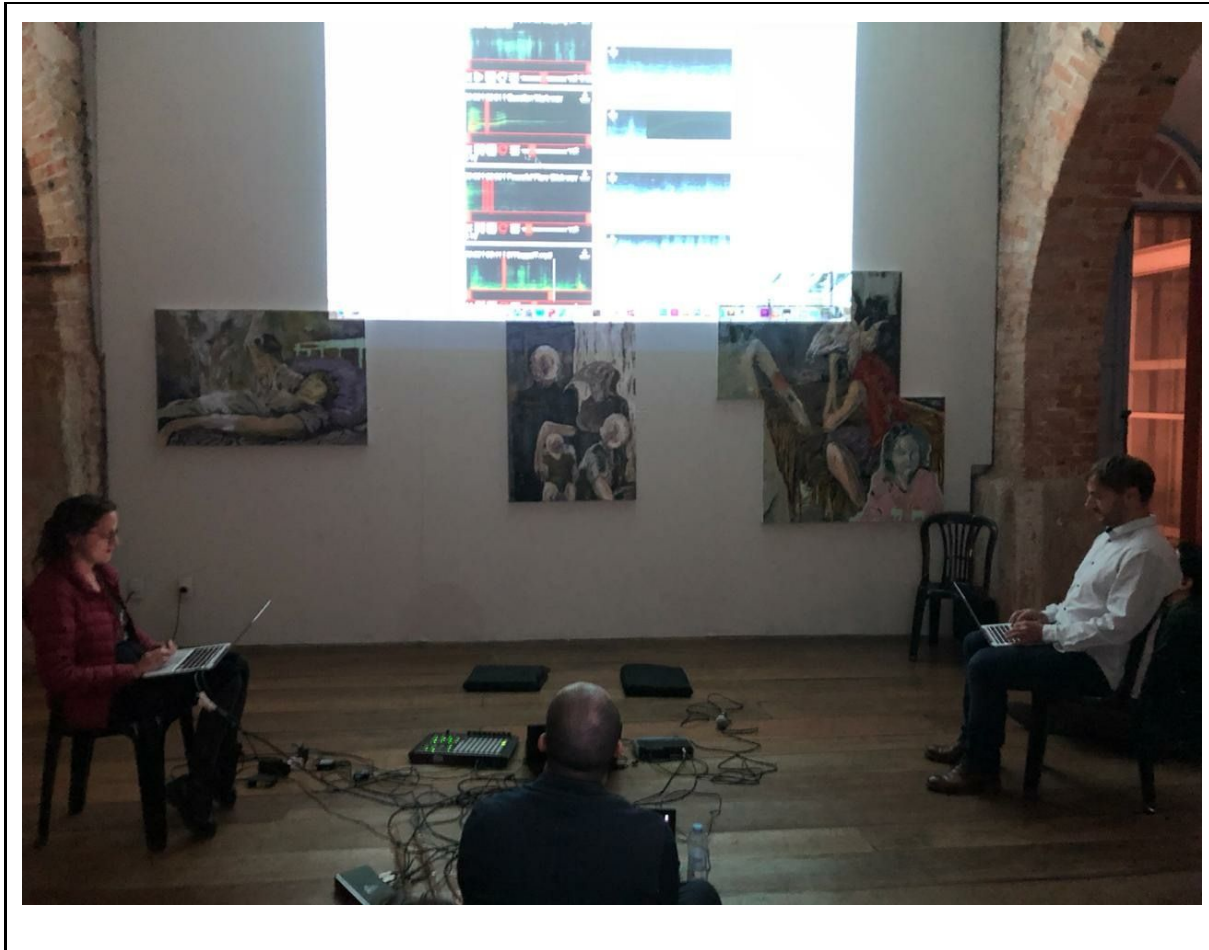
Audio Mostly		
Wrexham, UK	QMUL	September 12-14, 2018
http://audiomostly.com/		

Audio Mostly is an interdisciplinary conference on design and experience of interaction with sound, embracing applied theory and reflective practice. It brings together thinkers and doers from academia and industry who share an interest in sonic interaction and the use of audio for interface design.

In this particular edition of the conference, Anna Xambó and Johan Pauwels (QMUL) presented their query-by-chord application "Jam with Jamendo", evaluated with a small-scale user study.

- Xambó, A., Pauwels, J., Roma, G., Barthet, M., & Fazekas, G. (2018, September). Jam with Jamendo: Querying a Large Music Collection by Chords from a Learner's Perspective. In Proceedings of the Audio Mostly 2018 on Sound in Immersion and Emotion (p. 30). ACM.

Web Audio Conference		
Berlin, Germany	QMUL, UPF	September 19-21, 2018

https://webaudioconf.com/presentations/participatory-musical-improvisations-with-playsound-space/
https://webaudioconf.com/presentations/exploring-real-time-visualisations-to-support-chord-learning-with-a-large-music-collection

Web Audio Conference (WAC) is an international conference dedicated to web audio technologies and applications and addresses research, development, design, and standards concerned with emerging audio-related web technologies such as Web Audio API, Web RTC, WebSockets, and Javascript.

Ariane Stolfi and Alessia Milo (QMUL) presented a paper focused on the web audio technology supporting "Playsound.space", supported by a demonstration and a performance. Johan Pauwels and Anna Xambó (QMUL) delivered a presentation on their research with "Jam with Jamendo", specifically insights on the chords visualisation system. Xavier Favory (UPF) demonstrated the "Multi Web Audio Sequencer" tool for collaborative music making using Creative Commons content.

- Pauwels, J., Xambó, A., Roma, G., Barthet, M., & Fazekas, G. (2018). Exploring Real-time Visualisations to Support Chord Learning with a Large Music Collection. In Proceedings of

the Web Audio Conference.
- Stolfi, A., Milo, A., Ceriani, M., & Barthet, M. (2018). Participatory musical improvisations with playsound. space. In Proceedings of the Web Audio Conference.
- Favory, X., Serra, X. (2018). Multi Web Audio Sequencer: Collaborative Music Making. In Proceedings of the Web Audio Conference.

MediaEval Workshop		
Sophia Antipolis, France	UPF	October 29-31, 2018
http://www.multimediaeval.org/mediaeval2018/acousticbrainz/index.html		

The Multimedia Evaluation Benchmark, MediaEval, offers challenges in the form of shared tasks. The goal of MediaEval is to develop and evaluate new algorithms and technologies for multimedia retrieval, access and exploration. MediaEval tasks are innovative, involving multiple modalities, (e.g., audio, visual, textual, and/or contextual) and focusing on the human and social aspects of multimedia. MediaEval's larger aim is to promote reproducible research that makes multimedia a positive force for society.

In the 2018 edition we presented the outcomes of the second year of the AcousticBrainz Genre task that we organized based on open music data available in the AcousticBrainz database under the CC0 license, including our own solution for the task.

- Oramas, S., Bogdanov D., & Porter A. (2018). MediaEval 2018 AcousticBrainz Genre Task: A baseline combining deep feature embeddings across datasets.
- Bogdanov, D., Porter A., Urbano J., & Schreiber H. (2018). The MediaEval 2018

AcousticBrainz Genre Task: Content-based Music Genre Recognition from Multiple Sources.

Workshop on Detection and Classification of Acoustic Scenes and Events		
Woking, UK	CVSSP (Surrey), UPF	November 19-20, 2018
http://dcase.community/workshop2018		
The Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE) aims to bring together researchers from many different universities and companies with interest in the topic, and provide the opportunity for scientific exchange of ideas and opinions. This particular edition of the workshop was organized by University of Surrey, with Mark Plumbley (CVSSP) being the principal organizer. Also, Eduardo Fonseca (UPF) gave a short talk about the "General-purpose audio tagging of Freesound content with AudioSet labels" challenge organized by UPF using Creative Commons audio content; and Frederic Font (UPF) participated in the discussion panel closing the conference and Moderated by Mark Plumbley.		

International Semantic Web Conference		
Monterey, USA	QMUL	October 8-12, 2018
Conference website: http://iswc2018.semanticweb.org/ Accepted papers: http://iswc2018.semanticweb.org/accepted-papers/		
Miguel Ceriani presented a paper introducing the Audio Commons Ontology and George Fazekas organised the co-located workshop on Semantic Applications for Audio and Music. • M. Ceriani, G. Fazekas (2018). Audio Commons Ontology: A Data Model for an Audio Content Ecosystem. International Semantic Web Conference (2) 2018: 20-35.		

SAAM Workshop on Semantic Applications for Audio and Music		
Monterey, USA	QMUL	October 9, 2018
Workshop website: http://saam.semanticaudio.ac.uk/		
Organised as a satellite event of the International Semantic Web Conference (ISWC), the SAAM		

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workshop aimed to be a venue to discuss the implementation of semantic applications for audio and music, joining in dissemination and discussion, identifying intersections in the challenges and solutions which cut across musical areas.

During this workshop, Miguel Ceriani (QMUL) presented on behalf of Fabio Viola an article which explains the technical details of the recommendation system implemented in "Playsound.space". This system uses semantic web technologies and audio extraction to recommend similar content from other content providers.

- Viola, F., Stolfi, A., Milo, A., Ceriani, M., Barthet, M., & Fazekas, G. (2018, October). Playsound. space: enhancing a live music performance tool with semantic recommendations. In Proceedings of the 1st International Workshop on Semantic Applications for Audio and Music (pp. 46-53). ACM.

First International Workshop on Semantic Audio and the Internet of Things (ISAI) colocated with the IEEE FRUCT23 Open Innovations Association conference		
Bologna, Italy	QMUL, UPF	November 14-15, 2018
Program: https://fruct.org/sites/default/files/files/conference23/FRUCT23_Program_v1.pdf		
The International Workshop on Semantic Audio and the Internet of Things (ISAI18) provides a forum to disseminate and discuss research in the intersection of Audio and IoT. Examples include but not limited to environmental audio analysis and event detection in sensor networks and the Internet of Musical Things. The workshop brings together researchers working in Semantic Audio and IoT to facilitate discussion and partnerships in this emerging interdisciplinary field. Mathieu Barthet (QMUL) gave a keynote talk entitled *"Semantic Audio and IoT: Towards the Internet*		

of Audio/Musical Things" during which he introduced Audio Commons and how such ecosystems could lead to the development of novel physical or virtual objects with embedded intelligence and network connectivity to serve audio- or music-related functions ("Audio/Musical Things").

Fabio Viola (QMUL, UNIBO) presented the following papers describing initial studies to establish a semantic web architecture for Internet of Musical Things applications:

- Turchet L., Viola F., Fazekas G., Barthet M. (2018) Towards a Semantic Architecture for the Internet of Musical Things. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference. https://fruct.org/publications/fruct23/files/Tur2.pdf

The paper obtained the **Best Demo Award at the IEEE FRUCT23 conference.**

Luca Turchet (QMUL) presented the following paper applying UNIBO's SEPA broker in music recommendation tasks:

- Viola F., Turchet L., Antoniazzi F., Fazekas G. (2018) C Minor: a Semantic Publish/Subscribe Broker for the Internet of Musical Things. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference. https://fruct.org/publications/fruct23/files/Vio.pdf

Luca Turchet (QMUL) presented the following paper investigating novel audience-performer interactions involving the use of smart musical instruments and musical accompaniments generated using content retrieved from Freesound:

- Turchet, L., Barthet, M. (2018). Jamming with a smart mandolin and Freesound. In: Proc. of the 23rd IEEE FRUCT Conference. URL: https://www.fruct.org/publications/fruct23/files/Tur.pdf

Xavier Favory (UPF) gave an oral talk for presenting a paper about the research and development of manual annotation tools

- Favory, X., Fonseca E., Font F., Serra, X. (2018). Facilitating the Manual Annotation of Sounds When Using Large Taxonomies. In Proc. the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference.

G. Fazekas (QMUL) presented the following paper from University of Surrey on the automatic prediction of reverberation level from audio:

- Safavi, S., Wang, W., Plumbley, M., Choobbasti, A., and Fazekas, G. (2018). Predicting the Perceived Level of Reverberation using Features from Nonlinear Auditory Model. In: Proc. of the International Workshop on Semantic Audio and the Internet of Things (ISAI), in IEEE FRUCT Conference.

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DMRN+13 Digital Music Research Network		
London, UK	QMUL	December 18, 2018
Website: https://www.qmul.ac.uk/dmrn/dmrn13/		
The Digital Music Research Network (DMRN) aims to promote research in the area of Digital Music, by bringing together researchers from universities and industry in electronic engineering, computer science, and music. During this event, György Fazekas gave a talk about the AudioCommons project. • Milo, A., Barthet, M., & Fazekas, G. The Audio Commons Initiative. In DMRN+ 13: Digital Music Research Network One-day Workshop 2018.		

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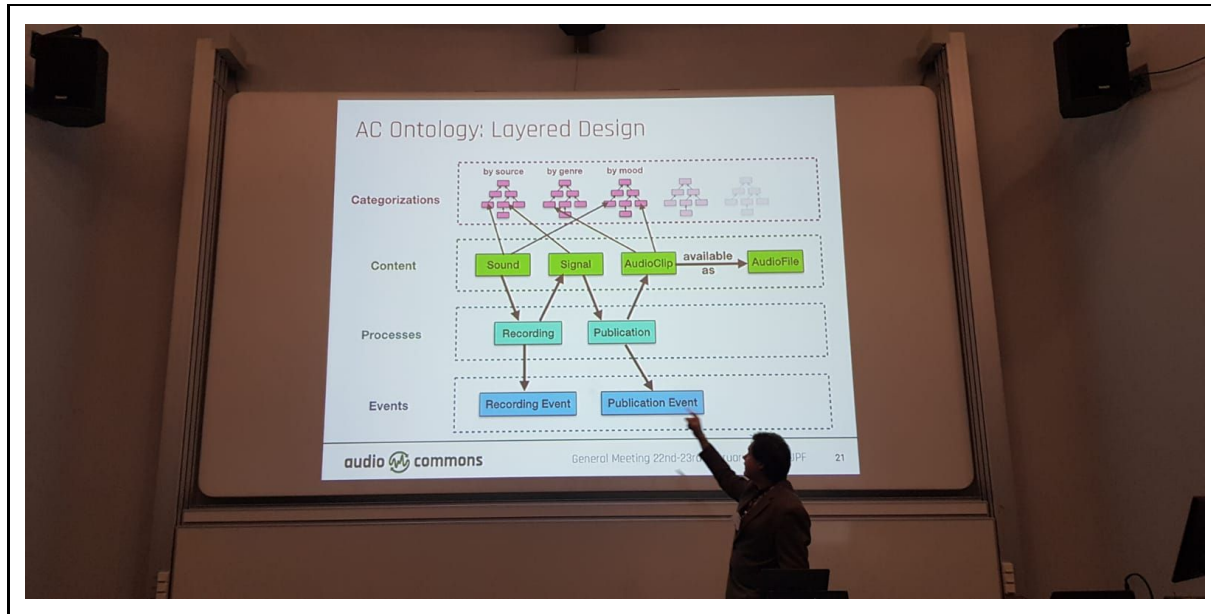
3.2 Attended academic events (posters and demonstrations)

International Society for Music Information Retrieval Conference		
Málaga, Spain	UPF, QMUL	October 26-30, 2015
http://ismir2015.uma.es/demosandlate.html		
The annual Conference of the International Society for Music Information Retrieval (ISMIR) is the world's leading research forum on processing, analyzing, searching, organizing and accessing music-related data. In this ISMIR edition (happening a couple of months before AudioCommons officially started) we disseminated our ideas for AudioCommons and project proposal with a poster in the late-breaking demo session. • Font, F., Serra, X. (2015). The Audio Commons Initiative.		
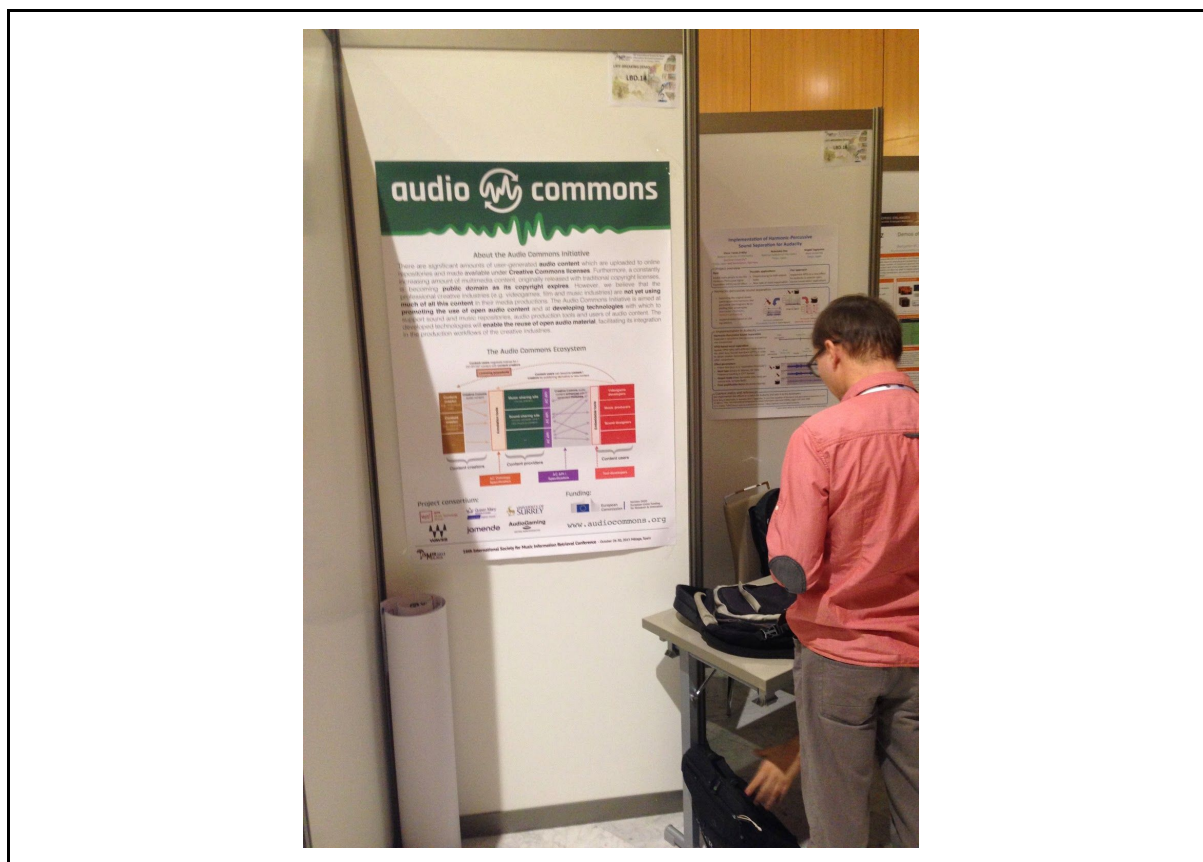
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International Society for Music Information Retrieval Conference		
New York, USA	UPF, QMUL	August 7-11, 2016
https://wp.nyu.edu/ismir2016/event/program/		
The annual Conference of the International Society for Music Information Retrieval (ISMIR) is the world's leading research forum on processing, analyzing, searching, organizing and accessing music-related data. Besides the oral presentation mentioned in section 3.1, in this ISMIR edition we also presented the following papers: ● Bogdanov, D., Porter, A., Herrera, P., Serra, X. (2016). Cross-collection evaluation for music classification tasks. ● Buccoli, M., Zanoni, M., Fazekas, G., Sarti A., Sandler, M. (2016). A Higher-Dimensional Expansion of Affective Norms for English Terms for Music Tagging. ● Allik, A., Fazekas, G., Sandler, M. (2016). An Ontology for Audio Features. ● Choi, K., Fazekas, G., Sandler, M. (2016). Automatic Tagging Using Deep Convolutional Neural Networks.		

IEEE International Conference on Acoustics, Speech and Signal Processing		
New Orleans, USA	CVSSP (Surrey)	March 3-5, 2017

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http://www.ieee-icassp2017.org

ICASSP is the primary international signal processing conference, and includes high quality content on non-musical sound analysis. Additional background: The travel was for information gathering and research discussions on non-musical sound properties, in preparation for arrival of the signal processing postdoc at Surrey-CVSSP working on WP5 "Semantic annotation of non-musical sound properties" (Safavi). Relevant sessions with information on non-musical sound analysis included AASP-L5: Deep Learning for Audio Content Analysis, AASP-P9: Audio and Music Content Analysis, AASP-P3: Hearing Aids and Environmental Sound Recognition, AASP-P12: Sound Event and Environment Classification. In particular the Google "AudioSet" large-scale database and labels was formally announced at ICASSP 2017 (I was aware ahead of time that an announcement was due at the conference). Following initial discussions with Dan Ellis and others from Google during ICASSP 2017, follow-up discussions with others in AudioCommons led to the AudioSet ontology being employed in the AudioCommons-organized DCASE 2018 challenge Task 2: "General-purpose audio tagging of Freesound content with AudioSet labels".

Web Audio Conference		
London, UK	QMUL, UPF	August 21-23, 2017

http://wac.eecs.qmul.ac.uk/programme/

Web Audio Conference (WAC) is an international conference dedicated to web audio technologies and applications and addresses research, development, design, and standards concerned with emerging audio-related web technologies such as Web Audio API, Web RTC, WebSockets, and Javascript.

In this edition of WAC Frederic Font (UPF) demonstrated the Freesound Explorer tool for exploring Freesound Creative Commons content in a two dimensional map and making music.

- Font, F., & Bandiera G. (2017). Freesound Explorer: Make Music While Discovering Freesound!

Audio Mostly		
London, UK	QMUL, Audiogaming	August 23-26, 2017

http://audiomostly.com/sponsors/

Audio Mostly is an interdisciplinary conference on design and experience of interaction with sound, embracing applied theory and reflective practice. It brings together thinkers and doers from academia and industry who share an interest in sonic interaction and the use of audio for interface design. AudioCommons was among the sponsors of the conference and several project members were involved in the organisation.

Simin Yang (QMUL) presented the following paper (poster) investigating a web-based audiovisual interface to supporting time-based music emotion analysis through visualisations of listener ratings, score- and audio-based features.

- Herremans, D., Yang, S., Chuan, C. H., Barthet, M., & Chew, E. (2017, August). IMMA-Emo: A Multimodal Interface for Visualising Score-and Audio-synchronised Emotion Annotations. In

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Proceedings of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences (p. 11). ACM. https://doi.org/10.1145/3123514.3123545

Anand Subramaniam (QMUL) presented the following paper (oral) describing a system for automated music visualisation informed by real-time measurements of emotional response based on physiological signals:

- Subramaniam, A., & Barthet, M. (2017, August). Mood Visualiser: Augmented Music Visualisation Gauging Audience Arousal. In Proceedings of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences (p. 5). ACM. https://doi.org/10.1145/3123514.3123517

Ariane Stolfi (QMUL) presented the following paper (oral) about a technology-mediated audience participation system involving sonifications of chat dialogues between audience members:

- Stolfi, A., Barthet, M., Goródscy, F., & de Carvalho Junior, A. D. (2017, August). Open Band: A Platform for Collective Sound Dialogues. In Proceedings of the 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences (p. 25). ACM https://doi.org/10.1145/3123514.3123526

Beici Liang (QMUL) presented the the following paper (poster) about gesture analysis while playing the piano. Her presentation received **Best Poster Award** by popular vote of the conference attendees:

- Liang, B., Fazekas, G., Sandler, M. (2017) "Recognition of Piano Pedalling Techniques Using Gesture Data" Proceeding Proc. of the ACM 12th International Audio Mostly Conference on Augmented and Participatory Sound and Music Experiences, Aug. 23-26, London, United Kingdom https://dl.acm.org/citation.cfm?id=3123514.3123535
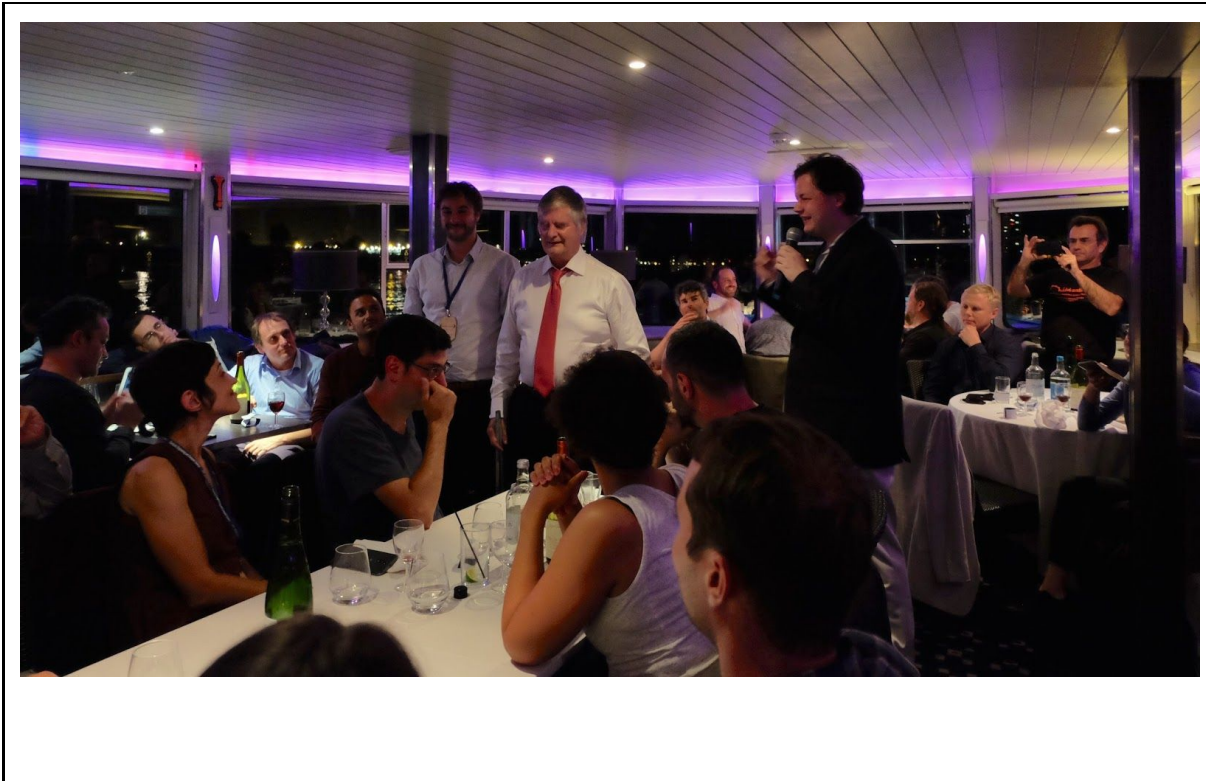

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International Society for Music Information Retrieval Conference		
Suzhou, China	UPF, QMUL	October 23-27, 2017
https://ismir2017.smcnus.org/programschedule/		

The annual Conference of the International Society for Music Information Retrieval (ISMIR) is the world's leading research forum on processing, analyzing, searching, organizing and accessing music-related data.

Besides the oral presentation for ISMIR 2017 listed in 3.1, we had posters for the following papers:

- Fonseca, E., Pons J., Favory X., Font F., Bogdanov D., Ferraro A., Oramas S., Porter A., Serra X. (2017). Freesound Datasets: A Platform for the Creation of Open Audio Datasets.
- Choi, K., Fazekas, G., Sandler, M., Cho, K. (2017) Transfer Learning for Music Classification and Regression Tasks **(Best Paper Award)**
- Pauwels, J., Fazekas, G., Sandler, M. (2017). Exploring Confidence Measures and Their Application in Music Labelling Systems Based on Hidden Markov Models.
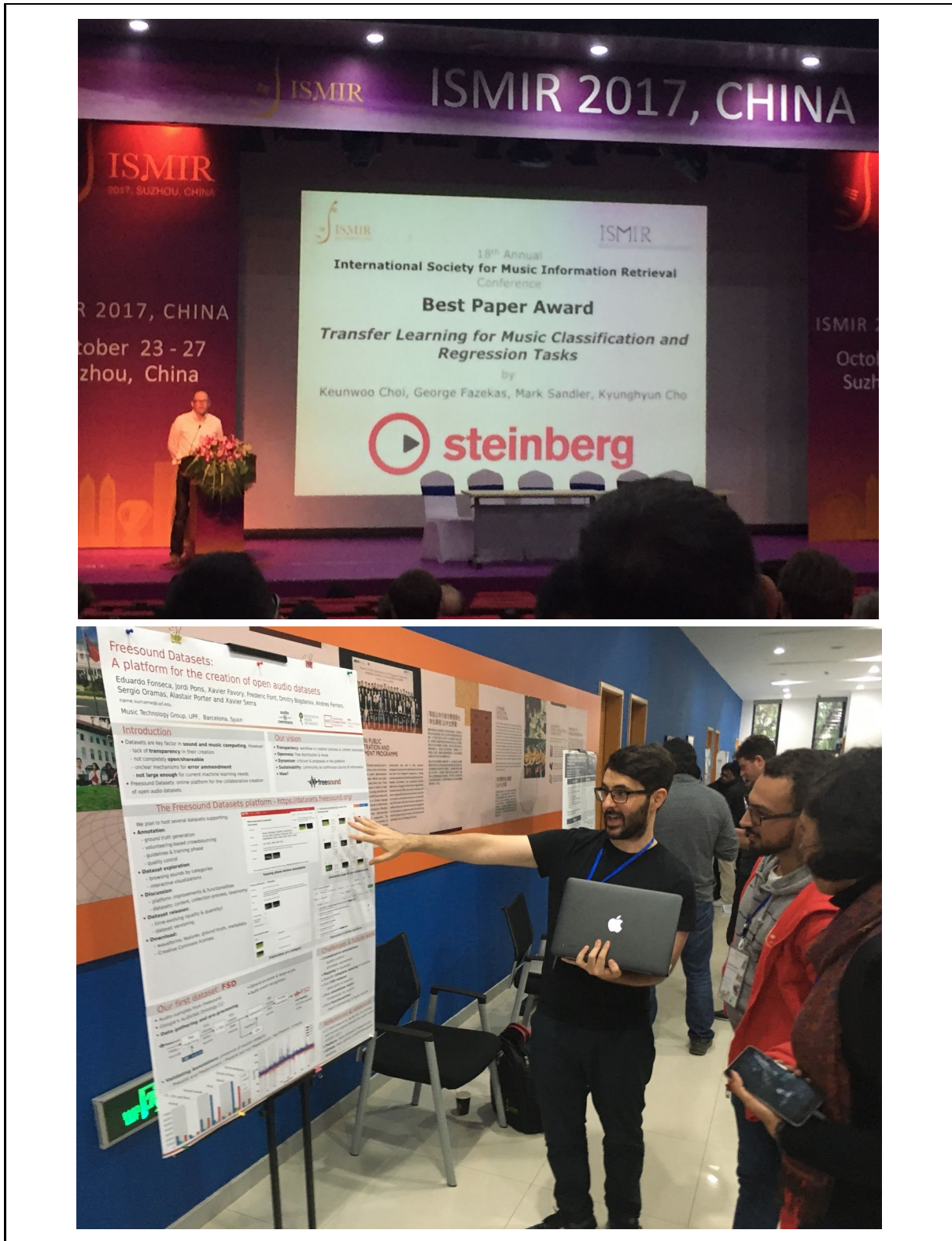
Tangible, Embedded, and Embodied Interaction conference (TEI)		
Stockholm, Sweden	QMUL	March, 18-21 2018

https://tei.acm.org/2018/about-tei/

The ACM International Conference on Tangible, Embedded and Embodied Interaction (TEI) addresses issues of human-computer interaction, novel tools and technologies, interactive art, and user experience. For this occasion, we presented a paper as a demonstration turning textiles into soft and wearable musical interfaces using the Bela platform, which was use to retrieve sounds from Freesound.

- Sophie Skach, Anna Xambó, Luca Turchet, Ariane Stolfi, Rebecca Stewart, Mathieu Barthet (2018). Embodied Interactions with E-Textiles and the Internet of Sounds for Performing Arts, published in "Proceedings of the Twelfth International Conference on Tangible, Embedded, and Embodied Interaction".

BBC Sounds Amazing Tech Exhibition		
New Broadcasting House, London, UK	Surrey	1-2 March 2018
https://www.bbc.co.uk/rd/blog/2018-05-audio-production-technology-sounds-amazing		
A tech exhibition organised by the BBC consisting of two interlinked events aimed at BBC staff and the wider production/research community. In the exposition, a poster was shown and a demonstration of the timbral explorer, allowing users to search for sounds effects by their timbral characteristics.		

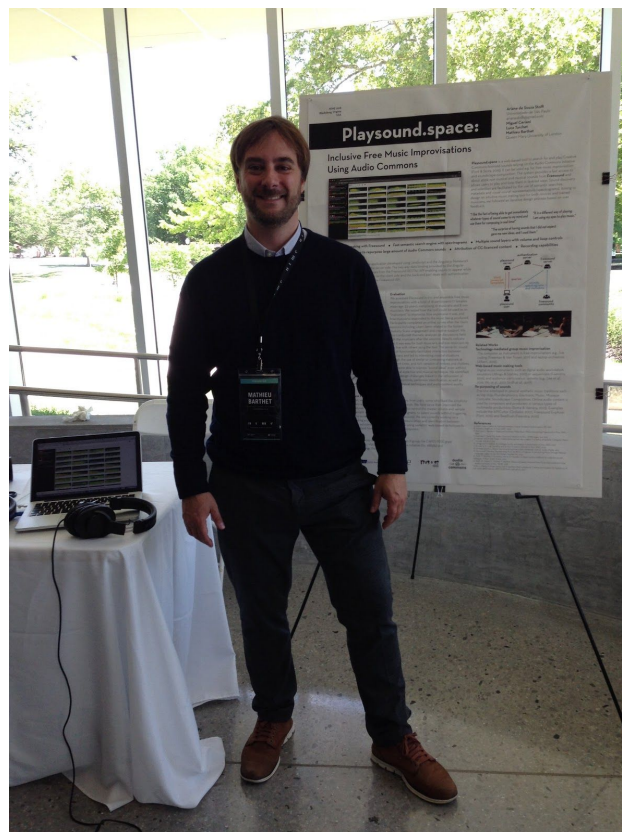| International conference on New Interfaces for Musical Expression (NIME)		
Blacksburg, Virginia, USA	QMUL	June 3-6, 2018

http://nime2018.icat.vt.edu/about/

The International Conference on New Interfaces for Musical Expression gathers researchers and musicians from all over the world to share their knowledge and late-breaking work on new musical interface design.

In this edition of the conference, Mathieu Barthet and Anna Xambó (QMUL) presented two posters with demos:

- Ariane Stolfi, Miguel Ceriani, Luca Turchet, Mathieu Barthet (2018). Playsound.space: Inclusive Free Music Improvisations Using Audio Commons, published in "Proceedings of the New Interfaces for Musical Expression".
  http://www.nime.org/proceedings/2018/nime2018_paper0050.pdf
- Anna Xambó, Gerard Roma, Alexander Lerch, Mathieu Barthet, György Fazekas (2018). Live Repurposing of Sounds: MIR Explorations with Personal and Crowdsourced Databases, published in "Proceedings of the New Interfaces for Musical Expression".
  http://www.musicinformatics.gatech.edu/wp-content_nondefault/uploads/2018/04/Xambo-et-al.-2018-Live-Repurposing-of-Sounds-MIR-Explorations-with-.pdf

L. Turchet and M. Barthet (QMUL) presented the following demo paper describing an audience-performer interaction system using haptic feedback of performer's expression:

- Turchet, L., & Barthet, M. Demo of interactions between a performer playing a Smart Mandolin and audience members using Musical Haptic Wearables.

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European Research Music Conference		
Barcelona, Spain	UPF	June 11-13, 2018

https://eventum.upf.edu/19834/programme/european-research-music-conference.html

The European Research Music Conference, co-organized by the UPF, brought together a significant number of the projects funded by the European Research Council that have music as their focus. These projects come from diverse research domains and exemplify the wide variety of high-quality research related to music that is being carried out in Europe. The Conference included talks by the Principal Investigators of the projects, plus demonstrations, short talks, and concerts by other team members.

In the context of this conference Frederic Font, Alastair Porter and Dmitry Bogdanov (all UPF) has posters presenting the following AudioCommons related tools and technologies:

- Font, F. (2018). Freesound: a research-friendly collection of audio clips
- Porter, A. (2018). Analysing music at large scale using the AcousticBrainz platform
- Bogdanov, D. (2018). Essentia: Open-source library and tools for audio and music analysis, description, and synthesis

Sound and Music Computing Conference		
Limassol, Cyprus	UPF	July 4-7, 2018

http://cyprusconferences.org/smc2018/program.html

The SMC Conference is a double-blind peer-reviewed international scientific conference around the core interdisciplinary topics of Sound and Music Computing.

In this particular edition of the conference, Eduardo Fonseca (UPF) had a poster presenting the following paper related to the Freesound Datasets platform:

- Fonseca, E., Gong R., & Serra X. (2018). A Simple Fusion of Deep and Shallow Learning for Acoustic Scene Classification.

Surrey Audio Day		
Guildford, UK	Surrey	July 6, 2018

https://cvssp.org/events/audio_day_2018/

The Surrey audio Day was an event organised to bring together researchers and collaborators engaged in audio-related research projects linked to the University of Surrey, including projects on musical audio repurposing using source separation; spatial audio in the home; making sense of sounds; and creative commons audio. Many of these are collaborative projects, including members of the Centre for Vision, Speech and Signal Processing (CVSSP), Institute of Sound Recording (IoSR), Digital World Research Centre (DWRC) and Centre for Digital Economy (CoDE) at Surrey, plus many other partners including the University of Salford, the University of Southampton, BBC R&D, and Audio Analytic.
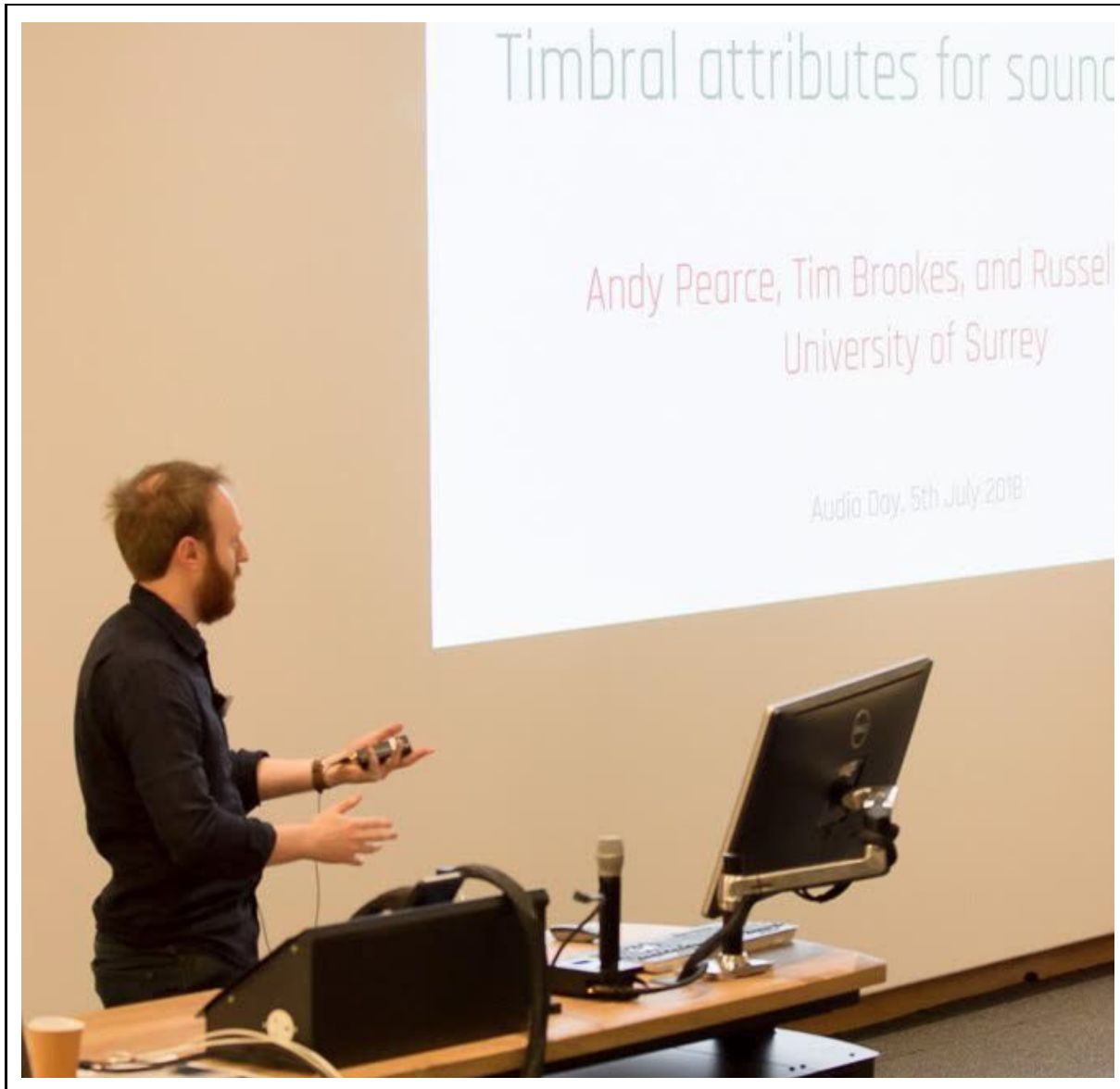
International Open Data Conference		
Buenos Aires, Argentina	Surrey (CoDE)	September 27-28, 2018
http://opendatacon.org/		
The International Open Data Conference (IODC) is the world's leading meeting for the open data community, comprising of policy makers, industry, academics and activist. Dr Bonina from Surrey CoDE led a session on the emerging business of open data, referring to the challenges to build innovative and sustainable business models with open data, and using the ACE as example.		

Workshop on Detection and Classification of Acoustic Scenes and Events		
Woking, UK	CVSSP (Surrey), UPF	November 19-20, 2018
http://dcase.community/workshop2018		
The Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE) aims to bring together researchers from many different universities and companies with interest in the topic, and provide the opportunity for scientific exchange of ideas and opinions. Besides the talks and panel mentioned in section 3.1, Eduardo Fonseca (UPF) also presented a poster about the results of the "General-purpose audio tagging of Freesound content with AudioSet labels" challenge organized by UPF as pat of DCASE.		

- Fonseca, E., Plakal M., Font F., Ellis D. P. W., Favory X., Pons J., Serra X. (2018). General-purpose Tagging of Freesound Audio with AudioSet Labels: Task Description, Dataset, and Baseline
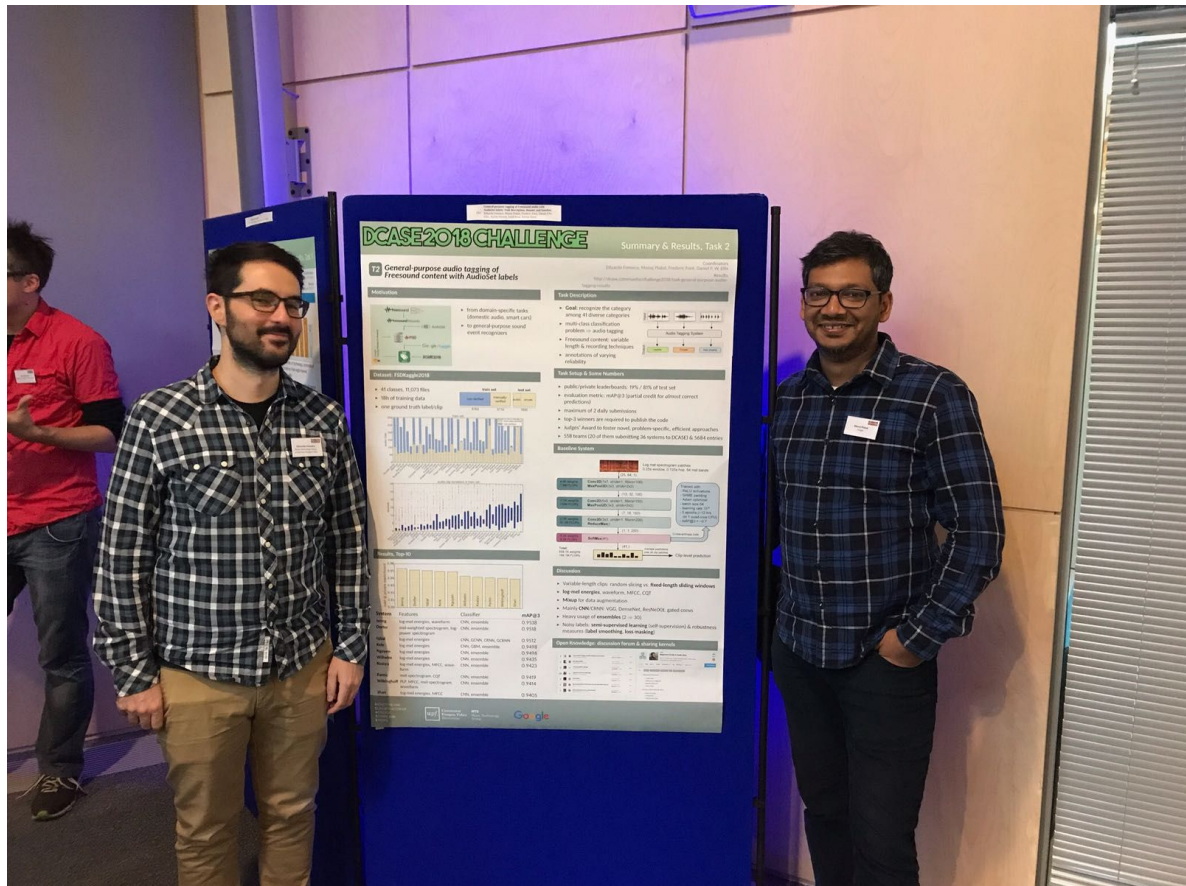
3.3 Data challenges

As part of the academic dissemination activities of the AudioCommons project we also organized a number of data challenges using Creative Commons audio content including audio files from Freesound and Creative Commons audio metadata stored in AcousticBrainz. The following sections provide some more details about these challenges.

3.3.1 Content-based music genre recognition from multiple sources (AcousticBrainz Genre Task in Media Eval 2017)

The Multimedia Evaluation Benchmark, MediaEval, offers challenges in the form of shared tasks. The goal of MediaEval is to develop and evaluate new algorithms and technologies for multimedia retrieval, access and exploration. MediaEval tasks are innovative, involving multiple modalities, (e.g., audio, visual, textual, and/or contextual) and focusing on the human and social aspects of

multimedia. MediaEval's larger aim is to promote reproducible research that makes multimedia a positive force for society.

In the 2017 edition, we organized the AcousticBrainz Genre 2017 task, a genre classification challenge based on open music data available in the AcousticBrainz database under the CC0 license. The task requires participants to predict genre and subgenre annotations given audio features of music tracks four datasets. Two sub-tasks are included, in which the datasets are either considered individually or are allowed to be combined in order to improve the predictions using all training data.

The task received 107 evaluation runs which included submissions for both subtasks and all four datasets from 5 participating research teams. The task was organized by UPF researchers of the AudioCommons team in collaboration with researchers from Delft University of Technology and industry (tagtraum industries incorporated). The outcomes were presented on the MediaEval 2017 workshop held in conjunction with CLEF 2017 (Conference and Labs of the Evaluation Forum).

Full data challenge information, dataset and results can be found in this website.

3.3.2 Content-based music genre recognition from multiple sources (AcousticBrainz Genre Task in Media Eval 2018)

The Multimedia Evaluation Benchmark, MediaEval, offers challenges in the form of shared tasks. The goal of MediaEval is to develop and evaluate new algorithms and technologies for multimedia retrieval, access and exploration. MediaEval tasks are innovative, involving multiple modalities, (e.g., audio, visual, textual, and/or contextual) and focusing on the human and social aspects of multimedia. MediaEval's larger aim is to promote reproducible research that makes multimedia a positive force for society.

In the 2018 edition, we organized the second year of the AcousticBrainz Genre task that we was started in 2017 and which is based on open music data available in the AcousticBrainz database under the CC0 license. This year we opened the validation datasets previously used to evaluate submissions in the 2017 challenge, and used new hidden test datasets for evaluating new submissions. This year we focused on providing baseline approaches for future participants in the challenge, and prepared submissions from two team formed from the organizers of the challenge, covering both subtasks and all four datasets (16 evaluation runs). The outcomes were presented on the MediaEval 2018 workshop.

Full data challenge information, dataset and results can be found in this website.

3.3.3 General-purpose audio tagging of Freesound content with AudioSet labels (Task 2 in DCASE Challenge 2018)

The Detection and Classification of Acoustic Scenes and Events challenge (DCASE) supports the development of computational scene and event analysis methods by comparing different approaches using common publicly available datasets.

In the 2018 we organized a challenge task to evaluate systems for general-purpose audio tagging with an increased number of audio categories (41) and using data with annotations of varying reliability. This poses the challenges of classifying sound events of very diverse nature (including musical instruments, human sounds, domestic sounds, animals, etc.) and leveraging subsets of training data

with annotations of different quality levels. The data used were Creative Commons audio samples from Freesound.

The challenge was organized by UPF researchers of the AudioCommons team in collaboration with researchers from Google, and took place in the well-known Kaggle platform. The challenge had a great repercussion, with more than 550 participating teams and very good achieved results. A new version of the challenge is currently being prepared for 2019 with a bigger Freesound dataset built with the Audio Commons annotation tools and the Freesound Datasets platform.

Full data challenge information, dataset and results can be found in the Kaggle competition page and in the DCASE challenge page.

4 Other dissemination events

In this section we list other types of dissemination events attended by partners of the AudioComons consortium and provides some details about the event and our participation. We first list AudioCommons project meetings (4.1), then continue with talks, panels and sessions in general public and industry events (4.2), workshops and hackdays (4.3), performances (4.4) and user studies (4.5). For each section, first a summary table is provided and then details about each entry.

4.1 AudioCommons meetings (project partners only)

Event	Date	Location	Attendees
AC Kick-Off meeting	January 19-20, 2016	Barcelona, Spain	All partners
1st AC General meeting	October 12-13, 2016	London, UK	All partners
2nd AC General meeting	February 20-21, 2017	Barcelona, Spain	All partners
3nd AC General meeting (review meeting)	September 19-21, 2017	Luxembourg	All partners
4th AC General meeting	February 22-23, 2018	Barcelona, Spain	All partners
5th AC General meeting	November 21-22, 2018	Surrey, UK	All partners
6th AC General meeting (final review meeting)	*March 20-21, 2019 (planned)*	*Luxembourg*	*All partners*

AudioCommons Kick-Off meeting		
Barcelona, Spain	All partners	January 19-20, 2016
https://www.audiocommons.org/2016/01/12/audiocommons-kick-off.html		
Kick-off meeting of the AudioCommons consortium, including public presentations by each partner. The meeting took place at UPF facilities. The meeting included focused discussions about the work to be done in each of the work packages, and the main research and development lines of work were drawn as well as internal organizational aspects.		

1st AudioCommons General meeting		
October 12-13, 2016	All partners	London, UK
https://www.audiocommons.org		
First meeting of the AudioCommons consortium. The first official AudioCommons meeting featured updates about the work done in each work package and had focused discussions mainly about licensing issues and risks, AudioCommons prototypes to be developed and API design.		

2nd AudioCommons General meeting		
Barcelona, Spain	All partners	February 20-21, 2017
https://www.audiocommons.org		
Second meeting of the AudioCommons consortium. This meeting took place one year after the project started and included status updates for each work package and plenary sessions about dissemination events, exploitation and sustainability of AudioCommons developments and the design of the AudioCommons mediator and ontology.		

3rd AudioCommons General meeting (review meeting)		
Luxembourg	All partners	September 19-21, 2017

https://www.audiocommons.org
Third meeting of the AudioCommons consortium and first review meeting with the EC project officer and evaluation committee. The meeting included presentations about the work done for each of the work packages as well as general summary of achievements and feedback from the EC reviewers and project officer.

4th AudioCommons General meeting		
Barcelona, Spain	All partners	February 22-23, 2018
https://www.audiocommons.org		
Fourth meeting of the AudioCommons consortium. This meeting happened one year before the end of the project and it included status updates from each work package as well as a plenary session with reflections about the work done until then and what was missing until the end of the project. This meeting was specially useful to coordinate activities for the last year of AudioCommons.		

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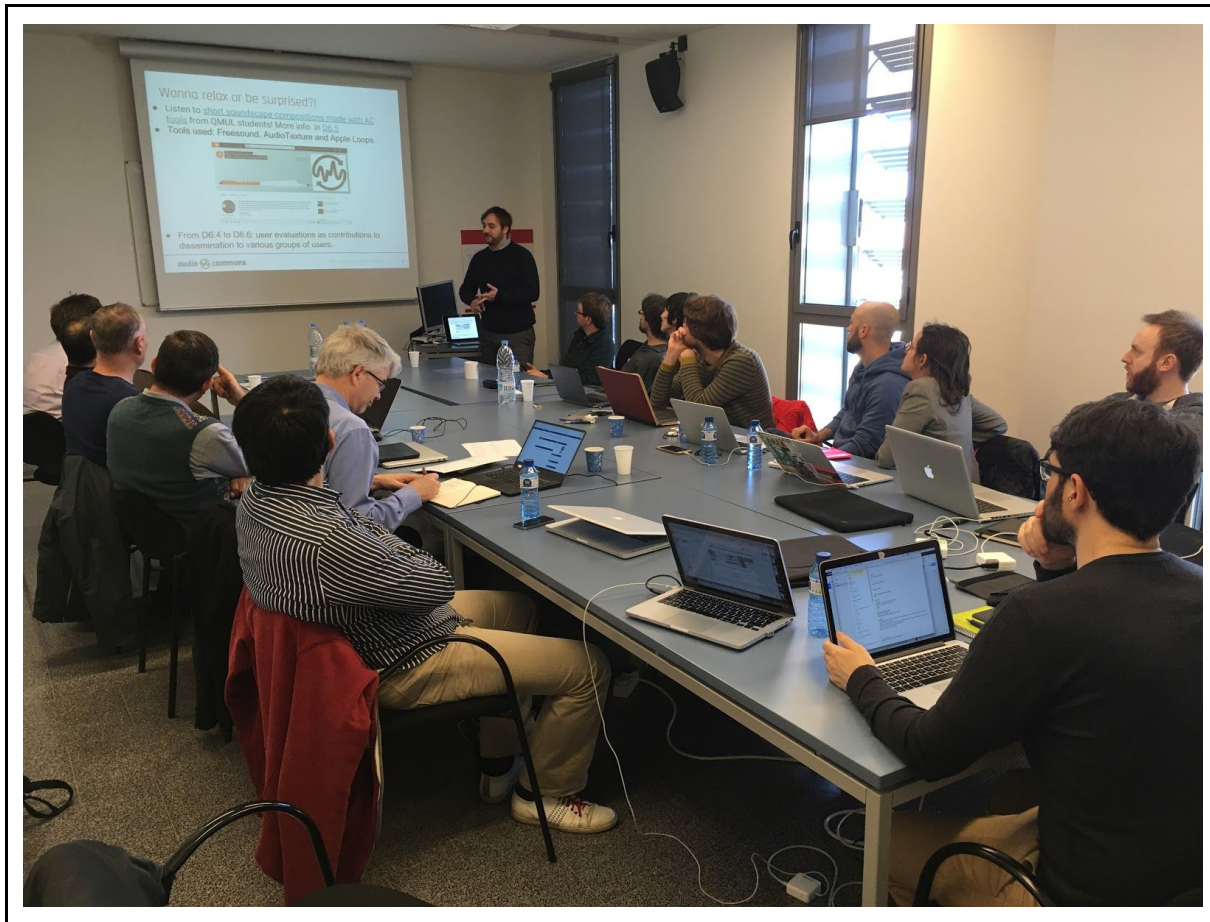
5th AudioCommons General meeting		
Surrey, UK	All partners	November 21-22, 2018
https://www.audiocommons.org		
Fifth meeting of the AudioCommons consortium. This meeting featured status updates from each work package and a plenary session about dissemination and the future of AudioCommons after the project is finished.		

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6th AudioCommons General meeting		
Luxembourg	All partners	March 20-21, 2019 (planned)
https://www.audiocommons.org		
Sixth meeting of the AudioCommons consortium and final review meeting with the EC project officer and evaluation committee.		

4.2 Talks, panel discussions or stands in industry and general audience events

Event	Date	Location	Attendees
Primavera Pro	May 30 - June 3, 2017	Barcelona, Spain	UPF

Sónar+D discussion panel: Creative Commons for the Creative Industries	June 13-16, 2017	Barcelona, Spain	UPF, Jamendo
Cultura Viva, La Ràdio del Futur	January 25-26, 2018	Barcelona, Spain	UPF
NAMM	January 25-28, 2018	Los Angeles, USA	Waves
Computer Entertainment Developers Conference	August 22-24, 2018	Yokohoma, Japan	Audiogaming
FAST Industry Day	October 25, 2018	London, UK	QMUL, UPF, IoSR and CVSSP (Surrey)
EECS Industry Event and Research open day	November 21, 2018	London, UK	QMUL

Primavera Pro		
Barcelona, Spain	UPF	May 30 - June 3, 2017
https://pro.primaverasound.com/event/view/id/903		
Primavera Pro is a small music industry conference inside of the very well known Primavera Sound music festival that takes place in Barcelona. In this venue Frederic Font (UPF) presented the AudioCommons project and discussed about Creative Commons licenses.		

Sónar+D discussion panel: Creative Commons for the Creative Industries		
Barcelona, Spain	UPF, Jamendo	June 13-16, 2017
https://sonarplusd.com/en/programs/barcelona-2017/areas/talks/creative-commons-for-the-creative-industries https://www.audiocommons.org/2017/10/30/videos-of-audiocommons-talks-at-sonar-plusd.html		
Audio Commons was present at Sónar +D, an international conference about creativity, technology, and cultural industries that happens inside Sónar festival in Barcelona. We organized a panel with the title "Creative Commons for the Creative Industries" in which we discussed about different perspectives and specific examples that provide a vision on how Creative Commons content can be used by creative industries, create economical return for content creators, and how to address specific legal aspects. The discussion panel was formed by Malcolm Bain (lawyer specialized on legal issues of open source), Emmanuel Donati (CEO at Jamendo), Frederic Font (UPF researcher) and Roger Subirana (composer who releases CC-licensed works in Jamendo Licensing). It was moderated by Xavier Serra (AudioCommons, UPF). The full video of the discussion panel is available here.		

Cultura Viva, La Ràdio del Futur		
Barcelona, Spain	UPF	January 25-26, 2018
https://xrcb.cat/ca/event/presentacio-i-workshop-de-xrcb-a-cultura-viva-gener-2018/		
This was a workshop and round table addressed to the general public with the topic "The future of radio" and in which Frederic Font (UPF) participated to present Freesound and AudioCommons project, and to discuss how Creative Commons content already plays and will play an important role in the future of radio.		

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NAMM Show		
Los Angeles, USA	Waves	January 25-28, 2018
https://www.namm.org/		
The NAMM Show is the place where global leaders of the music products, pro audio and event technology industries are gathered at the crossroads for new product introductions, business opportunities, networking and fresh inspiration. Waves team members attended NAMM and met with potential commercial repositories to include content for their SampleSurfer plugin.		

Computer Entertainment Developers Conference		
Yokohama, Japan	AudioGaming	August 22-24, 2018
http://cedec.cesa.or.jp/2018/koubo/en/index.html		
CEDEC (Computer Entertainment Developers Conference) is a conference promoting improvement of technological strength and exchanges of knowledge and information for people connected to computer entertainment (mainly games) development, business, and research and development of related technologies and hardware, etc. AudioGaming was invited by Media Integration Inc. to jointly exhibit sound design products including AudioTexture Free. In a private invited talk, we have disseminated the Audio Commons project to sound design professionals from major studios in Japan including Sony, Capcom, etc. The overall exhbisition is very well recieved, which results in an overswhenming downloads of AudioTexture Free from Japan when officially launched.		

FAST industry day		
London, UK	QMUL, UPF, IoSR and CVSSP (Surrey)	October 25, 2018
Event: http://www.semanticaudio.ac.uk/events/fast-industry-day/ Blog post: https://www.audiocommons.org/2018/10/23/abbey-road-industry.html Video: https://youtu.be/VF4qQRcGfl8		
The event showcased to artists, journalists and industry professionals the next generation technologies that will shape the music industry – from production to consumption. AudioCommons held a talk introducing the project and presented four demonstrators, AudioTexture, SampleSurfer, Timbral Explorer, Freesound, offering the opportunity to search and manipulate audio content from the partner providers (Freesound, Europeana, Jamendo). The audience engaged with the tools asking questions about the semantic technology and how they could use them for their own purposes. The event has also allowed us to discuss possible collaborations with other partners, including our invitation to the first Abbey Road Red Hackathon, held on the 10th and 11th of November 2018 in Abbey Road Studio One.		

EECS Industry Event and Research open day		
London, UK	QMUL	November, 21 2018
http://eecs.qmul.ac.uk/news-and-events/events/items/industry-event-and-research-open-day-.html		
During this event aimed at networking and engaging in potential industry collaborations, we showcased a demo about the embeddable tools and presented a poster discussing recent findings and the interactions between the different parts of the AudioCommons Ecosystem.		

4.3 Workshops and hacking days

Event	Date	Location	Attendees
Sónar+D Innovation Challenge	June 13-16, 2017	Barcelona, Spain	UPF
Designing in the Cloud	August 23-26, 2017	London, UK	QMUL, Audiogaming
Abbey Road Hackathon	November 10-11, 2018	London, UK	QMUL

Sónar+D Innovation Challenge		
Barcelona, Spain	UPF	June 13-16, 2017

https://sonarplusd.com/en/programs/barcelona-2018/areas/sonar-d-innovation-challenge/former-challenges

Audio Commons was present at Sónar +D, an international conference about creativity, technology, and cultural industries that happens inside Sónar festival in Barcelona. AudioCommons hosted a challenge for the Sónar Innovation Challenge, which is an activity co-organized by UPF. The topic of the challenge was "musical instruments for interacting with creative commons audio", and a team of 5 creators worked on the challenge and came up with *Freesound Trip*, a web application for exploring Freesound Creative Commons content in a three-dimensional space and generate soundscapes synced to a metronome. A video of the presentation of Freesound Trip at Sónar Innovation Challenge is available here. You can also play with the application.

Designing in the Cloud		
London, UK	QMUL, Audiogaming	August 23-26, 2017
http://audiomostly.com/sponsors/		
Audio Mostly is an interdisciplinary conference on design and experience of interaction with sound, embracing applied theory and reflective practice. It brings together thinkers and doers from academia and industry who share an interest in sonic interaction and the use of audio for interface design.		

During this workshop, we introduced web-based and sound design technologies including those created in the EU projects Audio Commons and Rapid-Mix, followed by a short creative sound walk.

| **Abbey Road Hackathon**		
London, UK	QMUL	November 10-11, 2018
Event: https://www.abbeyroad.com/hackathon Blog post: https://www.audiocommons.org/2018/12/30/abbey-road-hackathon.html		
The first Abbey Road hackathon gathered developers, designers and industries with the aim to discuss and propose new approaches to music making. Over a hundred participants took part in the event. As mentors, we presented and shared the latest version of the Mediator (V2) and further resources, which were employed by three teams of participants.		

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4.4 Performances

Event	Date	Location	Attendees
MareNostrum	August 9, 2018	Blacksburg, VA, USA	Performance
Cannibal Soundscapes	September 13, 2018	São João Del Rey, Brazil	Performance
Tender Buttons | Sound | Space (Web Audio Conference)	September 19, 2018	Berlin, Germany	Performance
A Live Coding Session using MIRLC	September 28, 2018	London, UK	Performance
A session on participatory mobile music and live coding using crowdsourced sounds	November 24, 2018	Trondheim, Norway	Performance
Live coding with crowdsourced sounds & a drum machine	January 18, 2019	Madrid, Spain	Performance

MareNostrum		
Blacksburg, VA, USA	QMUL	August 9, 2018
https://www.audiocommons.org/2018/10/01/marenostrum-cube-fest-2018.html http://annaxambo.me/music/solo-performances/marenostrum-cubefest-2018/		
The Cube is one-of-a-kind research and performance space that since 2013 features a high-density loudspeaker array (HDLA) of 139 speakers, comprising 124 satellite speakers distributed in 3 levels and a top grid level, 10 floor-standing speakers, and 5 subwoofers. The Cube Fest is curated by Eric Lyon and presents spatial music pieces in the Cube. Anna Xambó premiered the musical piece MareNostrum, a soundscape piece that was the result of participating in the 2018 Spatial Music Workshop at Virginia Tech during the previous week. The piece is based on the musical spatialization of sounds from crowdsourced online databases from the AudioCommons ecosystem, such as Freesound.org, combined with personal recordings and sound synthesis generated with SuperCollider. Some of the sounds were processed using the AudioCommons tool AudioGaming's AudioTexture and the whole composition and performance was developed in SuperCollider.		
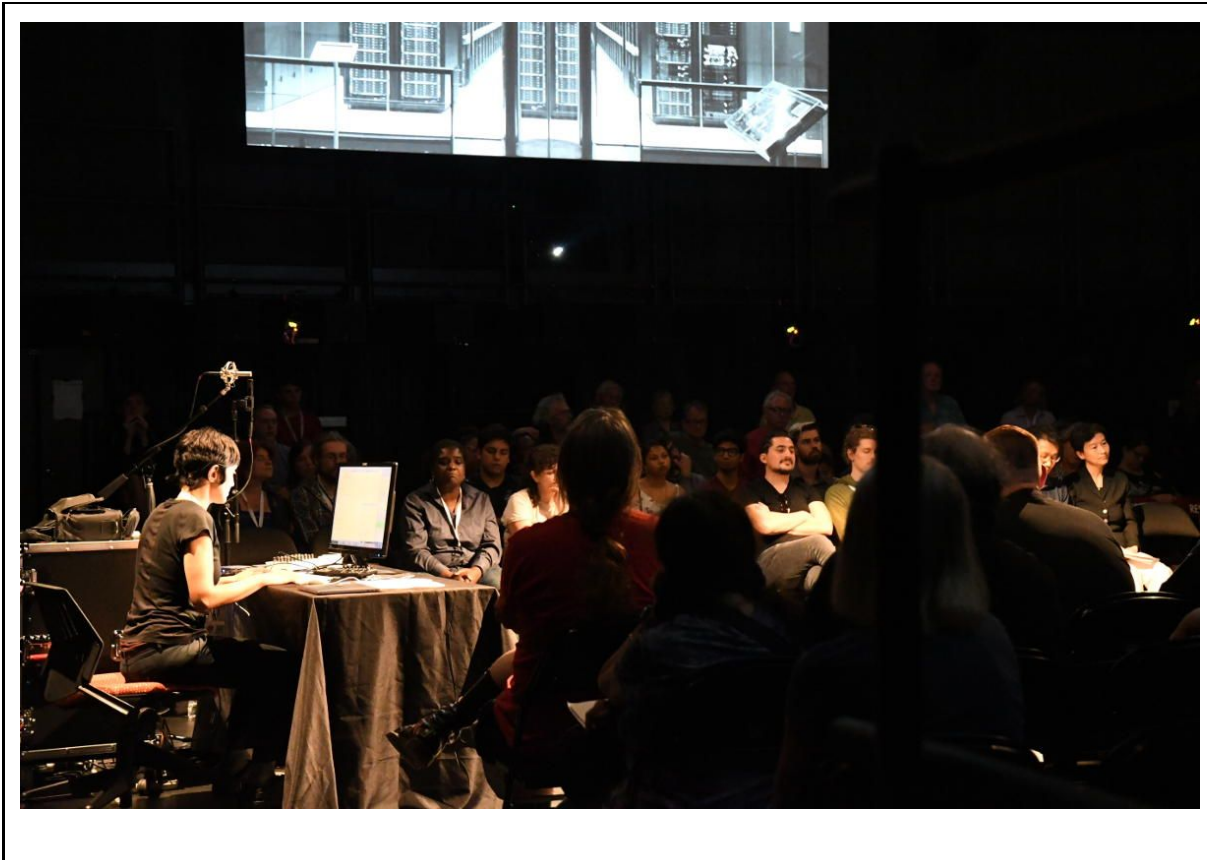
Cannibal Soundscapes		
São João Del Rey, Brazil	QMUL	Sep 13, 2018

https://alice.dcomp.ufsj.edu.br/ubimus/

Cannibal Soundscapes is a performance presented at the concert of the UBIMUS Congress in São João Del Rey to an audience of about 70 researchers, students and members of the public , where a paper describing the development of Playsound was also presented. Constructed from many references of Brazilian culture, Oswald de Andrade's Cannibalist Manifesto is a text considered difficult to translate. The performers proposed to use the original text in Portuguese, and use the built-in translation system of Playsound.space as the basis for searching for words in Freesound. The chat system developed on the platform was used to simulate a dialogue between the two performers, using Oswald de Andrade's text as a basis. Mathie Barthet was sticking snippets of text onto the screen while Ariane Stolfi selected real-time words and sounds in a system-mediated intersemiotic process of translation.

Tender Buttons | Sound | Space (Web Audio Conference)		
Berlin, Germany	QMUL	September 19, 2018

Performance abstract: https://webaudioconf.com/performances/tender-buttons-sound-space
Performance video: https://www.youtube.com/watch?v=LiNb_T8oIuA

Tender Buttons \| Sound \| Space is the title of the performance delivered by Ariane Stolfi and Alessia Milo, presented at the Web Audio Conference in 2018 in Berlin, Germany, where we also presented a paper and led a hands-on demonstration. We constructed the performance based on self-produced readings of a poem by Gertrude Stein, available in the public domain, edited and uploaded to the Freesound database. By doing so, we could play these parts during the performance while showing the reading's' text in the chat interface. The readings were blended with the sounds selected based on queries of words from the text, creating an additional layer of meaning. A video of the performance, that lasted 20 minutes is available on YouTube.
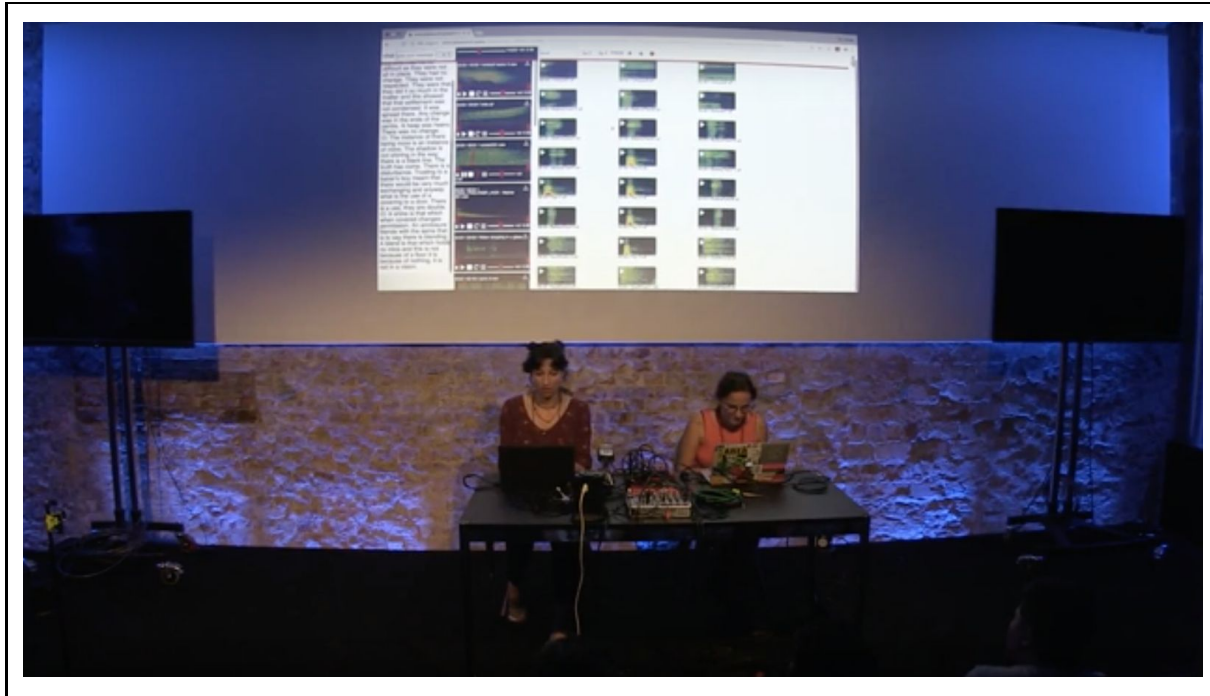
A Live Coding Session using MIRLC		
London, UK	QMUL	September 28, 2018
https://intersections.io/ http://annaxambo.me/music/solo-performances/live-coding-the-raw-2018/		
The RAW & The Cooked, Inter/sections 2018 is a QMUL student-led event that organized two full-day events about live coding (on the first day) and physical computing (on the second day), in which workshops and performances are included throughout the day to build a community between students, artists, researchers, and general public. In this event, Anna Xambó (aka peterMann) performed a live coding session where she used the self-built MIRLC, which uses MIR techniques in live coding retrieving crowdsourced sounds from Freesound.org based on AudioCommons principles.		
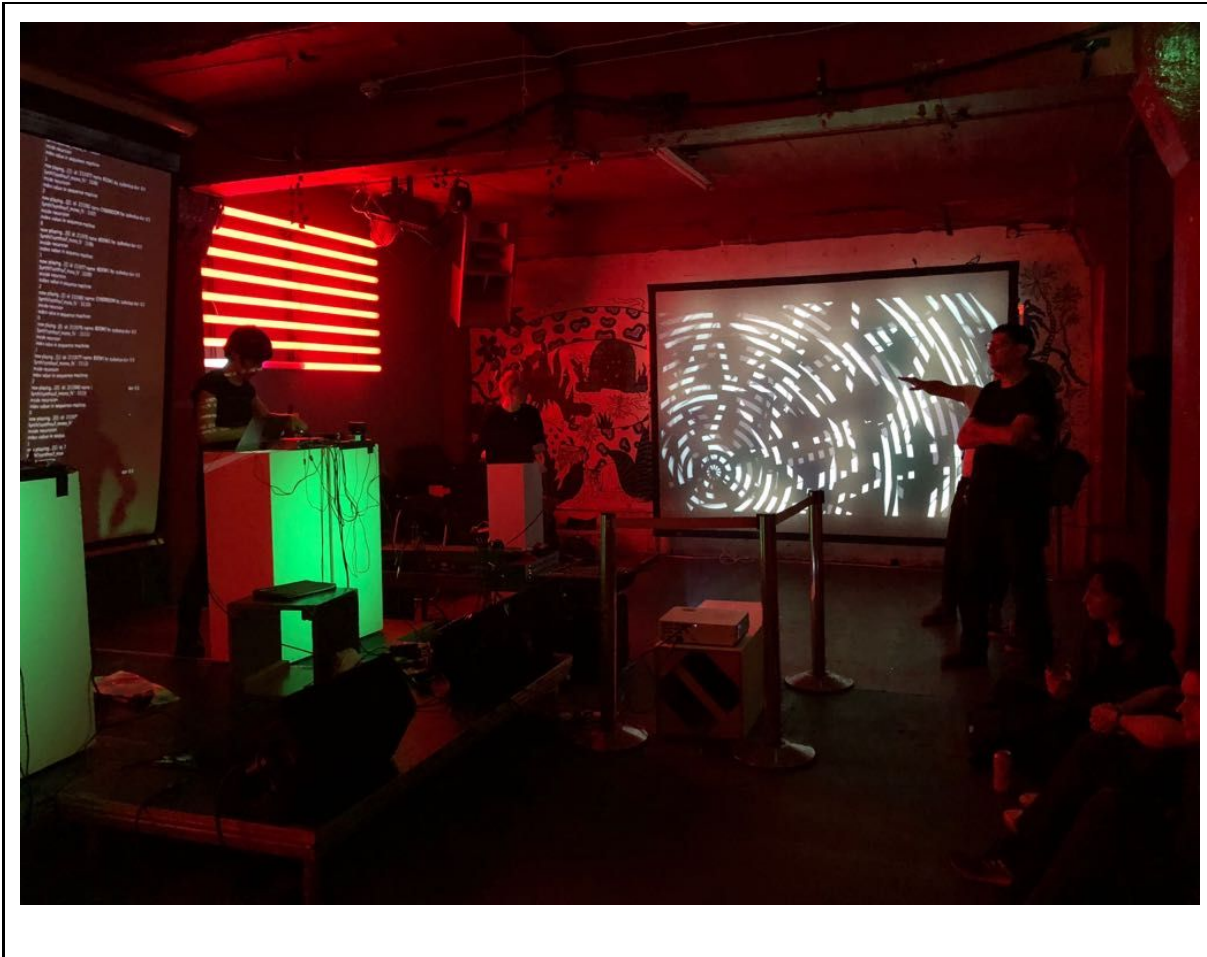
A session on participatory mobile music and live coding using crowdsourced sounds		
Trondheim, Norway	QMUL	November 24, 2018
https://vimeo.com/313128047 https://vimeo.com/309867671 http://annaxambo.me/music/solo-performances/forskningskonsert-ntnu-2018/		
This session included two musical pieces in the format of a research concert (forskningskonsert) by Anna Xambó: The second piece, 'Live coding with MIRLC and a drum machine', is a live coding session that combines the self- built live coding engine for repurposing crowdsourced sounds with an old-school drum machine.		

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Piece #2
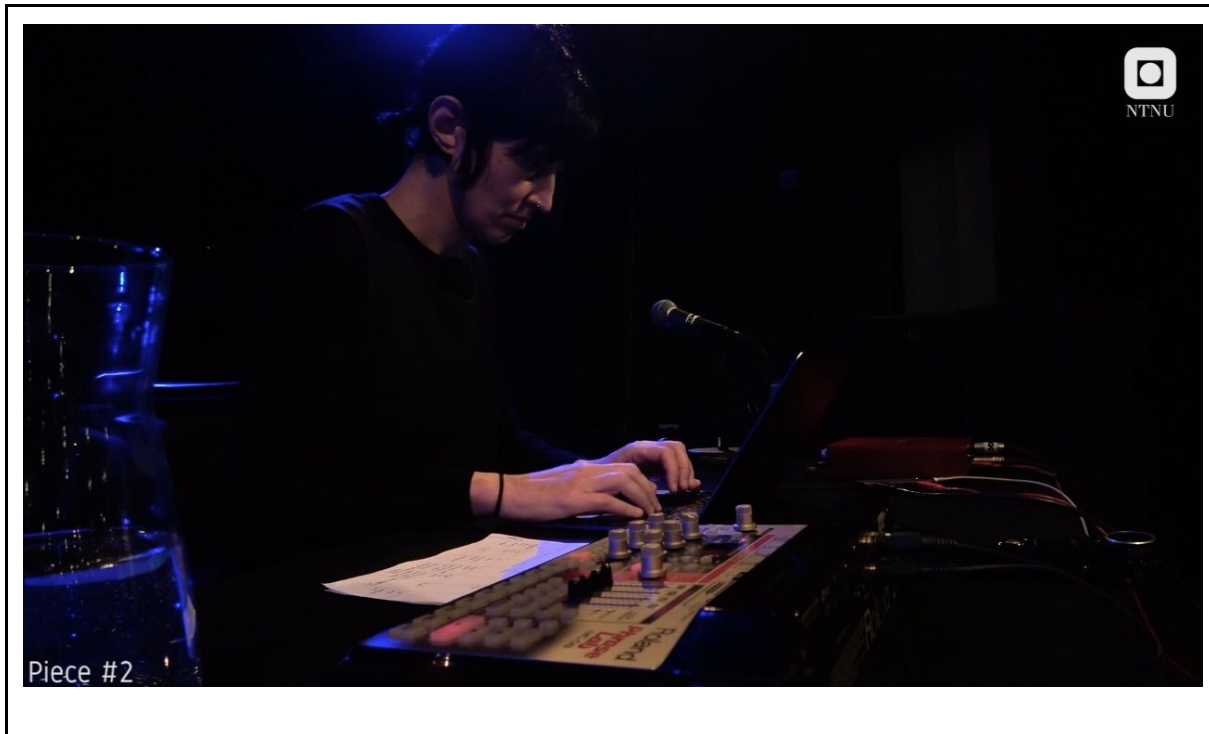
Live coding with crowdsourced sounds & a drum machine		
Madrid, Spain	QMUL	January 18, 2019
https://iclc.livecodenetwork.org/2019/programa.html#pn6 http://annaxambo.me/music/solo-performances/live-coding-iclc-2019/		
The International Conference on Live Coding (ICLC) is a conference that focuses on the practice of live coding, which refers to the creation and modification of algorithms with a creative purpose in real time often in the presence of a physical or virtual audience. The community is diverse and seeks to engage in a wide cross-section of artistic practices including but not limited to music, audiovisual creation, performance, robotics, dance, scientific research and education. As part of the closing concert of ICLC 2019, Anna Xambó performed a live coding session with the self-built system MIRLC to access audio content from the online Creative Commons (CC) sound database Freesound combined with a drum machine.		

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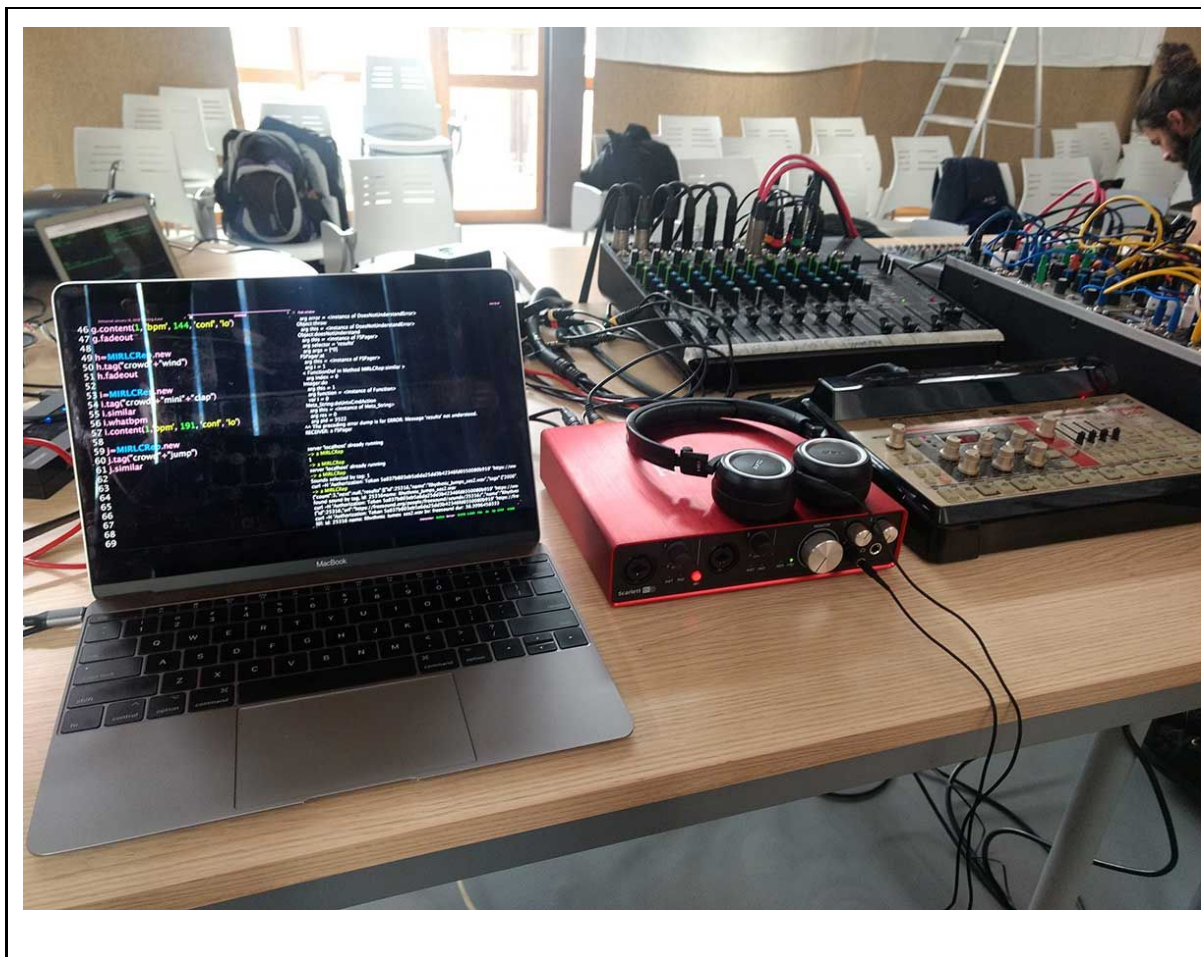
4.5 Studies

The user studies allowed the participants to test the tools in typical creative tasks and get involved in the project, providing design suggestions to improve the tools and the technologies to which they have become exposed. Below we list the number of users who interacted with AudioCommons Technologies through our user studies, providing design suggestions and other helpful comments.

Tools	Participants (n.)	Deliverable	Dataset
Playsound	18	D6.4	DS 6.5.1
MuSST	7	D6.5	/
AudioTexture Freesound Apple Loops	20	D6.6	DS 6.7.1
Jam with Jamendo	7+7	DS 6.8	DS 6.6.1

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AudioTexture SampleSurfer MuSST Playsound	17 respondents (32 students)	D6.12	DS 6.7.2
AudioTexture SampleSurfer MuSST	18	D6.12	DS 6.5.2
Moodscape Generator	8	D6.12	DS 6.4.2
Jam with Jamendo (Trondheim study)	20	D6.12	DS 6.6.1
Total participants	**122**		

Among the outcomes of these interactions, there are the soundscapes composed by the students evaluating the first prototype of AudioTexture (D6.6), which can be listened to at this link (https://soundcloud.com/qmulsrpt).

In addition to the participants above, who could test technologies in first person, we also mention the involvement of the 600+ respondents[1] which took part in the large-scale survey reported in D2.1, aimed at gathering technical and design requirements for the AudioCommons Ecosystem.

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[1] https://zenodo.org/record/832644

5 Web engagement

5.1 Website and Blog

The website served as a resource to inform the audience about the scope of the project and the developments across the different areas.It comprises of the following sections: home (blog news), about, materials, team, and the recent tools section. We published in total 24 blog entries - 4 in 2016, 4 in 2017, 14 in 2018 and 2 in January 2019 - advertising our posts on Twitter and on our internal mailing list. Note how special dissemination efforts were put during the second half of the project. What follows is a list of the blog posts:

| Date	Blog Titles
2016-01-12	AudioCommons kick-off
2016-02-04	AudioCommons: 61st AES
2016-05-9	AudioCommons: user requirement survey
2016-11-8	AudioCommons: first milestone reached
2017-05-05	AudioCommons: second milestone reached
2017-05-22	AudioCommons presence at Sonar+D and Primavera Sound
2017-05-22	Sonar+D Panel
2017-10-30	Videos of audiocommons talks at Sonar +D
2018-03-13	SAAM 2018
2018-05-18	TEI 2018
2018-05-25	Sonorities 2018
2018-06-01	NIME 2018 Playsound
2018-06-08	NIME 2018 MIRLC fluidsound
2018-06-15	Web of Things Semantic Audio
2018-07-06	Wallifornia Musictech 2018
2018-07-15	AudioCommons: Audio Extractor

2018-07-27	AudioCommons Ontology
2018-09-05	Timbral Explorer
2018-09-18	Moodscape Generator
2018-10-01	Marenostrum Cube Fest 2018
2018-10-23	Abbey Road FAST Industry Day
2018-12-30	Abbey Road Hackathon
2019-01-04	CC- licensing
2019-01-14	Unspoken Words Ars Electronica

We present below a selection of the website analytics (by Google) for the period Jan 1st 2016 to Jan 29th 2019.
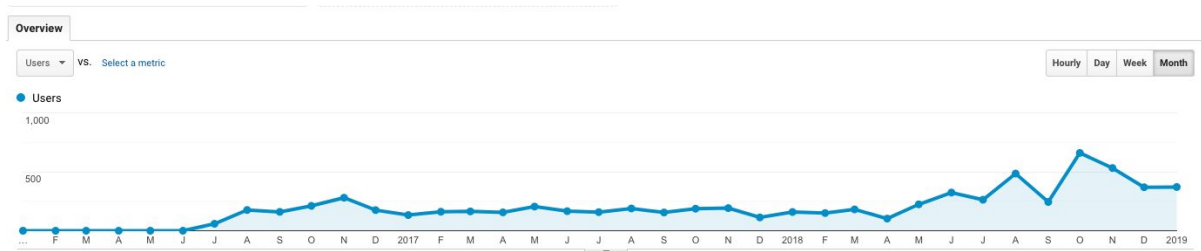
The plot above shows how the monthly engagement activity increased over the last year, yielding high spikes over the summer. In retrospective, and from the analysis of the weekly and daily engagement, crossed with the data related to page visits, we attribute the increase to the dissemination conducted at TEI in May, at NIME in June, and in August to the dissemination of AudioCommons in Brazil. From October, the peaks (over 50 visits per day) could be attributed to the publications of the "Marenostrum Cube Fest" post (1st of October) and the "Fast Industry Day" (25th of October).
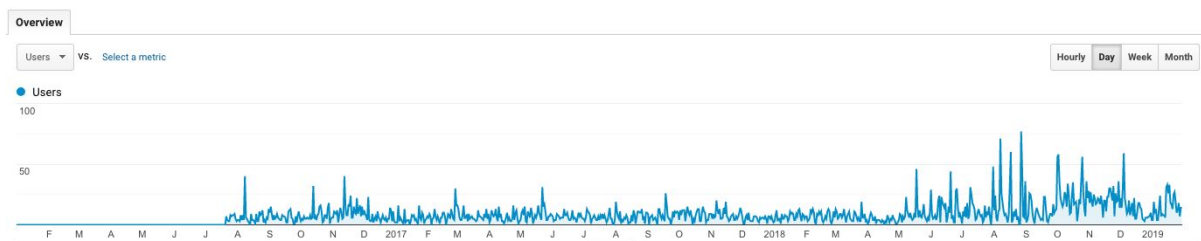
Overall, we engaged 6.5K users through the website, for a total of 9.7K sessions and 21.5K pageviews. The sessions lasted in average 1'.40" with 2.20 pages per sessions. The bounce rate (how many people leave the website after landing on it) was at 61.50%, which is in the average. The chart below highlights that 88.5% were new visitors, according to the analytics.

Users	New Users	Sessions	Number of Sessions per User	Pageviews
6,461	6,461	9,742	1.51	21,450

Pages / Session	Avg. Session Duration	Bounce Rate
2.20	00:01:40	61.50%

■ New Visitor ■ Returning Visitor
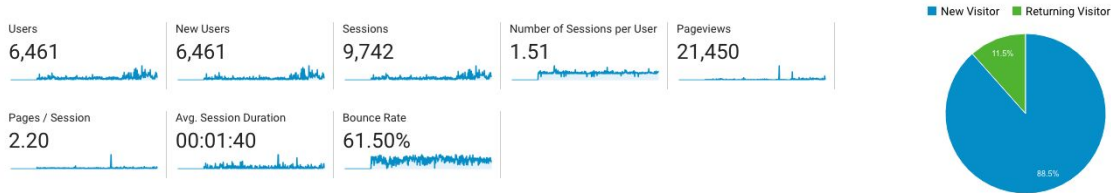
In the image below we can observe the number of views for each page of the website. The most visited was the *home* page (/), with 10K visualisations, followed by the *materials* page (2.2K), *team* (1.8K), *about* (869), *news* (648), and several blog posts. The most viewed blog post was "Timbral Explorer" (341 views), the post explaining the navigable timbral models developed by WP5, followed by the Fast Industry Day at Abbey Road (293), the tutorial on the Audio Commons Extractor (287), "sharebutton.to" (277), possibly an analytics service, "Moodscape Generator" (232).

	Page	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate
		21,450 % of Total: 100.00% (21,450)	14,656 % of Total: 100.00% (14,656)	00:01:23 Avg for View: 00:01:23 (0.00%)	9,742 % of Total: 100.00% (9,742)	61.50% Avg for View: 61.50% (0.00%)
1.	/	10,407 (48.52%)	7,251 (49.47%)	00:01:26	6,998 (71.83%)	57.07%
2.	/materials/	2,220 (10.35%)	1,718 (11.72%)	00:01:48	415 (4.26%)	76.39%
3.	/team/	1,869 (8.71%)	1,386 (9.46%)	00:01:24	271 (2.78%)	70.11%
4.	/about/	869 (4.05%)	489 (3.34%)	00:01:02	112 (1.15%)	66.96%
5.	/news/	648 (3.02%)	460 (3.14%)	00:00:28	40 (0.41%)	42.50%
6.	/2018/09/05/timbre-sound.html	341 (1.59%)	276 (1.88%)	00:03:19	153 (1.57%)	67.32%
7.	/2018/10/23/abbey-road-industry.html	293 (1.37%)	240 (1.64%)	00:02:32	122 (1.25%)	73.77%
8.	/2018/07/15/audio-commons-audio-extractor.html	287 (1.34%)	255 (1.74%)	00:02:56	134 (1.38%)	79.85%
9.	/sharebutton.to	277 (1.29%)	96 (0.66%)	00:00:00	96 (0.99%)	4.17%
10.	/2018/09/18/moodscape-generator.html	232 (1.08%)	196 (1.34%)	00:02:12	125 (1.28%)	75.20%

If we observe the data aggregation for the flow below, 3K of web sessions landed on our website from direct link (e.g. typing audiocommons.org), pointing in 6K cases to *home* (/), and a range of other pages. 2K of web sessions landed on our website from Google. 530 sessions came from the freesound blog (blog.freesound.org), 345 from Twitter (t.co), 285 from the MTG web domain.
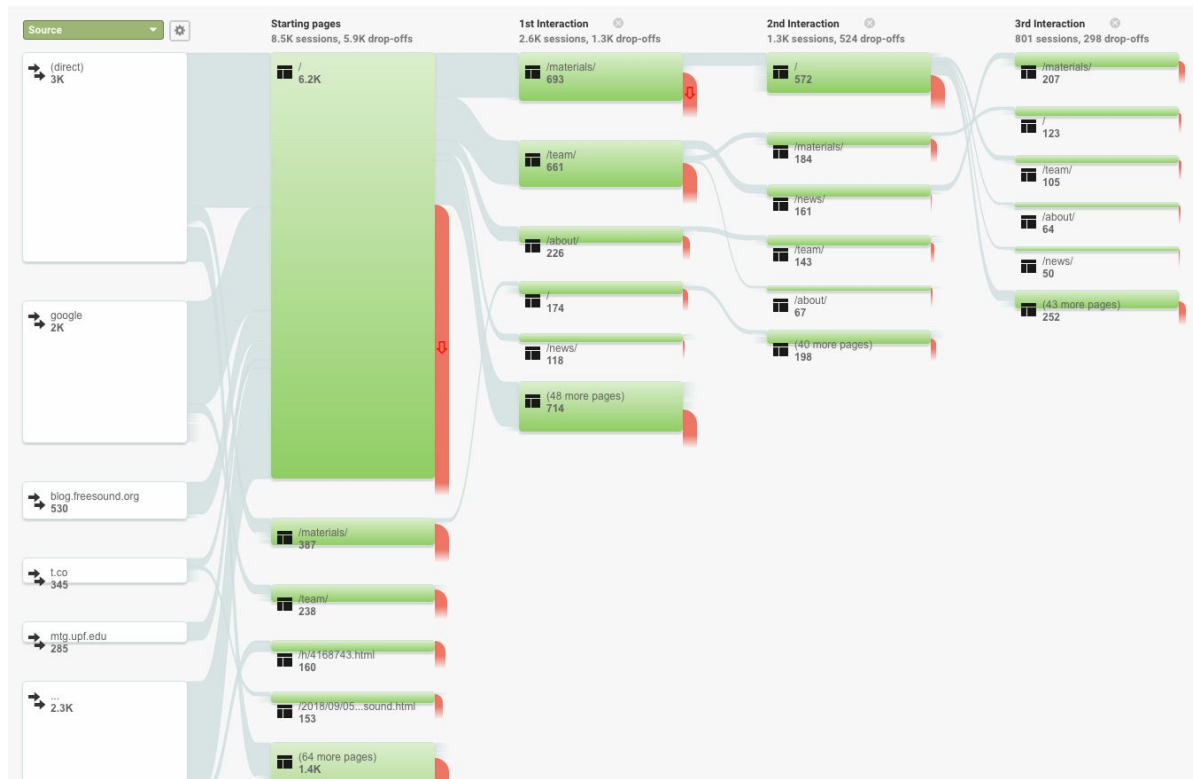
The table below shows a detail of the visits composing the 1.4K tab in the first green row of the picture above (after *home, materials, team, h/, Timbral Explorer*).

1.6K Sessions

Top segments ▾

Segment	Sessions	% of traffic
/2018/07/15/audio-commons-audio-extractor.html	134	8.39%
/2018/09/18/moodscape-generator.html	125	7.82%
/2018/10/23/abbey-road-industry.html	122	7.63%
/2018/10/01/marenostrum-cube-fest-2018.html	117	7.32%
/about/	112	7.01%
/2018/06/08/nime-2018-mirlc-fluidsound.html	99	6.20%
/index.html	80	5.01%
/sonarpanel/	72	4.51%
/2018/07/06/wallifornia-musictech-2018.html	68	4.26%
/call/	62	3.88%
/2018/05/18/tei-2018.html	59	3.69%
/2019/01/14/unspoken-words.html	55	3.44%

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According to the analytics shown below, among all 9742 sessions, 33.85% came from direct visit (e.g. typing "audiocommons.org" in the browser bar. 32.45% came from links available in other websites or for example emails (Referral). 26.35% came from major search engines (Organic Search). 7.33% came from specific social media services. Referral Channel also comprises of Social Media platforms.

|	Default Channel Grouping		Sessions ⬍ ↓	Sessions
			9,742	9,742
			% of Total: 100.00% (9,742)	% of Total: 100.00% (9,742)
☐	1. ■ Direct		3,298	33.85%
☐	2. ■ Referral		3,158	32.42%
☐	3. ■ Organic Search		2,567	26.35%
☐	4. ■ Social		714	7.33%
☐	5. ■ (Other)		5	0.05%

The top 10 referral sessions (39.75% on total) to our website from other websites are shown below and include among the first three the freesound blog (15.73% Sessions column), the MTG-UPF domain (9.58%) and twitter (9.01%).

	Source ?	Acquisition			Behavior	
		Users ?	New Users ?	Sessions ? ↓	Bounce Rate ?	Pages / Session ?
		0	2,506	3,872	63.48%	2.17
		% of Total: 0.00% (0)	% of Total: 38.79% (6,461)	% of Total: 39.75% (9,742)	Avg for View: 61.50% (3.23%)	Avg for View: 2.20 (-1.33%)
☐	1. blog.freesound.org	0 (0.00%)	566 (22.59%)	609 (15.73%)	62.40%	2.04
☐	2. mtg.upf.edu	0 (0.00%)	143 (5.71%)	371 (9.58%)	57.41%	1.91
☐	3. t.co	0 (0.00%)	175 (6.98%)	349 (9.01%)	64.76%	1.76
☐	4. audiocommons.jamendo.com	0 (0.00%)	25 (1.00%)	212 (5.48%)	73.58%	2.04
☐	5. facebook.com	0 (0.00%)	81 (3.23%)	123 (3.18%)	75.61%	1.80
☐	6. m.facebook.com	0 (0.00%)	96 (3.83%)	121 (3.12%)	85.95%	1.29
☐	7. duckduckgo.com	0 (0.00%)	72 (2.87%)	91 (2.35%)	46.15%	1.92
☐	8. labs.freesound.org	0 (0.00%)	55 (2.19%)	90 (2.32%)	66.67%	2.16
☐	9. c4dm.eecs.qmul.ac.uk	0 (0.00%)	50 (2.00%)	85 (2.20%)	63.53%	1.86
☐	10. dtic.upf.edu	0 (0.00%)	59 (2.35%)	79 (2.04%)	56.96%	1.80

Social referral (7.33% on the total 9.7K views) also contributed to the overall publicity of the project. The project website was reached in 714 sessions obtained through social channels. In the chart below we observe a detail of the daily contributions from social media to the overall web sessions.
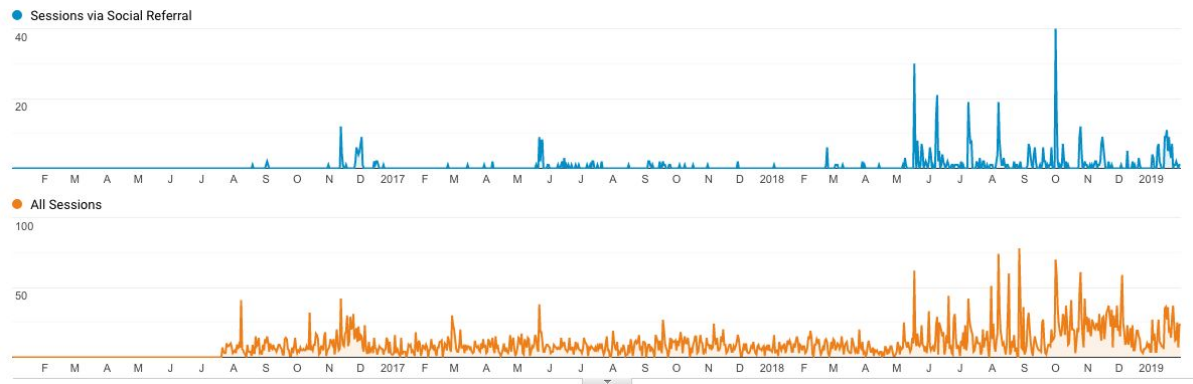
Among these 714 sessions, 50,14% were from Twitter, which we discuss in the next section, while 41.18% were from Facebook, driven by further interest towards personal posts pointing to the blog entries or the website. This data shows that engagement done in first person is also important for outreach purposes.

Social Network ?	Sessions ? ↓	Pageviews ?
1. Twitter	358 (50.14%)	631 (52.41%)
2. Facebook	294 (41.18%)	450 (37.38%)
3. reddit	33 (4.62%)	69 (5.73%)
4. LinkedIn	17 (2.38%)	30 (2.49%)
5. Stack Exchange	7 (0.98%)	12 (1.00%)
6. YouTube	4 (0.56%)	11 (0.91%)
7. WordPress	1 (0.14%)	1 (0.08%)

We noticed that the Social Media engagement pointed apart from the website home page (22.55%) to "Marenostrum Cube Fest" post (9.10%), MIRLC at NIME (7.70%), "Timbral Explorer" (7.14%), TEI 2018 (6.30%), Wallifornia Musictech (5.32%), Unspoken Words (5.04%), and the Call for the 1h Challenge study (5.04%), showing how web engagement we achieved through social media was supported across different dimensions: technological interest, creative interdisciplinary workshops, performances, user studies.

The table below shows the kind of sessions which were reached from social media activity.

Shared URL ?	Sessions ? ↓	Pageviews ?	Avg. Session Duration ?	Pages / Session ?
1. www.audiocommons.org/	161 (22.55%)	403 (33.47%)	00:02:46	2.50
2. www.audiocommons.org/2018/10/01/marenostrum-cube-fest-2018.html	65 (9.10%)	84 (6.98%)	00:00:48	1.29
3. www.audiocommons.org/2018/06/08/nime-2018-mirlc-fluidsound.html	55 (7.70%)	61 (5.07%)	00:00:07	1.11
4. www.audiocommons.org/2018/09/05/timbre-sound.html	51 (7.14%)	76 (6.31%)	00:02:59	1.49
5. www.audiocommons.org/2018/05/18/tei-2018.html	45 (6.30%)	77 (6.40%)	00:02:07	1.71
6. www.audiocommons.org/2018/07/06/wallifornia-musictech-2018.html	38 (5.32%)	46 (3.82%)	00:00:46	1.21
7. www.audiocommons.org/2019/01/14/unspoken-words.html	36 (5.04%)	51 (4.24%)	00:01:11	1.42
8. www.audiocommons.org/call/	36 (5.04%)	40 (3.32%)	00:00:05	1.11
9. www.foxnews.com/	22 (3.08%)	44 (3.65%)	00:05:17	2.00
10. www.audiocommons.org/2018/10/23/abbey-road-industry.html	21 (2.94%)	28 (2.33%)	00:02:55	1.33

Show rows: 10 ⇅ Go to: 1 1 - 10 of 49 ‹ ›

According to the analytics the majority of sessions visiting the website come from the UK (20,12%), where Surrey and QMUL are, Spain (15.99%) where UPF is, followed by the US (15.03%). Other countries include in order France, Germany, Italy, Brazil, Russia, Luxembourg, China, and many others.
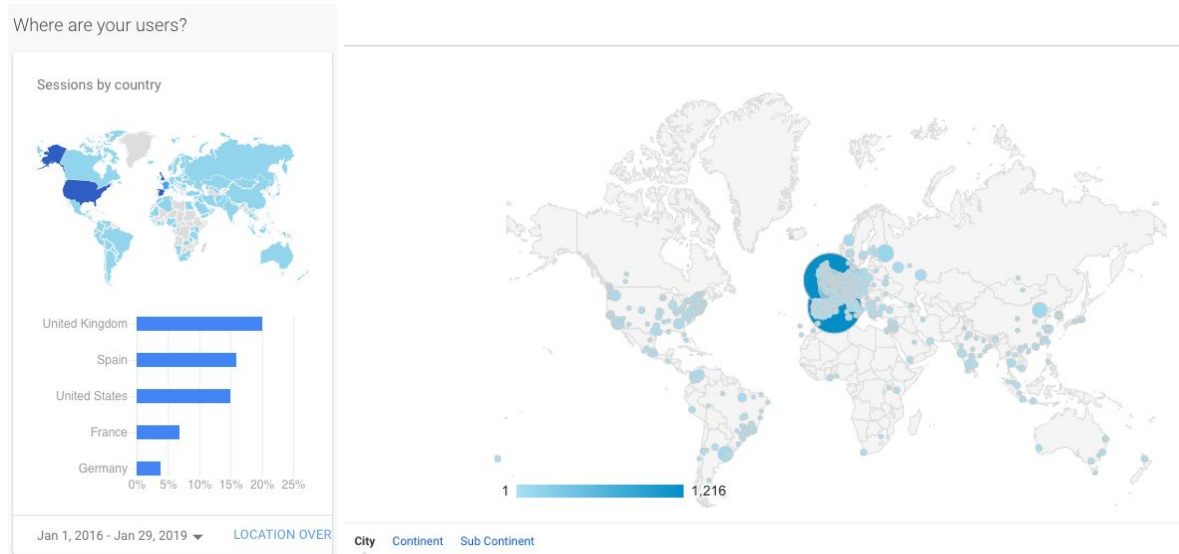
The table below shows the session percentages in detail, while the picture above shows the city from which the session visits are coming.

Country	Acquisition			Behavior
	Users	New Users	Sessions ↓	Bounce Rate
	0 % of Total: 0.00% (0)	6,464 % of Total: 100.05% (6,461)	9,742 % of Total: 100.00% (9,742)	61.50% Avg for View: 61.50% (0.00%)
1. 🇬🇧 United Kingdom	0 (0.00%)	1,046 (16.18%)	1,960 (20.12%)	53.88%
2. 🇪🇸 Spain	0 (0.00%)	637 (9.85%)	1,558 (15.99%)	51.35%
3. 🇺🇸 United States	0 (0.00%)	1,289 (19.94%)	1,464 (15.03%)	68.31%
4. 🇫🇷 France	0 (0.00%)	466 (7.21%)	668 (6.86%)	72.01%
5. 🇩🇪 Germany	0 (0.00%)	238 (3.68%)	367 (3.77%)	57.77%
6. 🇮🇹 Italy	0 (0.00%)	271 (4.19%)	319 (3.27%)	52.35%
7. 🇧🇷 Brazil	0 (0.00%)	237 (3.67%)	272 (2.79%)	88.24%
8. 🇷🇺 Russia	0 (0.00%)	97 (1.50%)	259 (2.66%)	35.52%
9. 🇱🇺 Luxembourg	0 (0.00%)	64 (0.99%)	192 (1.97%)	69.27%
10. 🇨🇳 China	0 (0.00%)	171 (2.65%)	191 (1.96%)	87.96%

An interesting result is that the highest average number of pages visited come from countries which are not directly related to the project. Although few visits came from these countries (see column sessions), the visits explored the website in detail.

Country	Users	New Users	Sessions	Bounce Rate	Pages / Session ↓
	0 % of Total: 0.00% (0)	6,464 % of Total: 100.05% (6,461)	9,742 % of Total: 100.00% (9,742)	61.50% Avg for View: 61.50% (0.00%)	2.20 Avg for View: 2.20 (0.00%)
1. ▨ Namibia	0 (0.00%)	1 (0.02%)	1 (0.01%)	0.00%	17.00
2. ▨ Qatar	0 (0.00%)	1 (0.02%)	1 (0.01%)	0.00%	10.00
3. ▨ Slovakia	0 (0.00%)	4 (0.06%)	4 (0.04%)	25.00%	6.25
4. ▨ Senegal	0 (0.00%)	1 (0.02%)	1 (0.01%)	0.00%	6.00
5. ▨ Azerbaijan	0 (0.00%)	1 (0.02%)	1 (0.01%)	0.00%	4.00
6. ▨ Ecuador	0 (0.00%)	6 (0.09%)	6 (0.06%)	83.33%	4.00
7. ▨ Guatemala	0 (0.00%)	4 (0.06%)	4 (0.04%)	50.00%	4.00
8. ▨ Trinidad & Tobago	0 (0.00%)	2 (0.03%)	2 (0.02%)	50.00%	4.00
9. ▨ Sri Lanka	0 (0.00%)	4 (0.06%)	4 (0.04%)	50.00%	3.75
10. ▨ Spain	0 (0.00%)	637 (9.85%)	1,558 (15.99%)	51.35%	3.74
11. ▨ Côte d'Ivoire	0 (0.00%)	3 (0.05%)	3 (0.03%)	66.67%	3.67
12. ▨ Tunisia	0 (0.00%)	11 (0.17%)	12 (0.12%)	66.67%	3.08
13. ▨ Afghanistan	0 (0.00%)	1 (0.02%)	1 (0.01%)	0.00%	3.00
14. ✕ Jersey	0 (0.00%)	2 (0.03%)	2 (0.02%)	0.00%	3.00
15. ▨ Cambodia	0 (0.00%)	5 (0.08%)	17 (0.17%)	47.06%	3.00
16. ▨ Uganda	0 (0.00%)	3 (0.05%)	3 (0.03%)	66.67%	3.00
17. ▨ Norway	0 (0.00%)	33 (0.51%)	74 (0.76%)	45.95%	2.89

The following table reports the number of sessions by subcontinent, showing how South America (5,97%), Eastern Europe (4.66%), Asia (Eastern 3.73%, Southern 2.30%, Western 2.19%, Southeast 1.82%), also engaged with the AudioCommons project.

		0 % of Total: 0.00% (0)		6,464 % of Total: 100.05% (6,461)		9,742 % of Total: 100.00% (9,742)	
1.	Northern Europe	0	(0.00%)	1,213	(18.77%)	2,190	(22.48%)
2.	Southern Europe	0	(0.00%)	1,039	(16.07%)	2,068	(21.23%)
3.	Northern America	0	(0.00%)	1,394	(21.57%)	1,579	(16.21%)
4.	Western Europe	0	(0.00%)	997	(15.42%)	1,543	(15.84%)
5.	South America	0	(0.00%)	420	(6.50%)	582	(5.97%)
6.	Eastern Europe	0	(0.00%)	231	(3.57%)	454	(4.66%)
7.	Eastern Asia	0	(0.00%)	316	(4.89%)	363	(3.73%)
8.	Southern Asia	0	(0.00%)	198	(3.06%)	224	(2.30%)
9.	Western Asia	0	(0.00%)	191	(2.95%)	213	(2.19%)
10.	Southeast Asia	0	(0.00%)	162	(2.51%)	177	(1.82%)
11.	Central America	0	(0.00%)	80	(1.24%)	93	(0.95%)
12.	Australasia	0	(0.00%)	56	(0.87%)	75	(0.77%)
13.	Northern Africa	0	(0.00%)	45	(0.70%)	51	(0.52%)
14.	(not set)	0	(0.00%)	46	(0.71%)	46	(0.47%)
15.	Western Africa	0	(0.00%)	16	(0.25%)	21	(0.22%)
16.	Southern Africa	0	(0.00%)	21	(0.32%)	21	(0.22%)
17.	Eastern Africa	0	(0.00%)	16	(0.25%)	17	(0.17%)
18.	Caribbean	0	(0.00%)	13	(0.20%)	14	(0.14%)

5.2 Twitter

We present the analysis of our Twitter activity, held from the account "@AudioCommons"[2], which helped us disseminating the research conducted, promoting the technological findings and presenting its possible applications in creative domains.

The 28 day retrospective summary for the day we analysed (below, taken on the 21st of January) shows in green the comparison with the previous period and in black our overall achievements. We tweeted 52 times, gaining 275 followers and 45 Likes. We had 5534 impressions, 273 profile visits, and 7 mentions.

Our tweeting activity during the month of January, covered the publication of three blog posts, "Abbey Road Hackathon", Unspoken Words", "CC licensing". Tweeting about these posts allowed us to receive 149.4% more impressions, 370.7% more visits, 600% more mentions, 10 more followers with respect to the previous month, December.

Tweets	Following	Followers	Likes	Lists	Moments
52	144	275	45	0	0

28 day summary with change over previous period

Tweets	Tweet impressions	Profile visits	Mentions	Followers
3	5,534 ↑149.4%	273 ↑370.7%	7 ↑600.0%	275 ↑10

We can observe from the figure below how 19% of the audience is from the UK, 19% from the US, 18% from Spain, in agreement with the website analytics data. In the audience figure also Germany and France above the 2% threshold.

Country name	% of audience	
United Kingdom	19%	
United States	19%	
Spain	18%	
Germany	6%	
France	4%	
Japan	2%	
Indonesia	2%	
Sweden	2%	
Portugal	2%	
Mexico	2%	

We report below our twitter engagement month by month, supporting our advice to promote the website activities and resources through active social media engagement conducted on platforms such as twitter as well as private channels such as facebook. The combination website - Twitter works well at an impersonal project level, connecting the organisation with other organisations interested in similar topics, while the combination website - Facebook might work to promote personal participation in research projects and other dissemination events.

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[2] https://twitter.com/audiocommons

January. The blog post about CC-licensing earned 1740 impressions. 33 engagements were earned by being mentioned by Audio Mostly, a conference about interactive audio where some collaborators presented their work in 2018. In 2017 the Audio Mostly conference was held at QMUL, with substantial strategic involvement of many QMUL members working for the AudioCommons project. During this conference the workshop "Designing in the Cloud" (see D6.8) also took place. Finally, this summary highlights how Abbey Road Red, the innovation incubator involved with the Abbey Road Hackathon event, is our top follower. Therefore, our involvement in the Fast Industry Day, and the hackathon that followed, potentially opened new paths to reach out for those which we identified as actors of our ecosystem.

Jan 2019 · 20 days so far...

TWEET HIGHLIGHTS

Top Tweet earned 1,740 impressions

A new blog post, by Kari Koskinen, showing how to license @creativecommons content, with the example of @freesounddev sounds. @mtg_upf @UniOfSurrey @c4dm

audiocommons.org/2019/01/04/cc-...

↻ 9 ♥ 14

[View Tweet activity]   View all Tweet activity

Top Follower followed by 1,678 people

Abbey Road Red
@AbbeyRoadRed FOLLOWS YOU

@AbbeyRoad's innovation department. Current startups on our incubator programme are @Humtap, @GetLickd, COTODAMA, @broomxtech & @LifeScoreMusic

View profile   View followers dashboard

Top mention earned 33 engagements

AudioMostly
@AudioMostly · Jan 8

Don't forget you can also get updates on the #Audio Mostly 2019 #Conference on our Facebook page

facebook.com/AudioMostly/

@UoNComputerSci @AudioCommons @c4dm @QMUL_MAT @AESorg @CompFoundry @semanticaudio @ismir2019 @@smcnetorg @UoNMusic @XPressz @RedRoxProjects #Music

↻ 3 ♥ 12

View Tweet

Top media Tweet earned 1,348 impressions

This week Lizzie Wilson @dgtlslvs and Jorge @delbosque from @QMUL_MAT tell us about Unspoken Word, their generative music project developed in collaboration with @BBCRD. It is based on spoken words semantic analysis, @freesounddev queries

ADVERTISE ON TWITTER

Get your Tweets in front of more people

Promoted Tweets and content open up your reach on Twitter to more people.

[Get started]

JAN 2019 SUMMARY

Tweets	Tweet impressions
3	5,214

Profile visits	Mentions
273	7

New followers
8

December. This month was very quiet for our Twitter account, resulting in a downward trend in our website sessions monthly average. However, the most interesting event was the release of AudioTexture as a freely available tool, twitted by MTG-UPF. This tweet earned us 34 engagements. Over December, we achieved 2064 impressions and 5 new followers.

Dec 2018 · 31 days

TWEET HIGHLIGHTS

Top Follower followed by 1,615 people

Huh
@RichardHofmeier FOLLOWS YOU

Firefighter/EMT aplummet, inverted soaring downward, worsening at rage-speed, compounding our distance, praying in a whooshing void for a catalytic obliviation.

View profile   View followers dashboard

Top mention earned 34 engagements

MTG-UPF
@mtg_upf · Nov 30

Integrate and transform @freesounddev content in your DAW with AudioTexture Free, a new audio plugin by @lesoundpro developed in the context of European project @AudioCommons @EU_H2020 #ResearchImpactEU
upf.edu/web/mtg/home/-...
pic.twitter.com/3HlNdt6Vjw

↻ 12 ♥ 21

View Tweet

DEC 2018 SUMMARY

Tweet impressions	Profile visits
2,064	44

New followers
5

November. During this month we twitted about our AC 5th meeting, earning 1206 impressions and 13 Likes. This was also the time when the Abbey Road hackathon took place. Since one of the projects was employing the single-board computer Bela, we earned 67 engagements by being mentioned in one of their tweets, advertising the open-source project "Play the Singer", developed during the hackathon. 10 new people followed us, we received 9 mentions, 198 profile visits, and 3739 impressions. A tweet mentioning the AC talk at the FAST Industry Day gained 140 impressions.

Nov 2018 · 30 days

TWEET HIGHLIGHTS

Top Tweet earned 1,206 impressions

Frederic Font discussing the Future of #AudioCommons at the 5th general AC meeting at @UniOfSurrey. With @freesounddev @mtg_upf @QMUL @c4dm @Jamendo @lesoundpro @WavesAudioLtd @Europeanaeu @IoSR_Surrey @cvssp_research @markplumbley @EU_Commission @EU_H2020 #H2020
pic.twitter.com/JpF2W8qwor

t❜5 ♥13

| View Tweet activity | View all Tweet activity |

Top Follower followed by 1,169 people

Top mention earned 67 engagements

Bela Platform
@BelaPlatform · Nov 13

Play-the-singer: a voice-controlled game running on @BelaPlatform + P5.js, using @AudioCommons API. Developed overnight by @AdanLBenito @alesmilo @giu_lio_mo_ro @BeiciLiang in the 24h Hackathon in Studio One at @AbbeyRoadRed .

youtube.com/watch?v=3aQUnf...

devpost.com/software/play-...

t❜9 ♥17

View Tweet

Top media Tweet earned 140 impressions

Gyorgy Fazekas presenting the Audio Commons project and some music production and discovery tools to the audience of the Studio Two. #H2020 #AudioCommons #AbbeyRoadStudios

NOV 2018 SUMMARY	
Tweets	Tweet impressions
1	3,739
Profile visits	Mentions
198	9
New followers	
10	

October. In October we received 4141 impressions, 177 profile visits, 8 mentions, and earned 13 new followers. We twitted about the FAST Industry Day and the related blog post, earning 1564 impressions, 22 Likes and 9 retweets. The mentions and followers gained belonged in large part to the music industry, as exemplified by the Focusrite-Novation top-follower, with whom we held a dialogue during the demo covering the sound libraries market.

Oct 2018 · 31 days

TWEET HIGHLIGHTS

Top Tweet earned 1,564 impressions

Today Audio Commons will be at @AbbeyRoad Studios with @semanticaudio to show a number of tools for music production and discovery! Read about them here:
audiocommons.org/2018/10/23/abb...
@mtg_upf @EU_H2020 @Jamendo @WavesAudioLtd @lesoundpro @IoSR_Surrey @freesounddev @annaxambo

↩1 t❜9 ♥22

| View Tweet activity | View all Tweet activity |

Top Follower followed by 717 people

Dave Hodder
@dvhdr FOLLOWS YOU
Chief Scientist @WeAreFocusrite @WeAreNovation. Dad. Love people, music, learning, sci-fi, art, data, cheese, tea & books.

Top mention earned 108 engagements

Birgitte Andersen
@BirgitteBIC · Oct 25

With amazing artist @DrRockUK at @AbbeyRoad at Studio 2 in London to explore #music @semanticaudio @AudioCommons home of @thebeatles
pic.twitter.com/Ourb3JoN4r

t❜2 ♥8

View Tweet

Top media Tweet earned 83 impressions

Gyorgy Fazekas presenting the Audio Commons project and some music production and discovery tools to the audience of the Studio Two. #H2020 #AudioCommons #AbbeyRoadStudios
pic.twitter.com/GzcnLRYB6q

OCT 2018 SUMMARY	
Tweets	Tweet impressions
3	4,141
Profile visits	Mentions
177	8
New followers	
13	

September. 985 impressions from a tweet at the Web Audio Conference, where we presented 2 papers. 3090 impressions in total, 13 new followers. We achieved 237 profile visits and 17 mentions.

Sep 2018 · 30 days

TWEET HIGHLIGHTS

Top Tweet earned 985 impressions

Johan Pauwels and Anna Xambó @axambo presenting Jam with @Jamendo at @WebAudioConf #QuerybyChord @c4dm pic.twitter.com/CTpaVfRK0r
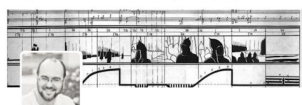
↻ 4 ♥ 5

[View Tweet activity]   View all Tweet activity

Top Follower followed by 1,725 people

Kyle D. Stedman
@kstedman FOLLOWS YOU

Top mention earned 23 engagements

Platform-7
@PLATFORM7events · Sep 7

This developing technology will interest sound artists, music producers, videographers & musicians. Part of Audio Commons Initiative, an EU funded programme researching how to expand open music & audio.
@IoSR_Surrey @freesounddev @mtg_upf @AudioCommons
audiocommons.org/2018/09/05/tim…

↻ 1 ♥ 5

View Tweet

Top media Tweet earned 100 impressions

Playsound.space being presented by Ariane Stolfi @WebAudioConf pic.twitter.com/QJ0mAfpPWw

SEP 2018 SUMMARY

Tweets	Tweet impressions
5	3,090

Profile visits	Mentions
237	17

New followers	
13	

The data from the months of **August, July, June, May** shows how followers and engagement could be gained also through mentions from other accounts, without tweeting from @AudioCommons. There were no tweets for July, June, May, but mentions which also included links to the blog news. In this case, 9 followers were gained in July, but none in June and May.

August.

Aug 2018 · 31 days

TWEET HIGHLIGHTS

Top Tweet earned 181 impressions

The #AudioCommons Ontology explained by Miguel Ceriani @quasicado
audiocommons.org/assets/img/AC_…
audiocommons.org/2018/07/27/aud…
@EU_H2020

[View Tweet activity]   View all Tweet activity

Top Follower followed by 239 people

John Carter
@JohnCarterAudio FOLLOWS YOU

View profile   View followers dashboard

Top mention earned 1 engagements

Modern Day NTK
@ModernDayNTK · Jul 31

...any questions?

RT @PLATFORM7events: Excellent table explaining Creative Common's licenses and how to use each one (via @annaxambo) @creativecommons @AudioCommons @lessig @europe_creative | #sound #freemusic #Filmmaking
creativecommons.org/faq/
pic.twitter.com/t2jZigm80l

↻ 2 ♥ 3

View Tweet

AUG 2018 SUMMARY

Tweets	Tweet impressions
2	377

Profile visits	New followers
95	1

July.

Jul 2018 · 31 days

TWEET HIGHLIGHTS

Top Follower followed by 1,831 people

PUZZLE AUDIO
Engineering & Sound Design
PuzzleAudio.com

Steve Blizin
@PuzzleAudio FOLLOWS YOU

Storyteller. Recordist. Audio Evangelist. Curator of odd sounds. Producer of many. And podcasts, too.
https://t.co/LTL1oTWQmS **#PodernFamily**

View profile   View followers dashboard

Top mention earned 72 engagements

Anna Xambó
@annaxambo · Jul 9

Here's a blog post with some insights of my participation (panel and hackathon) to **#WalliforniaMusicTech @MusicTechBE @LeanSquareBE** related to **@AudioCommons @C4DM #WomeninMusicTech**. It has been great to work with **@kyojindo @teamaxe** & Matthias Strobel!
audiocommons.org/2018/07/06/wal…

↩ 1   ⇄ 11   ♥ 21

View Tweet

JUL 2018 SUMMARY

Tweet impressions	Profile visits
223	119
Mentions	New followers
10	9

June.

Jun 2018 · 30 days

TWEET HIGHLIGHTS

Top Follower followed by 314 people
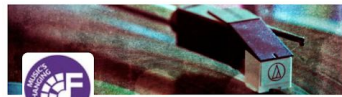
FAST_IMPACt
@semanticaudio FOLLOWS YOU

EPSRC project that brings the latest technologies to bear on the entire recorded music industry, end-to-end, producer to consumer, creating music for the 21c.

View profile   View followers dashboard

Top mention earned 35 engagements

Anna Xambó
@annaxambo · Jun 8

I'm back from amazing **@NIME2018 #NIME2018**, here's a blog post I wrote on our poster presentation about live repurposing of sounds:
audiocommons.org/2018/06/08/nim…
@AudioCommons @freesounddev #FluCoMa #MIRLC #FluidSound

⇄ 4   ♥ 7

View Tweet

JUN 2018 SUMMARY

Tweet impressions	Profile visits
254	15
Mentions	New followers
3	0

May.

May 2018 · 31 days

TWEET HIGHLIGHTS

Top mention earned 35 engagements

Anna Xambó
@annaxambo · May 18

We've written a blog post about our demo on **#eTextiles**+**@BelaPlatform**+**@AudioCommons** at **#TEI2018 @tei_conf** with **@SophieSkach**, Luca Turchet, Ariane Stolfi, **@theleadingzero**, **@matdiffusion**:
audiocommons.org/2018/05/18/tei…

⇄ 4   ♥ 7

View Tweet

MAY 2018 SUMMARY

Tweet impressions	Profile visits
352	54
Mentions	New followers
3	0

Top Tweets

Tweet activity   ✕

Audio Commons @AudioCommons
Frederic Font discussing the Future of
#AudioCommons at the 5th general AC
meeting at **@UniOfSurrey**. With
@freesounddev @mtg_upf @QMUL @c4dm
@Jamendo @lesoundpro @WavesAudioLtd
@Europeanaeu @IoSR_Surrey
@cvssp_research @markplumbley
@EU_Commission @EU_H2020 #H2020
pic.twitter.com/JpF2W8qwor

Impressions	2,534
Total engagements	100
Profile clicks	29
Media engagements	23
Link clicks	17
Likes	13
Detail expands	11
Retweets	5
Hashtag clicks	2

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons
A new blog post, by Kari Koskinen, showing how to license
@creativecommons content, with the example of
@freesounddev sounds.
@mtg_upf @UniOfSurrey @c4dm

https://www.audiocommons.org/2019/01/04/cc-licenses.html …

Impressions	1,922
Total engagements	56
Link clicks	19
Likes	14
Retweets	9
Profile clicks	8
Detail expands	6

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons
We have a new amusing blog post written by **@annaxambo**!
Read about MareNostrum, the piece composed using
#supercollider and **#audiocommons** resources, for the Spatial
Music Workshop held at Cube Fest August 4-9 2018.
@AudioGaming @freesounddev @EU_H2020
https://www.audiocommons.org/2018/10/01/marenostrum-
cube-fest-2018.html …

Impressions	1,530
Total engagements	20
Likes	5
Link clicks	4
Profile clicks	4
Replies	2
Retweets	2
Detail expands	2
Hashtag clicks	1

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons

This week Lizzie Wilson **@dgtlslvs** and Jorge **@delbosque** from **@QMUL_MAT** tell us about Unspoken Word, their generative music project developed in collaboration with **@BBCRD**. It is based on spoken words semantic analysis, **@freesounddev** queries and live mixing!
https://www.audiocommons.org/2019/01/14/unspoken-words.html …
pic.twitter.com/Z8qEaPvmeK

Impressions	1,640
Total engagements	51
Link clicks	20
Likes	9
Profile clicks	9
Detail expands	7
Retweets	4
Media engagements	2

↗ Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons

Johan Pauwels and Anna Xambó **@axambo** presenting Jam with **@Jamendo** at **@WebAudioConf** #QuerybyChord **@c4dm**
pic.twitter.com/CTpaVfRK0r

Impressions	1,510
Total engagements	27
Link clicks	9
Media engagements	7
Likes	5
Retweets	4
Profile clicks	2

↗ Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons

Our new #AudioCommons blog post on Timbral Modelling by Andy Pearce **@IoSR_Surrey**. Explore the interactive application to search with timbral attributes!
https://www.audiocommons.org/2018/09/05/timbre-sound.html … **@markplumbley** **@EU_H2020**

Impressions	1,416
Total engagements	25
Link clicks	15
Retweets	3
Likes	3
Profile clicks	3
Detail expands	1

↗ Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons
With this new post on the first
@AbbeyRoadRed hackathon we take the
opportunity to wish you a happy 2019!
https://www.audiocommons.org/2018/12/30/a
bbey-road-hackathon.html … @EU_H2020
#ResearchImpactEU #H2020
pic.twitter.com/a0YZT8BeRh

Impressions	1,000
Total engagements	18
Media engagements	5
Link clicks	5
Likes	4
Retweets	1
Follows	1
Detail expands	1
Profile clicks	1

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

Tweet activity   ✕

Audio Commons @AudioCommons
So many things this week for @AudioCommons! Post on
MoodScape Generator by Tayjo Padmini Vaduru based on
@freesounddev Timeline
https://www.audiocommons.org/2018/09/18/moodscape-
generator.html … and the @WebAudioConf starting tomorrow
with Jam with @Jamendo, http://Playsound.space @axambo
@alesmilo @garotasimpatica

Impressions	1,427
Total engagements	24
Link clicks	11
Profile clicks	6
Retweets	4
Likes	3

Reach a bigger audience
Get more engagements by promoting this Tweet!

Get started

6 Published tools, demonstrators and integration of AudioCommons content in 3rd party software

In the following subsections we list the different tools and demonstrators that have been developed during the AudioCommons project. Along with each tool, a short description is provided. Full descriptions, links and information about the tools can be found on the tools section of the AudioCommons website. We separate the tools listed here in tools developed by the industry partners (section 6.1), core AudioCommons tools developed by the consortium (section 6.2) and other AudioCommons tools and demonstrators developed by the consortium (section 6.3). We also include a section to list tools that integrate Audio Commons content but that have been developed by 3rd parties outside the consortium.

6.1 AudioCommons tools developed by industry partners

Tool name	Partner	Short description (extended descriptions can be found in AudioCommons website)
AudioTexture Free	Audiogaming	AudioTexture Free is the free version of AudioTexture, a DAW plugin which loads and processes contents from Freesound to create all sorts of soundscapes and audio textures. AudioTexture Free was released in November 2018.
SampleSurfer	Waves	SampleSurfer is a DAW plugin that allows to integrate Creative Commons content from AudioCommons providers Freesound and Jamendo (and other providers as well) by embedding the search workflow in the DAW itself and allowing drag and drop. SampleSurfer has not yet been released to the public. Release estimate is early 2020.
Music and Sound Search Tool (MuSST)	Jamendo	MuSST is a online search engine that allows searching and filtering content of the AudioCommons providers Jamendo, Freesound and Europeana. It also provides links for downloading the content and licensing it (when available).

6.2 Core AudioCommons tools developed by the consortium

Tool name	Partner	Short description (extended descriptions can be found in AudioCommons website)
Audio Commons Audio Extractor (for music samples)	UPF	Audio analysis tool to automatically extract musical properties and high-level timbral characteristics of music samples. High-level timbral characteristics are retrieved using the Audio Commons Timbral Models (see below). The tools include a simple web demonstrator that allows filtering Freesound content based on the analysis output.
Audio Commons Audio Analysis Service (for music pieces)	QMUL	Audio analysis web service to automatically extract musical properties such as chords, key, tempo and instrumentation from music pieces.
Audio Commons Timbral Models	IoSR/CVSSP (Surrey)	Audio analysis tool to automatically extract high-level timbre characteristics such as *brightness*, *depth* or *warmth* of audio signals.
Audio Commons Manual Annotators	UPF	Tools for the manual annotation of audio content which complement the automatic analysis tools listed above.
Audio Commons Mediator V1	UPF	Tool that provides a unified interface (Audio Commons API) to access all services in the Audio Commons Ecosystem.
Audio Commons Mediator V2	QMUL	Second version of the tool that provides a unified interface (Audio Commons API) to access all services in the Audio Commons Ecosystem. This second version is built using semantic web technologies.
Audio Commons Ontology	QMUL	Ontology describing the data model that allows the orchestration of services in Audio Commons Mediator V2 and provides interoperability between services conforming to the ontology.

6.3 Other AudioCommons tools and demonstrators developed by the consortium

Tool name	Partner	Short description (extended descriptions can be found in AudioCommons website)
Freesound Datasets	UPF	Online platform for the manual curation of Creative Commons audio datasets built with Freesound content and using the Audio Commons Manual Annotators.
Freesound Explorer	UPF	Visual interface for the exploration of Freesound content in a 2-dimensional space in which sounds are arranged by timbre-like characteristics. The interface also allows the created of sound playlists that can be played in sync to create music.
Freesound Trip	-	Web application that automatically arranges the sounds from Freesound in a three-dimensional space and lets the user fly manually through this space with a first-person perspective, hearing sounds as they get close. This is the output of the participation of AudioCommons in the Sónar Innovation Challenge 2017.
Jam with Jamendo	QMUL	Web application that suggests new practice material to music learners based on their selection of chords. A prototype was developed to demonstrate the novel ways of discovering music in the AC Ecosystem that are made possible by the AC Analysis Service.
MIRLC	QMUL	A SuperCollider extension that can be used to access audio content from the online Creative Commons sound database Freesound. The use of high-level MIR methods is possible (e.g., query by pitch or rhythmic cues).
Moodscape Generator	QMUL	Web-based tool that automatically generates soundscapes out of Freesound content based on mood.
Multi Web Audio Sequencer	UPF	Web application for segment-based sequencing of Freesound sound clips, with an emphasis on seamless remote collaboration.

Perceptual Sound Browser	UPF	Max-MSP tool for browsing sounds by high-level acoustic/perceptual qualities such as brightness, roughness, hardness and depth.
Playsound	QMUL	Web-based tool to search for and play Creative Commons-licensed sounds. It can be used for music making in contexts such as free music improvisation, soundscape composition and sound discovery.
Timbral Explorer	IoSR (Surrey)	Web-based tool for searching Freesound and visualising the timbral characteristics of the results by distributing the sounds according to their hardness, depth, brightness, roughness, warmth, sharpness, or boominess (Audio Commons Timbral Models).

6.4 3rd party tools that integrate Creative Commons content from AudioCommons content providers

The following list includes tools developed by 3rd parties outside the consortium and that integrate AudioCommons content. The integrations of AudioCommons content in these tools have happened during the lifetime of the AudioCommons project and make use of the individual service APIs (Freesound API) which will continue being supported after the end of AudioCommons.

Tool name	Developed by	Short description (extended descriptions can be found in AudioCommons website)
Ardour	Paul Davies and the Ardour community	Ardour is a hard disk recorder and digital audio workstation application which runs on Linux, OS X, FreeBSD and Windows. Released under the terms of the GNU General Public License (version two or any later version), Ardour is an open source, collaborative effort of a worldwide team including musicians, programmers, and professional recording engineers. Ardour includes an import function that allows users to search in Freesound and add results to the DAW.
Cloud Browser	Stagecraft Software	Cloud Browser is an audio plugin (VST, AudioUnit, AAX) that lets users search for samples from Soundcloud and Freesound and then drag-n-drop clips into your DAW for immediate use in recording projects. Cloud Browser gives links to the artists pages, and licensing requirements of all samples.

Freemix	Joseph Larralde (IRCAM)	Freemix is a web app for smartphones using movement to trigger and modify sounds. It allows for the rapid design of interactive playful sound apps. A specific interface (accessible from the main interface's "search sounds" button) allows for querying sounds on Freesound using keywords, which can be filtered by user names and minimum / maximum sound duration (search terms and user names can contain spaces, and therefore must be comma separated).
Lonofi	Lonofi	Lonofi provides technology for the automatic generation of endless soundscapes controlled by a number of high-level parameters. Lonofi uses artificial intelligence algorithms and audio content sourced and curated from Freesound to create the soundscapes.
Mixcraft	Acoustica	Mixcraft is a DAW driven by a new, lightning-fast sound engine, featuring advanced audio and MIDI routing, native sidechaining, and Audio Control, an innovative new feature allowing audio signals to control instrument and effect parameters. It also includes a function that allows users to search and import audio content from Freesound directly without leaving the DAW.
Soundly	Soundly	Soundly lets users drag sound effects from the cloud and drop them into a project, saving precious time. Soundly includes Freesound as one of the libraries that can be searched, and allows in this way its users to directly drag and drop content from Freesound into their production software.
Soundtrap	Soundtrap/Spotify	Soundtrap is a cloud-based music sequencer and digital audio workstation for collaborative music creation. It integrates Freesound clips in their sounds browser that can be searched and easily added to the project.

7 Conclusion

As documented in this deliverable, the AudioCommons project has disseminated and published results continuously and since the beginning of the project through a number of channels (e.g. online media, academic publishers, academic events, workshops, competitions, hackathons, panels) and communities (academia, industry, education, performance, general public). Public engagement and knowledge sharing within and across the team has been a key element for constant inquiry about our research and continuous progress in terms of the technologies, services and communities built around the core ideas of the AudioCommons ecosystem. Part of the success and high productivity of this collaboration has been engaging with different stakeholders (partnering with industry has been key for the success of the project) as well as with individuals or teams with multidisciplinary backgrounds.

This deliverable can be seen as a timeline overview of all the activities held during the lifespan of the project, of which most of them have been reported with more detail in previous deliverables and have been combined with the latest wrap-up activities. The main purpose of the latest activities has been to reach the general public by transferring the knowledge, technologies and future opportunities brought by the AudioCommons project. This deliverable can be used as a standalone document that summarizes, in chronological order, the different outcomes of the project, and therefore it clarifies the potential present and future applications from the research carried throughout the AudioCommons project.