TROMPA: Towards Richer Online Music Public-domain Archives

Deliverable 7.2
Annual Dissemination Report

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Contact Person	Tim Crawford (GOLD)
Authors	Tim Crawford (GOLD)
Reviewers	Emilia Gomez (UPF), Aggelos Gkiokas (UPF), Cynthia Liem (TUD)

Executive Summary

This document summarises the dissemination output of TROMPA in its first year. As a large proportion of the effort has so far been concentrated in planning and infrastructural and other software development, there has been less opportunity for reporting research and other activities than there will be over the next two years. This is reflected in the number of accepted conference papers to be presented later in 2019 (see A.2 Peer-reviewed conferences and workshops).

However, as well as general introductions to TROMPA in the media and elsewhere, there has been dissemination activity across most of the work-packages, some of which is in the form of submitted conference papers (papers accepted for future conferences are listed in A.2), and some in the form of exploratory workshops investigating specific aspects of the project. See the Table of Contents, below.

Version Log		
#	Date	Description
v0.1	29 April 2019	Initial version submitted for internal review
v0.2	30 April 2019	Revised version after internal review
v1.0	30 April 2019	Final version submitted to EU

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1. Introduction

The Dissemination activities of TROMPA are diverse in nature, in keeping with the broad scope of the project's goals and its several community audiences. As well as producing standard academic papers and journal articles (more of the latter are likely to appear later on in the project period), the project reaches a wider audience through invited talks, workshops and tutorials some of which involve formal teaching; these are more widely aimed at music professionals including those who are not academics. Another important strand of dissemination is through media outlets such as national or local broadcasters, or online forums and social media.

A project website[1] was set up in month 3 of TROMPA (deliverable D7.1), with a news blog to draw attention to the project's activities. This will be the first point of contact for those seeking access to TROMPA's outputs and resources as they become available.

The first Annual Exploitation Plan (deliverable D7.3) gives an analysis of outcomes and possible commercial exploitation possibilities of TROMPA and and collaboration with industry representatives during the first year of the project.

Three principal communities are being targeted in TROMPA's dissemination efforts reported here: Music Scholars, Music Professionals and Non-professionals (including music enthusiasts). (Dissemination to the Music R&D community and the Music industry is reported in D7.3.)

2. Academic dissemination

Most of the dissemination activities reported in this section are reports on technical or infrastructural aspects of the TROMPA project which are being, or will be, developed or applied directly in the software framework on which the project depends. In particular, the project will receive a high profile, targetted to academics in the field of music information retrieval (a core TROMPA discipline) from the highly prestigious activities reported under '2.3 Academic Service'.

2.1 Academic publications

A full list of publications published or accepted in the first year of TROMPA is given in Appendix A.

2.2 Open science: datasets and code

TROMPA has a dedicated Github organisation[2] which currently houses a number of repositories related to the Contributor Environment.

TROMPA is committed to reproducible and open science and to generating public-domain music archives. For this purpose we have created a zenodo repository in which our datasets and results will be lodged as they become available.[3]

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[1] http://trompamusic.eu
[2] https://github.com/trompamusic
[3] https://zenodo.org/communities/trompa/

Although the project is still at the initial stages of dissemination, we can already report three datasets linked to the choir singing use case:

- ❖ Choral Singing Dataset[4] presented at ESCOM conference (Cuesta et al., 2018).
- ❖ Source-separation code[5] for paper accepted for ICASSP conference (Slizovskaia, O., Kim L., Haro G., & Gómez E. 2019)
- ❖ Source code[6] for paper accepted for ICASSP conference (Chandna, P., Blaauw M., Bonada J., & Gomez E., 2019)

Also datasets and source code for accepted papers to two conferences:

- ❖ Data and source code[7] [8] to fully reproduce accepted papers for SIGIR conference (Urbano, J., Lima, H., & Hanjalic, A. 2019)
- ❖ Source code[9] for paper accepted for CICLing conference (Porcaro, L., & Saggion, H. 2019)

2.3 Invited academic talks

- ❖ Gomez, E., Blaauw M., Bonada J., Chandna P., & Cuesta H. (2018). Deep Learning for Singing Processing: Achievements, Challenges and Impact on Singers and Listeners. Keynote speech, *2018 Joint Workshop on Machine Learning for Music. The Federated Artificial Intelligence Meeting (FAIM), a joint workshop program of ICML, IJCAI/ECAI, and AAMAS,* Stockholm, July 2018.
- ❖ Weigl, D. M. 25 Jan. 2019. TROMPA invited presentation and panel discussion @ *First International Workshop on Multilayer Music Representation and Processing*, University of Milan.
- ❖ Weigl, D. M. & Goebl, W. 16 March 2019. "Large-scale interlinking of musical score encodings and audiovisual materials". International Conference *MUSIC // MEDIA // HISTORY: Re-thinking Musicology in an Age of Digital Media.* Invited talk.
- ❖ Weigl, D. M. MEI and Linked Data in the TROMPA project. 9 April 2019. *Wissenschaftsseminar* (scientific seminar) @ mdw, in front of a group of ~ 20 scientific researchers from mdw and the University of Vienna. Invited talk.
- ❖ Hernández-Leo. 11-12 April 2019. Invited talk and TROMPA case presentation. COST Workshop "Exploring the interplay between Human Learning and Machine Learning - The Citizen Science Perspective"[10]

2.4 Academic service

- ❖ Julián Urbano co-organized the 2018 AcousticBrainz Genre Task at the *MediaEval multimedia benchmarking workshop* on 'Content-based music genre recognition from multiple sources'.[11]

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[4] https://zenodo.org/record/2649950#.XMcrdSIzZhE
[5] https://github.com/Veleslavia/vimss
[6] https://github.com/pc2752/ss_synthesis
[7] https://github.com/julian-urbano/sigir2019-statistical
[8] https://github.com/julian-urbano/sigir2019-standardization
[9] https://github.com/LPorcaro/musicner
[10]
https://www.cs-eu.net/events/internal/workshop-wg-2-wg-4-exploring-interplay-between-human-learning-and-machine-learning
[11] https://multimediaeval.github.io/2018-AcousticBrainz-Genre-Task/

- ❖ Julián Urbano co-organized a tutorial on statistical evaluation in Music Information Retrieval at the *International Society for Music Information Retrieval Conference 2018*.[12]
- ❖ TROMPA part-sponsored (catering) the 5th International Conference on Digital Libraries for Musicology (DLfM) at IRCAM, Paris, September 2018, a satellite event of ISMIR 2018, which was attended by 70 librarians, musicologists and information scientists[13]
- ❖ David Weigl and Tim Crawford are co-coordinating a workshop/tutorial on Linked Data and Music at the *Music Encoding Conference*, 29 May 2019
- ❖ Tim Crawford will be introducing TROMPA in his teaching session in the Digital Musicology Workshop of the Digital Humanities at Oxford Summer School, 22-26 July 2019
- ❖ David Weigl will co-coordinate the 1st International Workshop on Requirements, Use Cases, and User Studies in Digital Music Libraries and Archives (RUCUS 2019) at the *IEEE/ACM Joint Conference on Digital Libraries (JCDL).*
- ❖ Cynthia Liem and Emilia Gómez will be general chairs, and Julián Urbano will be program co-chair, of the 20th anniversary edition of the *International Society for Music Information Retrieval Conference (ISMIR)* 2019.
- ❖ Emilia Gómez is president of the *International Society for Music Information Retrieval.*
- ❖ Emilia Gómez is co-editor in chief of the open journal *Transactions of International Society for Music Information Retrieval.*
- ❖ Emilia Gómez co-organized the seminar *Computational Methods for Melody and Voice Processing in Music Recordings,* Dagstuhl Seminar 19052, January 27 – February 1 , 2019.

3. Professional outreach

A variety of dissemination activities have been aimed towards professional, non-academic communities such as music-librarians, software developers and choral singers. These range from invited presentations, participation in conferences and seminars, to workshops organised and funded by TROMPA.

3.1 Project presentations

- ❖ Gkiokas, A., Vienna, Austria, 3 December 2019: Presentation of TROMPA to OFAI[14]
- ❖ Gkiokas, A., Brussels, Belgium. Presentation of TROMPA in the EC workshop *Common challenges and perspectives for Digital Cultural Heritage in H2020 projects: building on lessons learnt and strengthening the societal impact*.
- ❖ Goebl, W., & Weigl, D. M. 30 April 2019. Projektvorstellung: TROMPA (Project presentation). *Musikalische Interpretation bei Herbert von Karajan*, University of Music and Performing Arts Graz, Austria. Invited talk to a specialised Karajan symposium.[15]
- ❖ Gómez, E. Towards Richer Online Music Public-domain archives (TROMPA): The Choir Use Case, abstract at *Computational Methods for Melody and Voice Processing in Music Recordings,* Dagstuhl Seminar 19052, January 27 – February 1 , 2019.

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[12] http://ismir2018.ircam.fr/pages/events-tutorial-17.html
[13] https://dlfm.web.ox.ac.uk/workshops/dlfm-2018/programme
[14] http://www.ofai.at/events/2018/Aussendung-20181129-3.text
[15] https://karajan-research.org/programs/conference-2019

❖ Gómez, E. The TROMPA project in the context of citizen science. *Exploring the interplay between Human Learning and Machine Learning - The Citizen Science Perspective*, Workshop of Citizen Science COST Action.[16] 11-12 April 2019.

3.2 Participation to and demonstrations at professional events

❖ Weigl, D. M. October 30 - November 2, 2018. TROMPA-sponsored participation at Music Encoding Initiative technical meeting (MEIOX), Oxford e-Research Centre, University of Oxford.
❖ Weigl, D. M. & Goebl, W. February 27, 2019. Performance companion for instrumental players. *Klausur der Wissenschaften* @ mdw. Lightning talk and poster presentation in front of ~70 scientific researchers at mdw.
❖ Viro, V. March 9, 2019. Munich Datageeks Data Day 2019, a 40 minute talk in front of about 400 participants.
❖ Peachnote @ Karajan Music Tech Conference 2019,[17] April 12th, 2019
❖ Óscar Mayor, from Voctro Labs, presented a demo of the research on audio transformation and synthesis technologies being developed during the TROMPA project at the 2018 Web Audio Conference in Berlin. This was published as news on the TROMPA website.[18]
❖ Óscar Mayor, Jordi Janer and Álvaro Sarasúa, from Voctro Labs, attended the 2018 Sónar+D Congress as participants in the Startup Garden. There, they presented all Voctro Labs technologies, including the plans for TROMPA, to a professional, multidisciplinary audience.[19]

3.3 Invited talks for professional audiences

❖ Liem, C.C.S, February 6, 2019. Meaningful music in a world of information overload. Invited talk at 'Omniscient' student symposium, University of Twente.
❖ Liem, C.C.S., February 20, 2019. Verborgen schatten langs de digitale snelweg. Invited talk at 'Sound of science' student symposium, Radboud University Nijmegen.
❖ Liem, C.C.S., March 21, 2019. Verborgen schatten langs de digitale snelweg. Invited talk at VOGIN-IP Lezing (yearly conference for information professionals).
❖ Viro, V., April 25, 2019. Workshop on intellectual property rights and AI in music. Invited talk at Max Planck Institute for Innovation and Competition, Munich.
❖ Cynthia Liem will be invited speaker at the 'AI & Creative Industries' session of the upcoming NEM Summit, Zagreb, May 23, 2019.
❖ Tim Crawford has been invited to give a short presentation and participate in a panel in a study day at the British Library, London, *Digital Musicology and Libraries: Challenges and Opportunities*, July 1, 2019.

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[16] https://www.cs-eu.net/events/internal/workshop-wg-2-wg-4-exploring-interplay-between-human-learning-and-machine-learning
[17] https://www.karajanmusictech.com/
[18] https://trompamusic.eu/node/83
[19] https://sonarplusd.com/en/news/this-is-startup-garden-2018

3.4 Organization of outreach events

❖ Tim Crawford organised the first of three planned annual TROMPA workshops for music scholars at the British Library, London, April 5, 2019, facilitated by TROMPA Associate Partner, Richard Ranft (British Library National Sound Archive). The workshop was attended by about 20 enthusiastic participants, including several members of the BL staff.

Speakers and their topics were as follows:

Cynthia Liem, 'TROMPA and Digital Musicology'

Tim Crawford, 'Full-text search in the Early Music Online resource'

David Weigl, 'MEI and Linked Data in the TROMPA project'

Keynote talk: Emmanouil Benetos, 'Music Informatics & Computational Musicology: A case study in automatic music transcription'

Jamie Forth, 'Playability of tablature: analysing data from the Learn To Play project'

Ryaan Ahmed, 'A new module for importing tablatures into Music21'

❖ UPF-MTG, UPF-TIDE and Voctro Labs organized a workshop with 15 participants (choir singers and conductors) to retrieve information from the Choir Singers Pilot mockup. The workshop had a duration of 120 minutes and was done in a laboratory room at UPF campus. During this workshop, the general objectives of the project and the concrete objectives of the pilot were explained to the participants. Participants provided feedback from a mockup testing and a survey study. Participants were approached through an open call (in Catalan) via the web[20] and some contacts (from previous projects collaborations) were directly contacted via email.

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[20]

https://www.upf.edu/web/mtg/news/-/asset_publisher/WM181VyAQipW/content/id/219636716#.XMLWIOgzbIU

4. Dissemination geared to the general audience

Here we report on non-academic events or media appearances specifically aimed at the general public.

- ❖ Cynthia Liem was featured scientist of the @NL_Wetenschap Twitter account in the week of March 25. This account is meant to highlight work of Dutch researchers to a Dutch-speaking general audience. Within this Twitter week, the amount of followers of this account went up from ~7400 to ~7900 followers. The work of Cynthia Liem was also highlighted in that same week on the NPO Radio 1 public radio station, in the 'NTR Focus' science bulletin.
- ❖ Peachnote participated in the ORF Opening Gala of the Salzburg Easter Festival, April 11th, 2019.
- ❖ Emilia Gomez took part at the radio program Longitud de Onda, from Spanish National Radio, Classical Music, and discussed about several technologies related to TROMPA such as Optical Music Recognition (December 14th 2018) or Music enthusiasts use case (May 22nd 2018)[21]
- ❖ Emilia Gomez will take part at the opening event of the STEM in the City festival, in Teatro La Scala, May 6th[22]

Press appearances

- ❖ The role of intuition in musical performance, News from Universitat Pompeu Fabra[23]
- ❖ Emilia Gomez was interviewed at *Artificial intelligence and creativity* , xataka online journal.[24]
- ❖ Emilia Gomez explains music information retrieval research at El Pais Semanal[25]

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[21] https://emiliagomez.com/keynotes-media/longitud-de-onda-radio-clasica/

[22] https://www.steminthecity.eu/

[23] https://www.upf.edu/web/e-noticies/home/-/asset_publisher/wEpPxsVRD6Vt/content/id/2228560033/maximized#.XMLIXCIzaUl

[24] https://www.xataka.com/robotica-e-ia/a-seres-humanos-siempre-nos-quedara-creatividad-maquina-no-puede-crear-mito-realidad

[25] https://elpais.com/elpais/2018/11/20/eps/1542709928_770563.html

Appendix A. List of academic publications (including accepted papers) during TROMPA year 1

A.1 Journal articles

❖ Sarasúa A., Julián Urbano, J. and Emilia Gómez, E. (2019). Mapping by Observation: Building a User-Tailored Conducting System From Spontaneous Movements. Front. Digit. Humanit., 25 February 2019.[26]

A.2 Peer-reviewed conferences and workshops

❖ Cuesta, H., Gómez E., Martorell A., & Loáiciga F. (2018). Analysis of Intonation in Unison Choir Singing. *15th International Conference on Music Perception and Cognition (ICMPC)*.

❖ Mayor O., Janer J., Parra H., Sarasúa, Á. (2018). Demo: VOICEFUL: Voice Analysis, Transformation and Synthesis on the Web. *Web Audio Conference 2019. (WAC'18).*

❖ Liem, C.C.S. (2018). Music in newspapers: Interdisciplinary opportunities and data-related challenges. *5th International Conference on Digital Libraries for Musicology (DLfM '18)*.

❖ Cuesta, H., Gómez E., & Chandna P. (2019). A Framework for Multi-f0 Modeling in SATB Choir Recordings. *Sound and Music Computing (SMC) Conference*.

❖ Slizovskaia, O., Kim L., Haro G., & Gómez E. (2019). End-to-End Sound Source Separation Conditioned On Instrument Labels.[27] *2019 International Conference on Acoustics, Speech, and Signal Processing*.

❖ Chandna, P., Blaauw M., Bonada J., & Gomez E. (2019). A Vocoder Based Method For Singing Voice Extraction. *44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2019)*.

❖ Porcaro, L., & Saggion H. (2019). Recognizing Musical Entities in User-generated Content. *International Conference on Computational Linguistics and Intelligent Text Processing (CICLing) 2019*.

❖ Weigl, D. M., Liem, C., Gómez, E., Crawford, T., Ahmed, R., Klerkx, W., & Goebl, W. (2019). Towards Richer Online Music Public-domain Archives: Providing enriched access to classical music encodings. Accepted to *Music Encoding Conference.*

❖ Ahmed, R.; Crawford, T.; Lewis, D. (2019). Hundreds of Thousands of Pieces in MEI: Encoding Tablatures at Scale. Accepted to *Music Encoding Conference.*

❖ Crawford, T. (2019), Full-Text search of Early Music Prints Online (F-TEMPO): a new approach to a finding aid for musicians and librarians. Accepted to the *IAML Congress 2019* (International Association of Music Libraries and Sound Archives)

❖ Crawford, T. (2019) A tool for exploring early printed music: F-TEMPO (Full-Text search of Early Music Prints Online). Accepted to Medieval and Renaissance Music Conference *MedRen 2019*

❖ Ahmed, R. (2019) A Digital Toolbox for Exploring Lute Tablature. Accepted to Medieval and Renaissance Music Conference *MedRen 2019*

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[26] https://doi.org/10.3389/fdigh.2019.00003
[27] https://arxiv.org/abs/1811.01850

❖ Urbano, J., Lima, H., & Hanjalic, A. (2019). Statistical Significance Testing in Information Retrieval: An Empirical Analysis of Type I, Type II and Type III Errors. Accepted to *ACM SIGIR 2019*.

❖ Urbano, J., Lima, H., & Hanjalic, A. (2019). A New Perspective on Score Standardization. Accepted to *ACM SIGIR 2019*.