Sertan Şentürk

London, UNITED KINGDOM
Phone: +44 784 888 46 49

contact@sertansenturk.com
https://www.sertansenturk.com/
https://github.com/sertansenturk/
https://www.linkedin.com/in/sertansenturk/

Objective

I pursue a career in music technology, and specialize in music information retrieval, audio signal processing, machine learning and music perception & cognition. As a part of my endeavors, I develop novel methodologies and interfaces to explore new modes of musical understanding, discovery, creativity, expressivity and interaction.

Research Interests

- Music Information Retrieval, Audio Signal Processing & Machine Learning
    - Automatic description and summarization of music data
    - Music discovery
    - Audio-score alignment
    - Predictive music modeling
    - Mode recognition and tonic identification
- Semantic Web & Natural Language Processing
    - Record Linkage
    - Linked Data
    - Ontologies
- Interactive Music
    - Novel instrument and interface design
- Reproducible Research

Work & Research Experience

- **Kobalt Music Group Ltd.**   Jan 2018 – ongoing
  Data Scientist - Research & Development, manager Alison Wells   London, UK
    - Metadata Matching
    - Knowledge Graphs for Music Metadata

- **SoundCloud Ltd.**   Jun 2017 – Aug 2017
  Data Scientist, manager Etienne Dancoisne   Berlin, GERMANY
    - Audio Fingerprinting

- **Universitat Pompeu Fabra, Music Technology Group**   Sep 2011 – May 2017
  Researcher in CompMusic Project, advisor Prof. Xavier Serra   Barcelona, SPAIN
    - Computational Analysis of Audio Recordings and Music Scores for the Description and Discovery of Ottoman-Turkish Makam Music
    - Dunya: A tool for the analysis and discovery of Ottoman-Turkish makam music
    - Joint Tonic Identification and Mode Recognition

- **BAU, Department of Electrical and Electronics Engineering** Apr 2014 – Jun 2014
  Erasmus+ Visiting Researcher, supervisors Andre Holzapfel, Barış Bozkurt Istanbul, TURKEY
    - Audio-Score Alignment

- **Georgia Tech Center for Music Technology**   Aug 2009 – Aug 2011
  Graduate Research Assistant for Prof. Parag Chordia   Atlanta, GA, USA

- Predictive Music Modeling
  - Joint Tonic Identification and Mode Recognition

- **METU Department of Electrical and Electronics Engineering** Sep 2008 – Jun 2009
  Undergraduate Researcher for Prof. Tolga Çiloğlu *Ankara, TURKEY*
  - Incorporation of Visual Information in Automatic Speech Segmentation

- **METU Department of Mechanical Engineering** Oct 2007 – Jun 2008
  Undergraduate Researcher for Prof. Filiz Bal Koçyiğit *Ankara, TURKEY*
  - Sound and Noise Control in Hospitals
  - Acoustics in the Partial Deaf Student School Music Classrooms
  - Predicting the Acoustics of Historic Istanbul Tunnel

- **Arçelik A.Ş. Vibration and Acoustics Laboratory** Jun 2007 – Jul 2007
  Intern *Istanbul, TURKEY*
  - Active Noise Control

- **Karel R&D A.Ş.** Jul 2006 – Aug 2006
  Intern *Ankara, TURKEY*
  - Basics of telecommunication and network programming
  - Implemented a test program for DS10 PABX.

- **Alp Turac Music Studio** Jun 2006 – Jul 2006
  Assistant *Istanbul, TURKEY*
  - Basics of music recording & mixing
  - Worked during the recording of *Malt – Kendi Adını Taşıyan İlk Albüm*

- **Renko A.Ş.** Jul 2005 – Aug 2005
  Part-Time Researcher *Istanbul, TURKEY*
  - Research in acoustic experiment sets in the commercial market

- **Classical Guitar Instructor** Sep 2005 – Jun 2009
  Self-Employed *Ankara, TURKEY*
  - Beginner to intermediate level teaching

Education

- **Universitat Pompeu Fabra (UPF)** Sep 2011 – Dec 2016
  Ph.D. in Information, Communication and Audiovisual Technologies *Barcelona, SPAIN*
  - Researcher in the CompMusic Project
  - Teaching assistant in the course Signals & Systems (MTC.21409)

- **Georgia Institute of Technology (Georgia Tech)** Aug 2009 – Dec 2011
  MSc. in Music Technology; GPA: 3.64/4.00 *Atlanta, GA, USA*
  - Graduate Research Assistant in the Music Intelligence Group
  - Key Courses: Computational Music and Audio Analysis, Digital Signal Processing - Music, Music Technology Research Lab, Interactive Music, Music Perception & Cognition, Sensation & Perception, Technology Ensemble, Project Studio - Music Technology, Computer Music Composition, Music Technology History & Repertoire, Network Music, Music Recording & Mixing

- **Middle East Technical University (METU)** Sep 2004 – Jun 2009
  BSc. in Electrical And Electronics Engineering; GPA: 3.13/4.00 *Ankara, TURKEY*
  - Honor Student
  - Graduated from Control Engineering Option
  - Key Courses: Digital Signal Processing, Discrete Time Systems, Signals and Systems I-II, Probability and Random Variables, Feedback Systems, Computational Methods in Electrical Engineering, Data Structures, Introduction to Microprocessors, Digital Electronics, Introduction to Logic Design, Analog Electronics, Engineering Design I-II

- **Hacettepe University Ankara State Conservatory**   Sep 2005 – Jun 2009
  Certificate of Achievement in Classical Guitar; GPA: 87.75/100   *Ankara, TURKEY*
    - Four-year, part-time program
    - Courses: Classical Guitar, Solfège & Music Theory

- **Ankara Atatürk Anatolian High School**   Sep 2001 – Jun 2004
  High School Diploma; GPA: 5.00/5.00   *Ankara, TURKEY*

Skills

Programming Languages: Python, Scala, C/C++, SQL, MATLAB Scripting, R, Java, Shell Scripting

Libraries: Spark, scikit-learn, pandas, seaborn, TensorFlow, Docker, Essentia, librosa

Software Tools: ElasticSearch, MATLAB

PyCharm, IntelliJ, Visual Studio Code, Simulink, Xcode, Weka, Eclipse

Max/MSP, PD-extended, Pro Tools, Sonic Visualizer, Finale, MuseScore, Mus2, Humdrum

FMOD, openframeworks, ReacTIVision

Wordpress, Inkscape, LaTeX

Programming skills: object oriented programming, version control, unit testing, code coverage, continous integration, semantic versioning

Operating Systems: Ubuntu, Ubuntu Studio, Debian, Mac OS X, Windows

Languages: Turkish (native), English (fluent), Spanish (upper-intermediate), German (pre-intermediate), Catalan (beginner)

Musical: Classical guitar, fretless guitar, Western classical music theory and analysis

Technical: Sound equipment set-up and usage; electronic circuit design, test and implementation

Publications

[1] Hasan Sercan Atlı, Sertan Şentürk, Barış Bozkurt, and Xavier Serra. Synthesis of Turkish makam music scores using an adaptive tuning approach. In *Proceedings of 6th International Workshop on Folk Music Analysis (FMA 2017)*, pages 66–71, Málaga, Spain, 2017. Universidad de Málaga.

[2] Sertan Şentürk. *Computational Analysis of Audio Recordings and Music Scores for the Description and Discovery of Ottoman-Turkish Makam Music.* PhD thesis, Universitat Pompeu Fabra, Barcelona, Spain, December 2016.

[3] Georgi Dzhambazov, Ajay Srinivasamurthy, Sertan Şentürk, and Xavier Serra. On the use of note onsets for improved lyrics-to-audio alignment in Turkish makam music. In *Proceedings of 17th International Society for Music Information Retrieval Conference (ISMIR 2016)*, pages 716–722, New York, NY, USA, 2016.

[4] Sankalp Gulati, Joan Serrà, Kaustuv K. Ganguli, Sertan Şentürk, and Xavier Serra. Time-delayed melody surfaces for rāga recognition. In *Proceedings of 17th International Society for Music Information Retrieval Conference (ISMIR 2016)*, pages 751–757, New York, NY, USA, 2016.

[5] Sankalp Gulati, Joan Serrà, Vignesh Ishwar, Sertan Şentürk, and Xavier Serra. Phrase-based rāga recognition using vector space modeling. In *Proceedings of 41st IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2016)*, pages 66–70, Shanghai, China, 2016. IEEE, IEEE.

[6] Altuğ Karakurt, Sertan Şentürk, and Xavier Serra. MORTY: A toolbox for mode recognition and tonic identification. In *Proceedings of the 3rd International Digital Libraries for Musicology Workshop (DLfM 2016)*, pages 9–16, New York, NY, USA, 2016. ACM.

[7] Sertan Şentürk, Gopala Krishna Koduri, and Xavier Serra. A score-informed computational description of svaras using a statistical model. In *Proceedings of 13th Sound and Music Computing Conference (SMC 2016)*, pages 427–433, Hamburg, Germany, 2016. Zentrum für Mikrotonale Musik und Multimediale Komposition (ZM4) Hochschule für Musik und Theater.

[8] Sertan Şentürk and Xavier Serra. Composition identification in Ottoman-Turkish makam music using transposition-invariant partial audio-score alignment. In *Proceedings of 13th Sound and Music Computing Conference (SMC 2016)*, pages 434–441, Hamburg, Germany, 2016. Zentrum für Mikrotonale Musik und Multimediale Komposition (ZM4) Hochschule für Musik und Theater.

[9] Sertan Şentürk and Xavier Serra. A method for structural analysis of Ottoman-Turkish makam music scores. In *Proceedings of 6th International Workshop on Folk Music Analysis (FMA 2016)*, pages 39–46, Dublin, Ireland, 2016. Dublin Institute of Technology.

[10] Bilge Miraç Atıcı, Barış Bozkurt, and Sertan Şentürk. A culture-specific analysis software for makam music traditions. In *Proceedings of 5th International Workshop on Folk Music Analysis (FMA 2015)*, pages 88–92, Paris, France, 2015. University Pierre et Marie Curie.

[11] Hasan Sercan Atlı, Barış Bozkurt, and Sertan Şentürk. A method for tonic frequency identification of Turkish makam music recordings. In *Proceedings of 5th International Workshop on Folk Music Analysis (FMA 2015)*, pages 119–122, Paris, France, 2015. University Pierre et Marie Curie.

[12] Georgi Dzhambazov, Sertan Şentürk, and Xavier Serra. Searching lyrical phrases in a-capella Turkish makam recordings. In Meinard Müller and Frans Wiering, editors, *Proceedings of 16th International Society for Music Information Retrieval Conference (ISMIR 2015)*, pages 687–693, Málaga, Spain, 2015.

[13] André Holzapfel, Umut Şimşekli, Sertan Şentürk, and Ali Taylan Cemgil. Section-level modeling of musical audio for linking performances to scores in Turkish makam music. In *Proceedings of 40th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2015)*, pages 141–145, Brisbane, Australia, 2015. IEEE.

[14] Sertan Şentürk, Andrés Ferraro, Alastair Porter, and Xavier Serra. A tool for the analysis and discovery of Ottoman-Turkish makam music. In Meinard Müller and Frans Wiering, editors, *Extended Abstracts for the Late Breaking Demo Session of the 16th International Society for Music Information Retrieval Conference (ISMIR 2015)*, Málaga, Spain, 2015.

[15] Hasan Sercan Atlı, Burak Uyar, Sertan Şentürk, Barış Bozkurt, and Xavier Serra. Audio feature extraction for exploring Turkish makam music. In *Proceedings of 3rd International Conference on Audio Technologies for Music and Media (ATMM 2014)*, Ankara, Turkey, 2014. Bilkent University, Bilkent University.

[16] Georgi Dzhambazov, Sertan Şentürk, and Xavier Serra. Automatic lyrics-to-audio alignment in classical Turkish music. In André Holzapfel, editor, *Proceedings of 4th International Workshop on Folk Music Analysis (FMA 2014)*, pages 61–64, Istanbul, Turkey, 2014. Computer Engineering Department, Boğaziçi University.

[17] Sertan Şentürk, Sankalp Gulati, and Xavier Serra. Towards alignment of score and audio recordings of Ottoman-Turkish makam music. In André Holzapfel, editor, *Proceedings of 4th International Workshop on Folk Music Analysis (FMA 2014)*, pages 57–60, Istanbul, Turkey, 2014. Computer Engineering Department, Boğaziçi University.

[18] Sertan Şentürk, André Holzapfel, and Xavier Serra. Linking scores and audio recordings in makam music of Turkey. *Journal of New Music Research*, 43(1):34–52, 2014.

[19] Burak Uyar, Hasan Sercan Atlı, Sertan Şentürk, Barış Bozkurt, and Xavier Serra. A corpus for computational research of Turkish makam music. In *Proceedings of the 1st International Digital Libraries for Musicology Workshop (DLfM 2014)*, pages 57–63, London, United Kingdom, 2014.

[20] Parag Chordia and Sertan Şentürk. Joint recognition of raag and tonic in north Indian music. *Computer Music Journal*, 37(3):82–98, 2013.

[21] Sertan Şentürk. Sesin özgürleşmesi: Müzik prodüksiyonu teknolojileri. *Birikim Dergisi*, 285:98–104, 2013.

[22] Sertan Şentürk, Sankalp Gulati, and Xavier Serra. Score informed tonic identification for makam music of Turkey. In Alceu de Souza Britto Jr., Fabien Gouyon, and Simon Dixon, editors, *Proceedings of 14th International Society for Music Information Retrieval Conference (ISMIR 2013)*, pages 175–180, Curitiba, Brazil, 2013. Pontifícia Universidade Católica do Paraná.

[23] Sertan Şentürk, André Holzapfel, and Xavier Serra. An approach for linking score and audio recordings in makam music of Turkey. In Xavier Serra, Preeti Rao, Hema Murty, and Barış Bozkurt, editors, *Proceedings of 2nd CompMusic Workshop*, pages 95–106, Istanbul, Turkey, 2012. Universitat Pompeu Fabra.

[24] Sertan Şentürk, Sang Won Lee, Avinash Sastry, Anosh Daruwalla, and Gil Weinberg. Crossole: A gestural interface for composition, improvisation and performance using Kinect. In Georg Essl, Brent Gillespie, Michael Gurevich, and S O'Modhrain, editors, *Proceedings of International Conference on New Interfaces for Musical Expression (NIME 2012)*, pages 449–502, Ann Arbor, MI, USA, 2012. University of Michigan, University of Michigan.

[25] Mohamed Sordo, Gopala Krishna Koduri, Sertan Şentürk, Sankalp Gulati, and Xavier Serra. A musically aware system for browsing and interacting with audio music collections. In Xavier Serra, Preeti Rao, Hema Murty, and Barış Bozkurt, editors, *Proceedings of 2nd CompMusic Workshop*, pages 20–24, Istanbul, Turkey, 2012. Universitat Pompeu Fabra.

[26] Aaron Albin, Sertan Şentürk, Akito Van Troyer, Brian Blosser, Oliver Jan, and Gil Weinberg. Beatscape, a mixed virtual-physical environment for musical ensembles. In Alexander Refsum Jensenius, Anders Tveit, Rolf Inge Godøy, and Dan Overholt, editors, *Proceedings of International Conference on New Interfaces for Musical Expression (NIME 2011)*, pages 112–115, Oslo, Norway, 2011. University of Oslo and Norwegian Academy of Music.

[27] Parag Chordia, Avinash Sastry, and Sertan Şentürk. Predictive tabla modelling using variable-length Markov and hidden Markov models. *Journal of New Music Research*, 40(2):105–118, 2011.

[28] Sertan Şentürk. Computational modeling of improvisation in Turkish folk music using variable-length Markov models. Master's thesis, Georgia Institute of Technology, Atlanta, 2011.

[29] Sertan Şentürk. Interactivity in contemporary dance and music. Self Published, 2011.

[30] Sertan Şentürk and Parag Chordia. Modeling melodic improvisation in Turkish folk music using variable-length Markov models. In *Proceedings of 12th International Society for Music Information Retrieval Conference (ISMIR 2011)*, pages 269–274, Miami, FL, USA, 2011.

[31] Filiz Bal Kocyigit and Sertan Şentürk. Acoustics in the partial deaf student school music classrooms. In *Proceedings of Acoustics'08 Paris Conference*, pages 3919–3924, Paris, France, 2008. Société Française d'Acoustique.

Selected Projects

- **Computational Analysis of Ottoman-Turkish Makam Music** 2011 – 2016
  Doctoral Research *Universitat Pompeu Fabra*
  – Methodologies designed to analyze the audio recordings and music scores of Ottoman-Turkish makam music for automatic description and music discovery
  – Open source toolbox is available at https://github.com/sertansenturk/tomato.
  – Related papers: [1, 2, 6, 7, 8, 9, 11, 13, 14, 15, 17, 18, 22, 19, 23, 25] in **Publications**
  – Funded by the European Research Council under the European Union Seventh Framework Program (FP7/2007-2013) / ERC grant agreement 267583.
  – Responsibilities: Set music score and audio corpora, propose culture-aware methodologies to analyse the melodic, structural, rhythmic and lyrics content of the music scores and audio recordings, implement the algorithms in a modular and easy-to-use toolbox

- **Automatic Music Description and Discovery** 2011 – 2017
  Doctoral Research *Universitat Pompeu Fabra*
  – Creation of representative music corpora and development of relevant software tools for corpus-based automatic music description and discovery
  – The web application may be visited at http://dunya.compmusic.upf.edu/makam/.
  – Related papers: [1, 14, 15, 19, 25] in **Publications**
  – Funded by the European Research Council under the European Union Seventh Framework Program (FP7/2007-2013) / ERC grant agreement 267583.
  – Responsibilities: Set up the CompMusic makam music corpora, deploy the implementations of the automatic analysis methodologies, assist in developing the culture-specific user interaction

- **Audio-Score Alignment** 2012 –
  Doctoral Research *Universitat Pompeu Fabra*
  – Audio-score alignment methodologies designed to handle culture-specific characteristics of the studied musics
  – Related papers: [2, 7, 8, 13, 14, 15, 17, 18, 19, 22, 23] in **Publications**
  – Funded by the European Research Council under the European Union Seventh Framework Program (FP7/2007-2013) / ERC grant agreement 267583.
  – Responsibilities: Set up and annotate the score-audio test datasets, develop section-level and note-level alignment methodologies robust to changes in structure, transposition, tuning and intonation

- **Predictive Music Modeling** 2011 – 2013
  Graduate Assistantship Research, Masters Thesis *Georgia Tech*
  – Computational modeling of *uzun hava*, a non-metered improvisational melodic structure in Turkish folk music
  – Computational modeling of tabla (a sophisticated North Indian percussion) performances with Avinash Sastry
  – Related papers: [27, 28, 30] in **Publications**
  – Responsibilities: Creating datasets from symbolic notations, automatic segmentation, feature extraction, class conditional probability calculation and classification by naive multivariate Gaussian distributions, multiple viewpoints modeling

- **Joint Mode Recognition and Tonic Identification** 2010, 2016
  Doctoral and Masters Research *Georgia Tech, Universitat Pompeu Fabra*
  – Realised a state-of-art system that is able to recognise tonic and mode of Ottoman-Turkish makam, Hindustani and Carnatic music recordings jointly from pitch distributions in a fully automatic way and with very high precision
  – An open source toolbox is available https://github.com/altugkarakurt/morty.
  – Related papers: [6, 20] in **Publications**
  – Funded by NSF CreativeIT Grant, Award #0855758 and by the European Research Council under the European Union Seventh Framework Program (FP7/2007-2013), ERC grant agreement 267583
  – Responsibilities: Pitch tracking in GTRaagDB, pitch distribution calculations, tonic candidate selection algorithms, joint tonic and raag recognition using different parametric and non-parametric methods

- **Crossole** 2011
  A Musical Interface Designed in the Course, Project Studio *Georgia Tech*
  – A musical interface by which humans and possibly the machine itself performs a musical structure by creating and controlling musical progressions in real time in a virtual environment with hand gestures.

- Related papers: [24] in **Publications**
- Performed at the Atlanta Maker Faire 2011; 10 September 2011; Atlanta, GA, USA and the Listening Machines 2011; April 2011; Atlanta, GA, USA
- Finalist in the Innovation Competition of GTRIC 2012
- Responsibilities: Audio framework and software development in C++

Ottoman-Turkish Makam Music Ontologies — 2015 – 2017
Doctoral Research — *Universitat Pompeu Fabra*
- Ontologies describing the concepts in Ottoman-Turkish makam music from music scores to melodic structures and performance interactions
- The ontologies are available at https://github.com/sertansenturk/makam-ontologies.
- Funded by the European Research Council under the European Union Seventh Framework Program (FP7/2007-2013) / ERC grant agreement 267583.
- Responsibilities: Infer the concepts from CompMusic makam music corpora, music theory knowledge and metadata in MusicBrainz, construct the ontologies

Beatscape — 2010
Instrument Built in the Course, Technology Ensemble — *Georgia Tech*
- A Mixed Virtual-Physical Environment for Musical Ensembles, with Aaron Albin, Brian Blosser, Oliver Jan and Akito Van Troyer
- Related papers: [26] in **Publications**
- Performed at the *FutureMedia Fest*; 5 October 2010; Atlanta, GA, USA and the *Listening Machines 2010*; 17 April 2010; Eyedrum, Atlanta, GA, USA
- Responsibilities: Physical set-up of the instrument, image detection via Reactivision framework, data communication between Reactivision and the main software, audio playback

Bayan Sound Modelling and Synthesis — 2009 – 2010
Graduate Assistantship Research — *Georgia Tech*
- Mathematical modelling the sounds produced by a bayan drum and synthesising them in real-time
- Funded by NSF CreativeIT Grant, Award #0855758
- Responsibilities: Tabla Segmentation, analysis of segments, parameter estimation, mathematical modelling from parameters, building python external and adding relevant control structures in puredata for real-time synthesis from the model

Urban Remix — 2009
A Locative Sound Project Designed in the Course, Network Music — *Georgia Tech*
- A collaborative and locative sound project
- Audio Team with Aaron Albin and Avinash Sastry
- Responsibilities: Experimented with different sound generation software, optimised sound generation time, designed a sound rendering system that gives the feeling of localisation and distance of the sound sources which are consistent to the paths that are drawn by the user, audio post-processing for clippings and normalisation

Incorporation of Visual Information in Automatic Speech Segmentation — Jun 2009
Doctoral Research of Eren Akdemir, Ph.D. — *METU*
- Speech segmentation developed to incorporate the visual information captured around the mouth region
- Funded by Tubitak Support Program for Scientific and Technological Research Projects #107E101
- Responsibilities: Manual segmentation of a Turkish speech database with more than forty thousand phonemes, additional segmentation for cross-validation with another participant, error checking in segmentation data and maintenance in the speech database

Teaching

Universitat Pompeu Fabra — Sep 2012 – July 2015
Signals and Systems (Course code: MTC.21409) — *Barcelona, SPAIN*
- Laboratory Coordinator in 2015
- Laboratory Instructor between 2012 and 2015
- Seminar Instructor in 2013

Funding and Distinctions

- **Ph.D. Fellowship**   Sep 2012 – Sep 2016
  Universitat Pompeu Fabra   *Barcelona, SPAIN*

- **Computational models for the discovery of the world's music**   Sep 2011 – Sep 2016
  Grant agreement 267583 (CompMusic)   *Barcelona, SPAIN*
  – Funding agency: European Research Council
  – Funded within European Union Seventh Framework Program (FP7/2007-2013)
  – General Principal Investigator: Xavier Serra
  – Partially funded the Ph.D. research

- **Modeling Musical Creativity**   Aug 2009 – Aug 2011
  Award IIS-0855758   *Atlanta, GA, USA*
  – Full Title: Modeling Musical Improvisation to Support Creativity in Education and Performance
  – Funding Agency: National Science Foundation
  – Principal Investigator: Parag Chordia
  – Partially funded the graduate research

- **Incorporation of Visual Info. in Automatic Speech Segmentation**   Sep 2008 – Jun 2009
  Project 107E101   *Ankara, TURKEY*
  – Funding Agency: Scientific and Technological Research Council of Turkey (TÜBİTAK)
  – Principal Investigator: Tolga Çiloğlu
  – Worked as an undergraduate researcher

Invited Talks and Seminars

- **What is Machine Learning?**   Jul 2018
  Kobalt Music Group   *London, UK*
  – Lunch N Learn talk given as part of the company learning and development efforts

- **Music Information Retrieval: Applications and the State-of-the-Art**   Dec 2017
  Middle East Technical University   *Ankara, TURKEY*
  – Seminar given as part of the "Multimedia Informatics - Research Methods" course in the Graduate School of Informatics.
  – The slides are available at Google Slides.

- **Why Reproducibility Matters? A Personal Experience**   Feb 2017
  Universitat Pompeu Fabra   *Barcelona, SPAIN*
  – Talk given within the scope of the Maria de Maeztu Strategic Research Program. Presented the importance of reproducibility in academic research, which I had learned by experience throughout my academic studies. Provided guidelines and best-practices for conducting reproducible research.
  – The slides are available at https://zenodo.org/record/255537.

- **Culture specific approaches in music technology: Turkish Music Case**   Feb 2016
  Multiple Universities   *TURKEY*
  – Main speaker in a series of seminars showcasing the technologies developed within the CompMusic Project.
  – Took place in *Istanbul Technical University State Conservatory, Yıldız Technical University State Conservatory, Yıldırım Beyazıt University State Conservatory, Boğaziçi University Deparment of Computer Engineering, Middle East Technical University Informatics Institute* and *Bilkent University Department of Electrical and Electronics Engineering.*

- **Symbolic analysis of Ottoman-Turkish makam music**   Jun 2015
  University of the Basque Country   *San Sebastian, SPAIN*
  – Invited talk. Presented an overview of the state-of-the-art and possible extensions for music transformation

- **Otomatik nota-icra eşleştirme (Audio-score alignment)**   Jun 2014
  Istanbul Technical University State Conservatory   *Istanbul, TURKEY*
  – Invited talk in the seminar "Ses teknolojisinde Türk Müziği'ne özgü tasarımlar"

- **Galata Electroacoustic Orchestra** — Jun 2013
  Conservatorio Niccolò Paganini di Genova — *Genoa, ITALY*
    – Taught two lessons titled "Pitch analysis of traditional Turkish music" and "Information processing techniques applied to traditional Turkish music" (Erasmus Intensive Program (IP) No: 2012-1-IT2-ERA10-38878)

Supervision and Mentoring

- **Georgia Tech Music Technology Mentorship** — Sep 2018 – ongoing
    – Alumni Outreach Chair

- **Women in MIR** — Jan 2017 – ongoing
    – Mentor

- **Hasan Sercan Atlı** — Jun 2014 – ongoing
    – Development of a modular, extensive and customizable desktop application for accessing and visualizing the music information sources, the features and the analysis results. The source code is available at https://github.com/MTG/dunya-desktop
    – CompMusic makam music corpus [19]
    – Melody extraction for Ottoman-Turkish makam music recordings [15]
    – Tonic identification methodology proposed in [11]
    – The works listed above are included in his master thesis titled "An interactive tuition software for the melodic dimension of Turkish makam music." The software was awarded with the "silver" prize in the student design competition of 139th *Audio Engineering Society Convention, NY, USA (2015).*
    – Introduced the fundamentals of academic writing, object oriented programming, version control, code coverage, continous integration

- **Halil Erdoğan** — March 2018 – ongoing
    – Automatic music generation
    – Research methodologies, reproducibility, and software development

- **Aslı Ateş** — May 2018 – ongoing
    – Record linkage, data-driven sustainable development

- **Altuğ Karakurt** — Jun 2015 – Jan 2017
    – Automatic mode recognition and tonic identification [6]. An open source toolbox implementing the methodology is hosted at https://github.com/altugkarakurt/morty/.

- **Burak Uyar** — Jun 2014 – Mar 2016
    – CompMusic makam music corpus [19].
    – Tools to generate MusicXML scores from the SymbTr makam music score collection. The open converter is hosted at https://github.com/burakuyar/MusicXMLConverter/.

- **Miraç Atıcı** — Feb 2015 – Mar 2016
    – Fundamentals of academic writing, object oriented programming and Python

Scientific Services

- Advisory Committee
    – Modus Operandi — 2015 – 2017
- Programme Committee
    – International Conference on Digital Libraries for Musicology (DLfM) — 2017, 2018
- Journal Referee
    – Applied Sciences — 2017
    – Journal of New Music Research (JNMR) — 2013
- Conference Referee
    – International Society for Music Information Retrieval Conference (ISMIR) — 2014 – 2018
    – Sound and Music Computing Conference (SMC) — 2013, 2014, 2016, 2018
    – International Computer Music Conference (ICMC) — 2014
    – Iberoamerican Congress on Pattern Recognition (CIARP) — 2014

Compositions and Sound Design

- **A Reproduction of La Espiral Eterna**   Mar 2011; Revised Dec 2011
  Classical Guitar, Signal Processing & Organised Sound

    Taking the side of the weak, the piece expresses the clashes between those in power and those who are oppressed. It acknowledges that the struggle will continue forever; forming an "eternal spiral".

  - Performed at KSU New Music Festival; 28 March 2011; Kennesaw State University, Kennesaw, GA, USA
  - Original composition for classical guitar by Leo Brouwer, 1971
  - Guitar recording taken from "Guitar Recital" album by Dmitris Regginos, 2004. Samples are taken from freesound.org and Youtube.

- **Automobile**   Feb, 2011
  Organised Sound, Bağlama & Signal Processing

    Having a high sensational, perceptual and cognitive capability, human beings rarely think about their limits or errors. They forget that they can be confused or deceived...

  - Contributed by Oliver Jan and Akito Van Troyer
  - Composed using samples from field recordings and samples that are taken from freesound.org and Acoustical Society of America

- **Road to School**   Oct 2010
  Short Movie, Directed by Yiğitalp Ertem
  - Foley, sound design and mixing
  - Screened in 22. Ankara International Film Festival; March 2011; Ankara, Turkey and METU Film Festival; Feb 2011; Ankara, Turkey

Selected Performances

- Crossole

  - Performed at the 2011 Atlanta Maker Faire 2011; 10 September 2011; Atlanta, GA, USA and the Listening Machines 2011; April 2011; Atlanta, GA, USA

- Beatscape, a mixed virtual-physical environment for musical ensembles

  - Performed at the *FutureMedia Fest*; 5 October 2010; Atlanta, GA, USA and the *Listening Machines Concert*; 17 April 2010; Atlanta, GA, USA

- LOLC, collaborative live coding environment

  - Performed at the *NIME 2011*; 29 May 2011; Oslo, Norway, the *FutureMedia Fest*; 5 October 2010; Atlanta, GA, USA and the *Listening Machines Concert*; 17 April 2010; Atlanta, GA, USA

- A Reproduction of La Espiral Eterna

  - Performed at KSU New Music Festival; 28 March 2011; Kennesaw State University, Kennesaw, GA, USA

- Classical Guitar

  - *Performed at 50th Year Anniversary of METU Department of Electrical and Electronics Engineering Student Concert*; 16 December 2008; METU Cultural and Convention Center, Ankara, TURKEY
    * Antonio Vivaldi – Concerto in G Major RV 532 with Aslı Topak and Gizem Elçi
    * Joaquin Turina – Hommage à Tárrega
    * Manuel M. Ponce – Prèlude I, *Dedicated to Aleksandros Grigoropoulos*

Organization Experience

- **Barcelona Music Hack Day**   Jul 2012 & Jul 2013
  One-day hacking session to realise any music related idea   *Barcelona, SPAIN*
  - Volunteer in Sónar 2012 - 2013

- **Sonic Generator Concert Series**   Aug 2009 – May 2011
  Ensemble-in-Residence at Georgia Institute of Technology   *Atlanta, GA, USA*

- – Stage crew, video recording, set-up assistance
- **Guthman Musical Instrument Competition** Feb 2010 & Feb 2011
  Hosted by the Georgia Tech Center for Music Technology *Atlanta, GA, USA*
  - – Set-up assistance and supervision
- **METU International Classical Guitar Festival** Mar 2006 & Mar 2007
  Organised by METU Classical Guitar Society *Ankara, TURKEY*
  - – Sound recording, set-up assistance

Personal Interests

Traveling, cooking, computer, swimming, skiing, literature

References

Available upon request