Abstracts

Day 1 – Monday, July 15th

Roberto Doati (L), *The GEO Project*
The project concerns the area of Music and Performing Arts. The GEO (Galata Electroacoustic Orchestra) project is inspired by the historical relations between Genova and Istanbul. It is named by the Genoese quarter Galata in Istanbul dating back to the 12th century. The general objectives of GEO IP are: 1) to found the Galata Electroacoustic Orchestra, a small group orchestra based on the idea of collective composition; 2) to merge the Western Classical tradition of score-based music and the improvisational techniques. As the dialogue between the three Countries involved in the IP is an important objective for GEO, we adopted the sealing map – "portolano" – as a guide metaphor for the project (when a ship docks, the goods - in our case: the musical products - from one country are unloaded and goods from another country are loaded). The activities are divided in: lectures (20 hours), workshops (28 hours), laboratories (24 hours), an instruction visit (6 hours), concert rehearsals and a final public concert (10 hours) within the Old Harbor.
The expected outputs of the GEO IP project are:

- a concert by the Galata Electroacoustic Orchestra at the end of the IP;
- a permanent web portal website, with downloadable audio and video recordings of IP activities;
- a documentary DVD with a booklet on the IP experience with the most important selection of the above.

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Francesco Surdich (L), *Routes, travels, trade and cultural exchanges in the Mediterranean Sea*
The Mediterranean can be considered a historical-cultural reality extremely complex and intricate, consisting of a liquid continent that, despite the contrasts and often substantial differences between the civilizations that have appeared on it, has not generally divided but united populations settled along its banks. The Mediterranean made differences live thanks to the continuous exchanges, to the point that, even during the most conflicting times, lines of tension and fracture appeared inseparable from the lines of the meeting to a principle of attraction and repulsion that seemed always imposed on all those who live and have lived in Mediterranean societies. Therefore we will focus on this space, trying to retrace briefly the circumstances and reasons that led in many different eras to move across it in many different directions, starting from the people who already around 7000 BC., long before it was brought to light something that can come closer to urban civilization, began to move by ship along the Mediterranean. The people of the Nile valley and then the sailors and merchants of Crete, the Phoenicians, Greeks and the Romans, who would leave space to the Byzantines and the Arabs until the emergence of the Maritime Republics in Italy and the market towns of Catalonia and southern France.
It was especially starting from the end of the eleventh century that the Mediterranean returned to be a communication area of fundamental importance for the development of commercial activities giving rise to a process of interchange with the East which lasted for about four centuries. In particular during the first Crusade, which allowed the Christian merchants the creation of colonies and the opening of new markets and encouraged at the same time also the phenomenon of pilgrimage in the Holy Land, almost always reached by sea. An activity, however, often put in danger by piracy (or warfare), a phenomenon that has always been present in the Mediterranean, but that became more endemic and consistent with the establishment of the Turkish domination in that cultural and geographical, which would attracted the interest and curiosity of the European political and intellectual world thanks to the rediscovery of the ancient Greek and Latin East, Egypt and the Ottoman world. During the nineteenth century - particularly during the second half of the century, especially after the opening in 1869 of the Suez Canal - in the Mediterranean it would be intensified trade routes directed mainly to the Far East, as well as navigation pleasure (yachting), due primarily to a culture of evasion and of displacement. Recreation boating in recent decades and the first period of the new millennium would have given way to tourist cruises, who have made the Mediterranean coast one of the epicenters of mass tourism, a phenomenon contemporary with the gradual spread of the presence, in the same sea, of the "boat people". A myriad of desperate people who have begun to move from the African to the Italian coast searching for better - often illusory - opportunities in life.

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Mauro Balma (L), *Liguria and the musical tradition*
Liguria is a region that is placed like an arch along a narrow territory, and on its South-facing side, it is entirely washed by the sea. But it is also, and above all, a land crossed from West to East by those mountains that range between the Ligurian Alps and Northern Apennines and that characterize the landscape of the inland. It is right here that, in villages more or less distant from the coast, there are (or were,

in the recent past) the songs and the music more tied to the tradition. Sea songs are virtually absent: only "copyright production" since the 1920s was written on words with the sea as a leading subject.
Making an ideal journey from East to West, we will meet songs for several voices: at East the Maggi songs connected with the arrival of spring, at West the religious songs of the brotherhoods; in the Centre narrative singing mostly for three parts voices. At West, around Imperia, there is the great music of the Ceriana tradition with its drone songs, while in Genova and its district it is still well represented the multipart singing called *trallalero*, an urban song genre with five parts voices also developed from modules and themes from the inland. A rich repertoire of monodic narrative songs (ballads), is spread over the whole territory.
There is essentially no instrumental tradition in Liguria, although there was also here the *piffero* (fife) and *musa* (bagpipes) repertoire, today still present in the Apennine area of the so-called "Four Districts", where the administrative boundaries of Genova, Piacenza, Alessandria and Pavia cross each other. Some of these repertoires have been rediscovered since the 1970s by Folk Music Revival groups mainly those playing in La Spezia, Chiavari, Genova and Savona.

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Xavier Serra (L), *Traditional folk music in Catalunya*
What most people consider the traditional music of Catalonia is the Sardana. Sardanes are popular dances that started to be widespread by the end of the 19th century. The sardana's music (música de cobla, in Catalan) is played by an 11-piece band called a cobla, that includes genuine folk instruments such as the flabiol (tabor pipe) and tambori, tenora, tible which are also used in other regions of Spain. Coblas also frequently play as concert bands without the dance.
Other popular music in Catalonia are the ball de bastons (stick dances), galops, espunyolets, ball de panderetes, ball de gitanes and the music of gralla (music) (a kind of Catalan shawm) and drums used in cercaviles or by colles diableres, etc. In areas around the river Ebre, the jota is a popular dance.
A part from these folk traditions that have been developed and are just maintained in Catalania, it is important to mention the Flamenco, which is the most relevant folk tradition in Spain and that has been very much alive also in Catalonia. But the only classical music tradition developed in Spain is the Arab-Andalusian music. The Andalusian classical music is very much alive in the Maghreb but its origins go back to the times of Al-Andalus. Catalonia was part of Al-Andalus for a short time.
In the class we will give an introduction to these different music traditions, specially listening to their music.

References:
- http://en.wikipedia.org/wiki/Catalan_music
- http://en.wikipedia.org/wiki/Sardana
- http://en.wikipedia.org/wiki/Flamenco
- http://en.wikipedia.org/wiki/Andalusian_classical_music

Day 2 – Tuesday, July 16th

Xavier Serra (L), *Music information processing and traditional music*
Music information processing covers all the topics involved in the understanding and modeling of music and that use information processing methodologies. The major aim of the current research in this field is developing methods and technologies with which to process musically relevant data and develop products and services with which to create, distribute and interact with music information. This field includes gathering and organization of machine-readable musical data, development of data representations, and methodologies to process and understand that data, taking into account domain knowledge and bringing expertise from relevant scientific and engineering disciplines. Music information processing is relevant for producing exploitable technologies for organizing, discovering, retrieving, delivering, and tracking information related to music. The presentation of this topic will cover three classes. In the first one we will give an overview of the field in a general way. In the second class we will go into the analysis of sound and music signals describing tools with which we can analyze and describe musical signals. In the third class we will focus on the sounds of different traditional music styles, using tools to discover their characteristics.

References:
- http://mires.eecs.qmul.ac.uk/wiki/index.php/Roadmap
- http://www.freesound.org/
- http://www.sonicvisualiser.org/

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Fabrizio Casti (L), *Traditional folk music in Sardinia*

Pieces taken from the repertoire for *Launeddas*, an ancient wind instrument from Sardinia will be analyzed during this lectures. To play this instrument means to compose "by memory" centered on the thematic continuity (*sonai a iskala*). The player organizes the composition in predefined melodic sections (*nodas* o *pikkadas*) being elaborated to anticipate music elements characterizing the following sections in a continuous process of coherent transformations. This modality realizes a musical succession thus not being established in rigid sequels beforehand but expressing itself in an always different, original and unique way.

References:

- F. Weis Bentzon, 1969, *The launeddas. A Sardinian folk-music instrument,* 2 voll. Akademisk Forlag, Copenhagen (in Italian: *Launeddas*, a cura di Dante Olianas, ed. Iscandula, Cagliari 2002).
- *Musica sarda. Canti e danze popolari*. Con 2 CD Audio (con saggi di D. Carpitella - P. Sassu- L. Sole), Geos CD book. Collana di etnomusicologia, 2010.
- *Enciclopedia della musica sarda*, a cura di M. Lutzu e F. Casu, La biblioteca dell'identità sarda de L'Unione Sarda, Launeddas 1, 2 Volume 11, 12, Società Editrice L'Unione Sarda, 2012, Cagliari.

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Fabrizio Casti (W), *Sounds coming from afar: signs and gestures*

During this workshop the work starts from the analysis of some of the musical behaviors examined linked to the idea of uniqueness and continuous transformation. These behaviors will be used as models for the generation of new music material re-thought and adapted to the acoustic and electronic music instruments and the voices available. This work of practical execution is flanked by a course of writing and gestural codification, thought as first step to analyze, choosing some data of the sonorous to be transformed in visible descriptions.

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Tolgahan Çoğulu (L), *The basic theory of Ottoman/Turkish Maqam music*

Maqam is a complex modal system that is used in Ottoman Art Music and Anatolian (Asia Minor) Folk Music. There are more than 500 maqams. In addition to the basic scale, each maqam has its own characteristic melodic development and modulation rules. In this lecture, after a brief historical introduction about the Ottoman/Turkish maqam music, the basic theory will be discussed. The concept of 'maqam' will be defined and the classification of maqams will be made in three categories: Simple, Compound and Transposed maqams. The tetrachords/pentachords and microtones that formed the skeleton of maqams will be discussed along with the melodic progression (Tr. seyir) concept. The rhythmic structure (Tr. Usul) of makams will be introduced. Some basic maqam's improvisatory characteristics and melodic progressions will be played live by the musicians.

Day 3 – Wednesday, July 17th

Sertan Şentürk (L), *Information processing techniques applied to traditional Turkish music*

Traditional Turkish music (TTM) is a rich music tradition with complex expressive characteristics. Some unique aspects of the music include (but are not limited to) the modal structure (makam), melodic progressions (seyir), tuning, rhythmic structure (usul). Gaining insight about these characteristics may open up new paths for musical appreciation, creativity, expressivity and interaction. Computational approaches can help us to establish a systematic way to discover, understand and appreciate MTT.

Given these unique attributes in this music tradition, information retrieval in TTM has many acoustic, computational and semantic challenges. Knowledge-based approaches are required uncover the characteristics of TTM. In this class, we will present the culture-specific challenges and the state of the art methodologies in the computational analysis and characterization of TTM. The class will cover the information processing techniques applied to problems such as tonic identification, makam recognition, tuning analysis, melody modeling and instrument modeling. We will point the strengths and weaknesses of the approaches and briefly explain future research questions. We will also outline the usage of various information sources (such as audio recordings, scores and metadata) in the analysis of TTM, and incorporating multiple data sources in the analysis.

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Tolgahan Çoğulu (L & W), *Ottoman/Turkish Maqam music and Anatolian folk music*

In this workshop, the tetrachords and pentachords that form the skeleton of maqams will be introduced and these will be played by the musicians. After this introduction, the concept of microtone will be made and the possibilities to play microtones with the Western instruments will be discussed. The basic scales of makams

will be played by the musicians. The melodic progression rules will follow the scales. The ornaments of maqams will also be discussed for the interpretation of some specific pieces.

* * *

Xavier Serra (W), ***Music information processing and traditional music***
Music information processing covers all the topics involved in the understanding and modeling of music and that use information processing methodologies. The major aim of the current research in this field is developing methods and technologies with which to process musically relevant data and develop products and services with which to create, distribute and interact with music information.
This field includes gathering and organization of machine-readable musical data, development of data representations, and methodologies to process and understand that data, taking into account domain knowledge and bringing expertise from relevant scientific and engineering disciplines. Music information processing is relevant for producing exploitable technologies for organizing, discovering, retrieving, delivering, and tracking information related to music.
The presentation of this topic will cover three classes. In the first one we will give an overview of the field in a general way. In the second class we will go into the analysis of sound and music signals describing tools with which we can analyze and describe musical signals. In the third class we will focus on the sounds of different traditional music styles, using tools to discover their characteristics.

References:
- http://mires.eecs.qmul.ac.uk/wiki/index.php/Roadmap
- http://www.freesound.org/
- http://www.sonicvisualiser.org/

Day 4 – Thursday, July 18th

Tolga Tüzün (L), ***Turkish Electroacoustic Music: A Historical Perspective***
This lecture will give an historical perspective on Turkish composers of electronic and electroacoustic music. It will explore the music of Ilhan Mimaroglu and of Bulent Arel, two major figures of 1960's and 1970's electronic music scene, and the music of the latest generation of Turkish composers.

References:
Robert J. Gluck, "The Columbia-Princeton Electronic Music Center: Educating International Composers", in *Computer Music Journal,* Summer 2007, Vol. 31, No. 2, pp. 20-38.

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Tolga Tüzün (Lab), ***Bilgi Laptop Orchestra***
This lab will concentrate on different aspects of treatment of acoustic instruments in order to extract some fundamental concepts about the sonic promises/potential of their role in electroacoustic music and the value of those concepts when it comes to Turkish folkloric music. Through various musical examples we will develop some cognitive maps, which will broaden our understanding of the realm. The main method of the lab is an analytical listening leading to a collaborative exploration of treatment techniques.

References:
Elizabeth Hoffman, "On Performing Electroacoustic Musics: a non-idiomatic case study for Adorno's theory of musical reproduction", in *Organised Sound,* April 2013, Vol. 18, pp. 60-70.

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Roberto Doati (W), ***Forms of the GEO concert*** **I**
After a first part concerning general thoughts on Improvisation, an Historical path will be traced from Serialism to Free Improvisation: total determinism, the disintegration of "note" idea with the Electronic Music revolution and the growing importance of timbre as structural parameter, chance and stochastic operations in composing music, graphic scores, open form, free improvisation. All these steps will be showed through scores and listening sessions of works by composers such as Stockhausen, Cage, Xenakis, Brown, Feldman, Wolff, Cardew, Nuova Consonanza, MEV, Sonic Arts Union, New Phonic Art, John Butcher, Lawrence Casserley, Evan Parker, Michael Edwards. Simple and clear tasks will be given.

References:
- Bruno Nettl, "Thoughts on Improvisation", in *The Musical Quarterly* vol. LX no. 1 (1974).
- Derek Bailey, *Improvisation. Its Nature and Practice in Music*, Da Capo Press, New York 1992.
- Walter Prati, *All'improvviso. Percorsi d'improvvisazione musicale*, Casanova e Chianura Edizioni, Milano

2010 (www.auditoriumedizioni.it).
- Roger T. Dean, “Envisaging Improvisation in Future Computer Music”, in Roger T. Dean (ed.), *The Oxford Handbook of Computer Music*, Oxford University Press, New York 2009.
- Tim Perkis, “Some notes on my Electronic Improvisation Practice”, in Roger T. Dean (ed.), *The Oxford Handbook of Computer Music*, Oxford University Press, New York 2009.
- Garth Paine, “Gesture and Morphology in Laptop Music Performance”, in Roger T. Dean (ed.), *The Oxford Handbook of Computer Music*, Oxford University Press, New York 2009-
- George E. Lewis, “Interactivity and Improvisation”, in Roger T. Dean (ed.), *The Oxford Handbook of Computer Music*, Oxford University Press, New York 2009,
Christopher Burns, “Complexity and Control in a Software Improvisation Environment”, Proceedings, SPARK Festival 2007.
- William Hsu, “Using Timbre in a Computer-based Improvisation System”, Proceedings, ICMC 2005.
- Thomas Ciufo, “Beginner’s Mind: an environment for sonic improvisation”, Proceedings, ICMC 2005
- Thomas Ciufo, “Design Concepts and Control Strategies for Interactive Improvisational Music Systems”, Proceedings, ICMC 2005.
- Caleb Stuart, “The Object of Performance: Aural Performativity in Contemporary Laptop Music”, Proceedings, Melbourne, DAC 2003.
- Lawrence Casserley, “A Digital Signal Processing Instrument for Improvised Music”, in *The Journal of Electroacoustic Music*, vol. 11, 1997.

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Sertan Şentürk (W), *Pitch analysis of traditional Turkish music*
Pitch organization and melody are fundamental elements in traditional Turkish music (TTM) and lead to a considerable amount of culture-specific information. In TTM, an octave is divided into more than 17 intervals. These intervals are not tuned according to a fixed frequency and they show distinct changes according to the makam, melodic progression, musical genre and personal aesthetics. Moreover, the notes are typically played interconnected by extensive usage of embellishments such as slurs, tremolos, legatos. These embellishments also show some characteristics specific to MTT. The performers have a high degree of freedom to interpret the melodies: in a performance with multiple musicians, each musician would interpret the same melody differently, producing a heterophonic interaction. Extracting pitch-based information and analysis of these features are highly relevant to study the melodic properties of the music tradition.
In this class, we will focus on pitch analysis of TTM. We will first start with prominent pitch extraction and get an estimation of the melody performed in the audio recording. From the estimated pitch, we will present additional computational tasks such as tonic identification, tuning analysis and makam recognition. We will consider different scenarios such as vocal compositions, solo instrumental pieces and (heterophonic) ensemble performances. We will also discuss how to interpret the analysis results, demonstrate possible errors in each analysis step and illustrate how to handle such errors.

We will use several tools to demonstrate the techniques. Some example software used for pitch analysis of TTM is:
- Tarsos (http://tarsos.0110.be/)
- Essentia (http://www.mtg.upf.edu/technologies/essentia)
- Matlab, Makam Toolbox
- Sonic Visualizer (http://www.sonicvisualiser.org/)

Day 5 – Friday, July 19th

Alessandro Olla (L), *Cantu a Tenore:Traditional song of center Sardinia*
Sardinia is probably the most culturally distinct of all the regions in Italy and musically is best known for the “tenor polyphonics” songs. *Cantu a tenore* is a style of polyphonic folk singing characteristic of the Barbagia region in the center of Sardinia island. The word *tenore*, refers to the actual style of folk singing and is distinguished from other similar styles called by different names in different places on the island. In the Barbagia region on the island of Sardinia, there are two different styles of polyphonic singing: *cuncordu*, usually a form of sacred music, sung with regular voices, and *tenore*, usually a form of profane music, marked by the use of overtone singing. A *tenore* is practised by groups of four male singers each of whom has a distinct role; the oche or boche is the solo voice, while the *mesu oche* or *mesu boche* ("half voice"), contra ("counter") and bassu ("bass")—listed in descending pitch order—form a chorus (another meaning of *tenore*). The *bassu* sings the same note sung by the *oche*, and contra a fifth above the *bassu*. *Oche* and *mesu oche* sing in a regular voice, whereas contra and *bassu* sing with a technique affecting the larynx. According to some anthropologists, canto a *tenore* was performed back in nuraghe civilisation. In 2005, Unesco classed the canto a *tenore* among intangible world heritage.

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Alessandro Olla (W), ***Azimuth: Live Electronics improvisation with traditional sounds and acoustic identity***

In the workshop the students will edit and play the *tenores* samples to create sound textures, sound objects and rhythm vocal patterns: The music practice aims to complete the sardinians sounds with Turkish identity acoustic through the improvisation and live electronics.

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Fabrizio Casti (W), ***Sounds coming from afar: improvisation and composition***

This second workshop is thought to quicken within the participants a particular music knowledge o consciousness of music that we could define and synthesize in "giving a form to the listening to the difference". To do this it should contain listening practices, improvisation practices, composition practices and gesture practices. Exactly with the use of gesture codes typical in the practice of "conduction" we get the possibility to generate collectively a sense of music contemplating in an completed and satisfactory way an authentic meeting between different music experiences leading the participants to a consciousness of hearing and to taking a responsibility towards the music form in all its components.

References:

- F. Oppo, *Il sistema dei cunzertus nelle launeddas*, in G. N. Spanu (a cura di), 1995, Sonos, Strumenti della musica popolare sarda, Nuoro.
- F. Giannattasio, *Il progetto musicale e l'espressione estemporanea*, in F. Giannattasio, 1992, Il concetto di musica. Contributi e prospettive della ricerca etnomusicologia, La Nuova Italia Scientifica, Roma.

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Xavier Serra (W), ***Music information processing and traditional music***

Music information processing covers all the topics involved in the understanding and modeling of music and that use information processing methodologies. The major aim of the current research in this field is developing methods and technologies with which to process musically relevant data and develop products and services with which to create, distribute and interact with music information. This field includes gathering and organization of machine-readable musical data, development of data representations, and methodologies to process and understand that data, taking into account domain knowledge and bringing expertise from relevant scientific and engineering disciplines. Music information processing is relevant for producing exploitable technologies for organizing, discovering, retrieving, delivering, and tracking information related to music. The presentation of this topic will cover three classes. In the first one we will give an overview of the field in a general way. In the second class we will go into the analysis of sound and music signals describing tools with which we can analyze and describe musical signals. In the third class we will focus on the sounds of different traditional music styles, using tools to discover their characteristics.

References

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Day 6 – Saturday, July 20th

Mu.MA – Musei del mare e della navigazione

The museum route progresses through twenty-three large rooms which are spread over four floors, plus the panoramic *Mirador* terrace, and are dedicated to the permanent exhibition, the themed sections and the *Saletta dell'Arte*, used for temporary exhibitions.

The topic of voyaging is one of the recurring themes of a visit to the Galata Museo del Mare: voyages which, though able to rely upon technological developments in means of transport, have always involved man having to defy the unexpected that the seas and oceans have in store. The museum exhibition route, in chronological order, is also something of a voyage beginning on theground floor with the era of ships propelled by oars, and continuing on to the first and second floors with the story of sailing ships and the revolutionary geographical explorations, only to arrive at the third floor which is entirely dedicated to the great transatlantic migrations.

Gruppo Spontaneo Trallalero

Concert (Piazza Matteotti)

Day 7 – Monday, July 22nd

Tolga Tüzün (Lab), *Bilgi Laptop Orchestra*
This lab will concentrate on different aspects of treatment of acoustic instruments in order to extract some fundamental concepts about the sonic promises/potential of their role in electroacoustic music and the value of those concepts when it comes to Turkish folkloric music. Through various musical examples we will develop some cognitive maps, which will broaden our understanding of the realm. The main method of the lab is an analytical listening leading to a collaborative exploration of treatment techniques.

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Sinan Bökesoy (Lab), *GEO concert with live transmission of the harbor sounds*
This project was born with the idea of using the harbor sounds which are maintained in a sonic eco-system specific to the Genoa harbor. The daily routine of these sounds contain mostly industrial activities of the harbor, such as crane sounds, alarm signals, engine sounds, boat sounds etc..The daily routine of the city as a sonic mapping is hard to be perceived except the ambulance sounds or the traffic noise. Most of these sonic events can be considered as irregularly distributed in time space, in fact each of them represent a reasoning, a sequence of activities for a purpose.
How should we consider the musical outcome of these sounds by processing them and projecting them on their original states? There is a whole universe of pieces made within acousmatic perspective, applied dynamic morphologies, or mix of concrete sound objects.
We consider the treatment of these sounds within freely expandable ideas, and performance applications. The 1city1001vibrations installation project of Sinan Bökesoy for Istanbul2010 was utilizing a machine listening system to make an analysis and create an acoustical mapping on the live Bosphorus sounds. Specific sound sources were extracted from the audio stream which was buffered in 10sec. long memory space. The treatment of the sounds and the original sonic space of the Bosphorus projected to the audience were the past 10 seconds of time. Such a technique can be applied in this GEO concert project again, this time with live human performers who listen to the recent 10seconds part of the stream but the audience would listen to the past with 10 seconds of delay. The purpose here is to project a unified sonic process, the original and the processed on the same time frame if possible.
As processing tools an FX version of Cosmos*ƒ* synthesizer will be introduced, and a setup of several Cosmos*ƒ* plugin inside a DAW (Live or Reaper) with some simple controller hardware attached can already define a language for communicating with the live harbor sounds.
By recording the present and projecting the past, there is a good potential on working on the memory of the audience and apply compositional techniques.

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Sinan Bökesoy (L), *Electroacoustic treatments on sonic potential*
Electro-acoustic treatment of live sound input or concrete material can be quickly achieved with specific plugin solutions on DAW platforms. Formerly, huge racks of electronic equipment was needed to experiment with such potential and before even not with digital audio. A quick survey on existing tools from different companies can be presented as an introduction. Then the Cosmos*ƒ* FX (in development currently) tool will be presented and different experiments will be offered while benefiting the plugin environment of DAW platforms. If requested and applicable, programming issues and techniques will be discussed with the students.

Day 8 – Tuesday, July 23rd

Alessandro Olla (W), *Azimuth: Live Electronics improvisation with traditional sounds and acoustic identity*
In the workshop the students will edit and play the *tenores* samples to create sound textures, sound objects and rhythm vocal patterns: the music practice aims to complete the sardinians sounds with Turkish identity acoustic through the improvisation and live electronics.

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Tolga Tüzün e Roberto Doati (Lab), *The Galata Electroacoustic Orchestra*
The settled cultural/musical mixed groups of students will be driven as separate groups to practice

improvisation and open forms with acoustic and electronic instruments.

Day 9 – Wednesday, July 24th

Tolgahan Çoğulu (L), *Microtonal music and temperament systems*
In Western classical music theory, the term “microtone” is used for an interval less than a half tone. “Microtonal Music” refers to pieces that use microtones in contemporary Western classical music repertoire. In addition to this, the term “Microtonal Music” also encompasses music that use intervals other than the equally-tempered 12 notes of an octave. In the first part of this lecture, definitions of microtones and microtonal music are made and the development of this music in the contemporary Western classical music is discussed. In the second part, temperament systems other than equal temperament is discussed. These temperament systems (Pythagorean, just intonation and meantone temperament) are defined and the related pieces of the repertoire are examined. In the third part, equal-tempered microtonality is discussed with the analysis of Julian Carrillo’s and Alois Haba’s pieces.

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Tolgahan Çoğulu (W), *Ottoman/Turkish Maqam music and Anatolian folk music*
In this workshop, the tetrachords and pentachords that form the skeleton of maqams will be introduced and these will be played by the musicians. After this introduction, the concept of microtone will be made and the possibilities to play microtones with the Western instruments will be discussed. The basic scales of makams will be played by the musicians. The melodic progression rules will follow the scales. The ornaments of maqams will also be discussed for the interpretation of some specific pieces.

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Tolga Tüzün e Roberto Doati (Lab), *The Galata Electroacoustic Orchestra*
The settled cultural/musical mixed groups of students will be driven as separate groups to practice improvisation and open forms with acoustic and electronic instruments.

Day 10 – Thursday, July 25th

Roberto Doati (W), *Forms of the GEO concert* II
The tasks given on Day 4th will be analyzed to set-up the final concert musical building blocks for the different groups of students that will be created after the first four days combining and recombining their knowledge and skills.

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Sinan Bökesoy, Tolgahan Çoğulu, Roberto Doati, Tolga Tüzün (Lab), *The Galata Electroacoustic Orchestra*
All of the students groups, now together on stage, will be driven by the four teachers to the concert subject metaphor.

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Sinan Bökesoy (Lab), *GEO concert with live transmission of the harbor sounds*
This project was born with the idea of using the harbor sounds which are maintained in a sonic eco-system specific to the Genoa harbor.
The daily routine of these sounds contain mostly industrial activities of the harbor, such as crane sounds, alarm signals, engine sounds, boat sounds etc..The daily routine of the city as a sonic mapping is hard to be perceived except the ambulance sounds or the traffic noise. Most of these sonic events can be considered as irregularly distributed in time space, in fact each of them represent a reasoning, a sequence of activities for a purpose.
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time with live human performers who listen to the recent 10 seconds part of the stream but the audience would listen to the past with 10 seconds of delay. The purpose here is to project a unified sonic process, the original and the processed on the same time frame if possible.
As processing tools an FX version of Cosmos*ƒ* synthesizer will be introduced, and a setup of several Cosmos*ƒ* plugin inside a DAW (Live or Reaper) with some simple controller hardware attached can already define a language for communicating with the live harbor sounds.
By recording the present and projecting the past, there is a good potential on working on the memory of the audience and apply compositional techniques.