Lifelong Learning Programme

Lifelong Learning Programme
www.programmallp.it

Genova, 15-26 July 2013
Conservatorio Niccolò Paganini
Via Albaro 38, Genova

Galata Electroacoustic Orchestra (GEO)

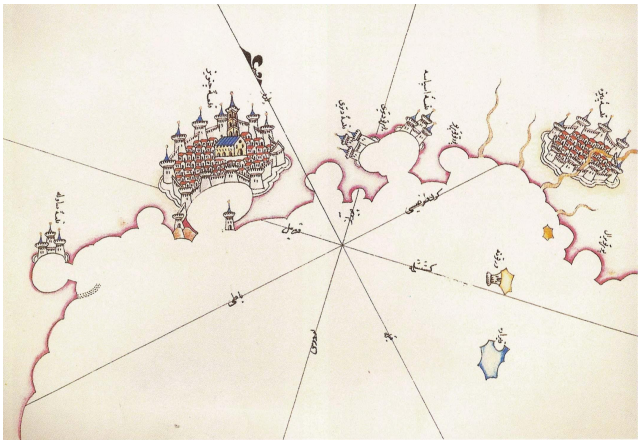
Lifelong Learning Programme
IP n° 2012-1-IT2-ERA10-38878

COORDINATOR
CONSERVATORIO STATALE DI MUSICA "N. PAGANINI" *[I GENOVA02]*

PARTNERS
ISTANBUL BILGI ÜNIVERSITESI *[TR ISTANBU11]*
ISTANBUL TEKNIK ÜNIVERSITESI *[TR ISTANBU04]*
UNIVERSITAT POMPEU FABRA *[E BARCELO15]*
CONSERVATORIO DI MUSICA "G. PIERLUIGI DA PALESTRINA" *[I CAGLIAR02]*

Conservatorio Niccolò Paganini
İSTANBUL BİLGİ ÜNİVERSİTESİ
İSTANBUL TEKNİK ÜNİVERSİTESİ 1773
upf. Universitat Pompeu Fabra Barcelona
Conservatorio Statale di musica Giovanni Pierluigi da Palestrina

1. Introduction



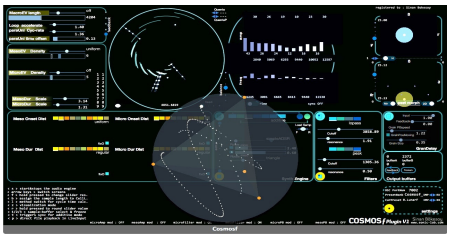
The GEO project (Galata Electroacoustic Orchestra) is inspired by the historical relations between Genova and Istanbul.
The general objectives of GEO IP is: 1) to found the Galata Electroacoustic Orchestra, a small group orchestra based on an idea of live collective composition; 2) to merge of the Western Classical tradition of score-based music and the Improvisational techniques, in particular of Turkish Maqam Music.
As the dialogue between the three Countries (Turkey, Spain and Italy) 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 expected learning outcomes are related to the acquisition of skills and abilities in the following disciplinary areas: theoretic, ethnomusicological, technological, performing and compositional. The expected outputs of the GEO IP project are:
- a concert by the Galata Electroacustic Orchestra at the end of the IP;
- a permanent web portal website of the HEI coordinator, with audio and video recordings of the all IP activities (the documentation will be downloadable for free). This output will represent a didactic permanent heritage;
- a documentary DVD on the IP experience with the most important selection of the above (lectures, workshops and laboratories; recording of final concert and backstage);
- a booklet containing the general program of IP, detailed information on the partners, final report on the educational and artistic outcomes of the project, final evaluation of the project level and photo gallery.

Galata Electroacoustic Orchestra is named by the Genoese quarter Galata in Istanbul dating back to the 12th Century where the Tower of Christ is still preserved. Almost all the aspects of the European Culture have been affected by the Arabian culture. In addition the European composers of the classical era (such as Mozart, Haydn, Beethoven) joined to the orchestra unusual instruments for that time (bass drum, triangle, cymbals) but typical of the Turkish military bands, of the Janissaries music. More in general, since the beginning of the 20th century the extra-European music and the traditional folk music become a true source of inspiration for Western composers, and more recently vice versa. Although many studies have been made on the reciprocal influences, the theory, practice and teaching on the true contact points between such different musical cultures are nowadays separately carried out among the different Countries. GEO aims to overcome this deficiency with a multidisciplinary didactical approach to the specific subject and to his current potential, thanks to the support by new technologies.
The main aim is to create a “dialogue” among digital and traditional instruments and performance practices. Thanks to the recent improvements in the Computer Human Interfaces field, it is possible to overstep the gap between the high level of interaction in acoustic instruments and the limited interaction (mouse, alphanumeric keyboard, joysticks) in the digital domain. The main path to achieve this will be a study of the musicians gestures. According to our opinion the conceptual and technological tools of the Electroacoustic Music – a truly new musical language based on the idea “to compose THE sounds, not only WITH the sounds” – are fit for creating a contiguity and a linguistic penetration to let ideas and new experiences spring.

2. Students

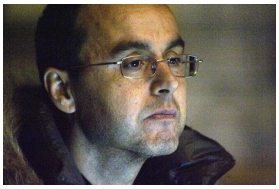
Can Aydınoğlu	Electroacoustics	*[TR ISTANBU11]*
Simone Amodeo	Electric guitar	*[I GENOVA02]*
Stefano Bertolotto	Sax	*[I GENOVA02]*
Caterina Bevegni	Harp	*[I GENOVA02]*
Federico Bragetti	Cello	*[I GENOVA02]*
Ayberk Çanakçı	Electroacoustics	*[TR ISTANBU11]*
Umut Çetin	Electroacoustics	*[TR ISTANBU11]*
Robert Clouth	Electroacoustics	*[E BARCELO15]*
Emin Abdulkadir Çolakoğlu	Ney	*[TR ISTANBU04]*
Ukuk Elik	Baglama	*[TR ISTANBU04]*
Seval Eroglu	Voice & Baglama	*[TR ISTANBU04]*
Emre Eryılmaz	Tar	*[TR ISTANBU04]*
Giacomo Gianetta	Electroacoustics	*[I GENOVA02]*
Sankalp Gulati	Ghatam & Sound and music computing	*[E BARCELO15]*
Neva Gunaydın	Voice & Kemence	*[TR ISTANBU04]*
Varun Jewalikar	Sound and music computing	*[E BARCELO15]*
Gopala Krishna Koduri	Science	*[E BARCELO15]*
Nadine Kroher	Electroacoustics	*[E BARCELO15]*
Edoardo Lattes	Electric bass & Electroacoustics	*[I GENOVA02]*
Daniele Matta	Electroacoustics	*[I CAGLIAR02]*
Francesco Medda	Electroacoustics	*[I CAGLIAR02]*
Sandro Mungianu	Electroacoustics	*[I CAGLIAR02]*
Felipe Navarro	Sound and Image engeneer	*[E BARCELO15]*
Valentino Nioi	Guitar & Electroacoustics	*[I CAGLIAR02]*
Federico Onnis	Voice & Percussion	*[I CAGLIAR02]*
Giovanni Pastorino	Electroacoustics	*[I GENOVA02]*
Luca Plumitallo	Electroacoustics	*[I CAGLIAR02]*
Alice Quario Rondo	Voice	*[I GENOVA02]*
Luca Serra	Electroacoustics	*[I GENOVA02]*
Diego Soddu	Electric bass & Electroacoustics	*[I CAGLIAR02]*
Ali Somay	Electroacoustics	*[TR ISTANBU11]*
Matteo Spanò	Electroacoustics	*[I GENOVA02]*
Ajay Srinivasamurty	Midrandgam & Music technology	*[E BARCELO15]*
Okan Yaşarlar	Electroacoustics	*[TR ISTANBU11]*


3. Teachers

Mauro Balma *[EXTERNAL EXPERT]*
Born in Genova (Italy) in 1940, he has been active for over forthy years in research into music traditions in Liguria and the surrounding areas. He has collected hundreds of sound documents together with numerous interviews with singers, players, story-tellers who are the holders of popular memory. On this topic he has produced radio and television programs, organized meetings, written a great deal of essays and held conferences in Italy and abroad. Worth mentioning are the two conferences on “Canterini at the Opera”, which were realized in cooperation with the Opera Theatre “Carlo Felice” of Genoa (1994 and 2000), with the exibition of eight teams of singers.
He has cooperated with the Region Liguria in the foundation of the Centre for Archives and Research on Liguria’s traditional music.

Sinan Bökesoy *[EXTERNAL EXPERT]*
(*www.sonic-disorder.com*) Composer, programmer, multimedia artist.
After his studies at the Deutsche Schule Istanbul, he has received his Bc.S. degree in Electronics Engineering at Istanbul Technical University in 1997. After he attended to one year long computer music and composition course at *Centre de Creation Musicale* Iannis Xenakis (CCMIX), in Paris. He obtained the DEA diplome in Music with mention 'très bien' at University of Paris VIII in 2004. He also received his Ph.D. degree in Computer Music & Composition at University of Paris.



Fabrizio Casti *[I CAGLIAR02]*
He graduated in Experimental Composition with Franco Oppo in Cagliari and studied electronic music with Vidolin Alvise in Venice.
He has worked and written compositions for Irvine Arditti (*Sottili di luce*); Carin Levine (*Morbide auree dell'aria* for solo flute), Oscar Pizzo (*L'ottavo Cielo* for piano and orchestra, *Le Rovine* for piano and live computer); Kirk Brundage (*Khroai* for one percussionist player); Marco Rogliano (*Sospinti oltre*); Isabelle Soccoja (D*Hai un sangue, un respiro II*); Astorre Ferrari (*Suoni che vengono da uomini*); Arditti Trio (*Sospinti Oltre le mura*); Vittorio Parisi (*L'ottavo Cielo*), Massimo De Bernart (*Pyknon*); Ensemble Belcanto (*Come un'ombra di luna*); Spaziomusica Ensemble and others.
He is Chairman of the Association of Space-music-search, and Vice President of the International Festival Spaziomusica for the promotion and dissemination of contemporary music. In 1992 and 1994 he was invited to be part of the Composers-forum during the Internationale Ferienkurse für Neue Musik in Darmstadt. His compositions are published by Ricordi and Steinäuser Verlag and recorded from New Fonit-Cetra and Spaziomusica. He is teacher of Elements of Musical Composition at the Conservatory of Music in Cagliari.

Tolgahan Çoğulu *[TR ISTANBU04]*
(*www.tolgahancogulu.com*) He began his classical guitar studies at the age of twelve. He received both Master of Music and PhD degrees on classical guitar from Istanbul Technical University, Center for Advanced Studies in Music.
He designed the *Adjustable Microtonal Guitar* in 2008. His microtonal and fretless guitar duo ‘Microtonal Guitar Duo’ and lecture recital ‘Microtonal Guitar Music’ takes him to many festivals, universities and conferences. He founded the classical guitar duo ‘Duoist’ with Erhan Birol in 2007.
He founded the classical guitar department at Istanbul Technical University, Turkish Music State Conservatory in 2010. He became an Associate Professor in 2013. Tolgahan now lives in Istanbul, Turkey where he teaches at Istanbul Technical University, Turkish Music Conservatory (High School and Undergraduate) and Center for Advanced Studies in Music (Graduate and PhD).

Roberto Doati *[I GENOVA02]*
(*www.robertodoati.com*) His musical activity starts at the age of 18 with free improvisation experiences as double-bass player and immediately after with tape music. In 1977 he decides to study Electronic music with Albert Mayr at the Firenze Music Conservatory, where he is introduced to Computer Music by Pietro Grossi at the Divisione Musicologica del CNUCE at the Pisa University. In 1979 he moves to Venezia where he gets a degree in Electronic Music with Alvise Vidolin at the local Music Conservatory. From then on he has been working as a composer and researcher in the field of musical perception at the Centro di Sonologia Computazionale, University of Padova. From 1983 to 1993 he was a staff member of L.I.M.B. for La Biennale di Venezia. Fellow and composer in residence in several places such as C.R.F.M.W. in Liège, Bogliasco Foundation, Rockefeller Foundation, MacDowell Colony, Kulturhuset USF in Bergen. Currently he is Professor of Computer Music at the Conservatory "Niccolò Paganini" in Genova. He is presently on the Casa Paganini – InfoMus Lab Scientific Commettee.

Alessandro Olla *[I CAGLIAR02]*
(*www.aleolla.it*) Composer, pianist, performer. After studying piano, composition and electronic music, Alessandro Olla has begun an artistic path through experimentation, improvisation and electronics both in music composition and on the stage. His personal research is focused mainly on the interaction of music with other artistic expressions. His interest and experience also include video art and dancing.
Since 1989 he has been composing original music for many shows, collaborating with important italian theatres and artists. He is author of theatre shows that also include improvisation performances and has composed music for radio, television and films and worked on site scoring in country and urban places.
He works on teaching activities since 1994, with theatre and music workshops. In 2007 he ideates and leads SIGNAL, advanced music and cross-media art festival. Since 2001 from 2005 he has been organizing an annual festival for improvisation and music research, based on workshops and performances in Cagliari, MicroOnde. He is based in Cagliari where in 1995 he founded "TiConZero", a center dedicated to the music research and theatre experimentation.

Sertan Şentürk *[E BARCELO15]*
He has received his M.Sc. degree in Music Technology at the Georgia Institute of Technology under the advisorship of Parag Chordia and his B.Sc. degree as a honor student in Electrical and Electronics Engineering with a specialty in control engineering from the Middle East Technical University in 2009; he has also completed a four-year, part-time classical guitar program from Hacettepe University Ankara State Conservatory in 2009. He has been playing classical guitar for almost 10 years now and he has recently started learning to play the bağlama, a traditional Turkish stringed instrument. He is pursuing an academic career in music technology, specializing in music information retrieval, audio signal processing, machine learning and music perception & cognition. Currently, he is a member of the CompMusic Project in the Music Technology Group in Universitat Pompeu Fabra, supervised by Xavier Serra.

Xavier Serra *[E BARCELO15]*
(*http://www.dtic.upf.edu/~xserra/*) He is Associate Professor of the Department of Information and Communication Technologies and Director of the Music Technology Group at the Universitat Pompeu Fabra in Barcelona. After a multidisciplinary academic education he obtained a PhD in Computer Music from Stanford University in 1989 with a dissertation on the spectral processing of musical sounds that is considered a key reference in the field. His research interests cover the understanding, modelling and generation of musical signals by computational means, with a balance between basic and applied research and approaches from both scientific/technological and humanistic/artistic disciplines. Dr. Serra is very active in promoting initiatives in the field of Sound

and Music Computing at the local and international levels, being involved in the editorial board of a number of journals and conferences and giving lectures on current and future challenges of the field. He has recently been awarded an Advanced Grant of the European Research Council to carry out the project CompMusic aimed at promoting multicultural approaches in music computing research.

Francesco Surdich *[EXTERNAL EXPERT]*
Born in Cherso (Croatia) in 1944, he graduated from the Faculty of Arts and Philosophy of the University of Genoa. In 1970 he obtained the post of History of Geographical Exploration at the Faculty of Arts and Philosophy of the University of Genoa, where he carried out his academic career: associate professor in 1980, professor in 2001 and full professor since 2004.
He has directed several editorial series and was a member of the scientific committee of several journals: *Il Polo, De strata Francigena. Studi e ricerche sulle vie di pellegrinaggio del Medioevo, Africa*, *Terra d'Africa*, *Emeroteca.Catalogo bibliografico annuale degli articoli di argomento storico pubblicati in Italia su Riviste o Atti di Convegni, Thule. Rivista italiana di studi americanistici*, *Itineraria. Letteratura di viaggi e conoscenza del mondo dall'Antichità al Rinascimento, I sentieri della ricerca,* il *Bollettino della Società Geografica Italiana*, *Viaggi e scrittura, Sulla via del Catai.*
Member of several commissions he has attended with continuity in the management and planning of the Faculty of Arts and Philosophy of the University of Genoa, in which he held the position of Chairman of the Board of the degree course in History, Chairman of the Committee for the MSc in Tools and methods of historical research, Vice, and since 2008, Headmaster.

Tolga Tüzün *[TR ISTANBU11]*
(*www.tolgatuzun.net*) He is an electro-acoustic music composer. (Ph.D.) He started taking classical piano lessons at the age of eleven. After receiving his BA in Political Sciences, he studied composition with Pieter Snapper and Marc Wingate and advanced orchestration with Ilhan Usmanbas and Hasan Ucarsu at the Istanbul Technical University, Center for Advanced Music Studies.
His compositions have been performed in various cities throughout US and Europe. During his studies for a Ph.D. in Music Composition at CUNY Graduate Center, he studied composition with David Olan and Tristan Murail in New York, and with Philippe Leroux in Paris.
He has given lectures on music theory and electro-acoustic music at international conferences. Between 2003-2005 he taught harmony and composition at Brooklyn College Conservatory of Music. Tolga Tüzün participated in the composition and computer music course at IRCAM during 2005-2006.
He is an assistant professor at Istanbul Bilgi University where he teaches composition and electronic music.

4. Organizational staff

Patrizia Conti, international activities coordinator
international@conservatoriopaganini.org
Raffaele Guido, administrative director
amministrazione@conservatoriopaganini.org
Manuela Benedetti, administrative assistant
benedetti@conservatoriopaganini.org
Elisa Tabò, trainee
tabo.elisa@gmail.com

5. General Program

(L) LECTURES; (W) WORKSHOPS; (LAB) LABORATORIES

Monday, July 15th

9:00	Roberto Doati (L), *The GEO Project*
11:00	Francesco Surdich (L), *Routes, travels, trade and cultural exchanges in the Mediterranean Sea*
15:00	Mauro Balma (L), *Liguria and the musical tradition*
17:00	Xavier Serra (L), *Traditional folk music in Catalunya*

Tuesday, July 16th

9:00	Xavier Serra (L), *Music information processing and traditional music*
11:00	Fabrizio Casti (L), *Traditional folk music in Sardinia*
15:00	Fabrizio Casti (W), *Sounds coming from afar: signs and gestures*
17:00	Tolgahan Çoğulu (L), *The basic theory of Ottoman/Turkish Maqam music*

Wednesday, July 17th

9:00	Sertan Şentürk (L), *Information processing techniques applied to traditional Turkish music*
11:00	Tolgahan Çoğulu (W), *Ottoman/Turkish Maqam music and Anatolian folk music*
15:00	Tolgahan Çoğulu (W), *Ottoman/Turkish Maqam music and Anatolian folk music*
17:00	Xavier Serra (W), *Music information processing and traditional music*

Thursday, July 18th

9:00	Tolga Tüzün (L), *Turkish Electroacoustic Music: A Historical Perspective*
11:00	Tolga Tüzün (Lab), *Bilgi Laptop Orchestra*
15:00	Roberto Doati (W), *Forms of the GEO concert (I)*
17:00	Sertan Şentürk (W), *Pitch analysis of traditional Turkish music*

Friday, July 19th

9:00	Alessandro Olla (L), *Cantu a Tenore:Traditional song of center Sardinia*
11:00	Alessandro Olla (W), *Azimuth: Live Electronics improvisation with traditional sounds and acoustic identity*
15:00	Fabrizio Casti (W), *Sounds coming from afar: improvisation and composition*
17:00	Xavier Serra (W), *Music information processing and traditional music*

Saturday, July 20th

10:00	*Organizational meeting*
14:30	*Visit - Mu.MA – Musei del mare e della navigazione*
17:30	*Concert “Gruppo Spontaneo Trallalero”, traditional folk music from Liguria*

Monday, July 22nd

9:00 Tolga Tüzün (Lab), *Bilgi Laptop Orchestra*
11:00 Sinan Bökesoy (Lab), *GEO concert with live transmission of the harbor sounds*
15:00 Sinan Bökesoy (Lab), *GEO concert with live transmission of the harbor sounds*
17:00 Sinan Bökesoy (L), *Electroacoustic treatments on sonic potential*

Tuesday, July 23rd

9:00 Alessandro Olla (W), *Azimuth: Live Electronics improvisation with traditional sounds and acoustic identity*
15:00 Tolga Tüzün e Roberto Doati (Lab), *The Galata Electroacoustic Orchestra*

Wednesday, July 24th

9:00 Tolgahan Çoğulu (L), *Microtonal music and temperament systems*
11:00 Tolgahan Çoğulu (W), *Ottoman/Turkish Maqam music and Anatolian folk music*
15:00 Tolga Tüzün e Roberto Doati (Lab), *The Galata Electroacoustic Orchestra*

Thursday, July 25th

9:00 Roberto Doati (W), *Forms of the GEO concert (II)*
11:00 Sinan Bökesoy, Tolgahan Çoğulu, Roberto Doati, Tolga Tüzün (Lab), *The Galata Electroacoustic Orchestra*
15:00 Sinan Bökesoy, Tolgahan Çoğulu, Roberto Doati, Tolga Tüzün (Lab), *The Galata Electroacoustic Orchestra*
17:00 Sinan Bökesoy (Lab), *GEO concert with live transmission of the harbor sounds*

Friday, July 26th

9:00 *GEO Concert Rehearsals 1st group*
11:00 *GEO Concert Rehearsals 2nd group*
15:00 *GEO Concert Rehearsals 3rd group*
17:00 *GEO Concert Rehearsals All*
21:00 *GEO Final Concert “Compasso da navegare”*

All activities (L, W and Lab) will be held at the Conservatory "N. Paganini", Via Albaro 38, Genoa

The working sessions will end at 19:00.
Coffee break at 11:00 and 17:00
Lunch from 13:00
Dinner from 19:30

6. 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.

* * *

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.

* * *

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.

* * *

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/

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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 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.

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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 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.

Day 11 – Friday, July 26th

GEO Concert Rehearsals
Piazza delle Feste – Porto Antico
1st group (9:00)
2nd group (11:00)
3rd group (15:00)
all (17:00)

GEO Final Concert
"Compasso da navegare" (21:00)

Dossier edited by Roberto Doati and Patrizia Conti

This project has been funded with support from the European Commission. The authors alone are responsible for such information. The Commission declines any responsibility for use that may be made of this information.

Galata Electroacoustic Orchestra (GEO)

Lifelong Learning Programme
IP n° 2012-1-IT2-ERA10-38878

with the support from the European Commission

Lifelong Learning Programme

Lifelong Learning Programme
www.programmallp.it

under the patronage of the Municipality of Genoa

COMUNE DI GENOVA

and with the cooperation of

REGIONE LIGURIA

PORTO ANTICO DI GENOVA
EVENTI

MuMA