D6.4 – Final report on dissemination activities

Version	Edited by
1.0	KTH, UNIGE

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Introduction

During the three years of the DANCE Project several events were organized to promote it and its research results. In this Deliverable, we enumerate the most significant dissemination activities that were undertaken by the DANCE Project Partners. Since this is the final report on dissemination activities, we only enumerated those activities which were previously described in Deliverable D6.2, relative to the first half of the project period, and we described in details the activities relative to the second half of the project.

The DANCE events organized during the second half of the Project were addressed to both experts and wide audience. They include specialized workshops, such as a DANCE workshop at the ISon – Interactive Sonification workshop in December 2016 in Bielefeld, but also public exhibitions, including the artistic project "Atlante del gesto_Genova" in collaboration with the famous choreographer Virgilio Sieni: the project, launched in November 2016, attracted about 150 citizens and an Institute for blind people, and involved these people from January to the end of March 2017. A special issue of the Journal of Multimodal Interfaces (JMUI) dedicated to Interactive Sonification has been organized in collaboration with DANCE project partner KTH, with call for papers in 2017 and publication during 2018. These events are presented in details in the following sections. Last but not least, the DANCE Project was actively promoted in Internet, and on Social Network media such as Facebook, or Twitter: see for example https://www.facebook.com/atlantedelgestoGenova/.

1. Scientific Papers in International Journals and Conferences

During the whole period of the DANCE Project several works related to development of the new algorithms to compute various expressive features were presented on international conferences, workshops and published in the conference proceedings, as well as in international peer-reviewed journals. The works related to DANCE Project were presented on the most prestigious conferences in human-computer interactions such as ACM International Conference on Multimodal Interaction (ICMI 2017), as well as on very specific events related to dance such as 3rd International Symposium on Movement & Computing (MOCO 2016), Interactive Sonification Workshop (ISon 2016), Sound and Music Computing Conference (SMC 2016). Below we provide the full list of the papers.

The papers can also be found at the following link: http://dance.dibris.unige.it/index.php/publications

2015:

Alborno, P., Kolykhalova, K., Frid, E., Malafronte, D., Huis in 't Veld. L., Analysis of the qualities of human movement in individual action, Proceedings of eNTERFACE 2015 workshop

Niewiadomski, R., Mancini, M., Volpe, G., Camurri, A., Automated Detection of Impulsive Movements in HCI, Proceedings of the 11th Biannual Conference on Italian SIGCHI Chapter (CHItaly 2015), ACM, 166-169, New York, USA.
doi: 10.1145/2808435.2808466

2016:

Alborno, P., Piana, S., Mancini, M., Niewiadomski, R., Volpe, G., Camurri, A., Analysis of Intrapersonal Synchronization in Full-Body Movements Displaying Different Expressive Qualities. In Proceedings of the International Working Conference on Advanced Visual Interfaces (AVI '16), Paolo Buono, Rosa Lanzilotti, and Maristella Matera (Eds.). ACM, New York, NY, USA, 136-143.
DOI=http://dx.doi.org/10.1145/2909132.2909262

Alborno, P., Cera, A., Piana, S, Mancini, M., Niewiadomski, R., Canepa, C., Volpe, G., Camurri, A., Interactive sonification of movement qualities - A case study on fluidity, *Proceedings of ISon 2016, 5th Interactive Sonification Workshop*, CITEC, Bielefeld University, Germany, December 16, 2016, 28-33,
http://interactive-sonification.org/ISon2016/papers/ISon2016-05-AlbornoCeraPiana-et-al.pdf

Bresin, R., Elblaus, L., Frid, E., Favero, F., Annersten, L., Berner, D., Morreale. F., Sound Forest/Ljudskogen: A Large-Scale String-Based Interactive Musical Instrument. In proceedings of SMC Sound and Music Computing Conference, Hamburg, 79-84.
http://kth.diva-portal.org/smash/get/diva2:973814/FULLTEXT01.pdf

Camurri, A., Volpe, G., The Intersection of Art and Technology, IEEE MultiMedia, vol.23, Issue No 01. DOI = http://doi.ieeecomputersociety.org/10.1109/MMUL.2016.13

Camurri, A., Volpe, G., Piana, S., Mancini, M., Niewiadomski, R., Ferrari, N., Canepa, C., The Dancer in the Eye: Towards a Multi-Layered Computational Framework of Qualities in Movement, 3rd International Symposium on Movement and Computing, MOCO 2016, 5-6 July 2016, Thessaloniki, Greece.
DOI: http://dx.doi.org/10.1145/2948910.2948927

Elblaus, L., Unander-Scharin, A., Unander-Scharin, C., New Scenic Subjects: Explorations of a System of Autonomous On-Stage Observers, Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems, 7-12 May, ACM, New York, NY, USA, 265-268.
https://dl.acm.org/citation.cfm?doid=2851581.2889470

Frid, E., Bresin, R., Alborno, P., Elblaus, L., Interactive Sonification of Spontaneous Movement of Children - Cross-modal Mapping and the Perception of Body Movement Qualities through Sound, Frontiers in Human Neuroscience, 10: 521.
Doi: doi:10.3389/fnins.2016.00521.
https://www.frontiersin.org/articles/10.3389/fnins.2016.00521/full

Frid, E., Bresin, R., Elblaus, L., Sonification of Fluidity - Interactive Adjustment of Audible Parameters for Communication of Expressive Body Movement Properties, Proceedings of ISon 2016, 5th Interactive Sonification Workshop, CITEC, Bielefeld University, Germany, 11-17.
http://interactive-sonification.org/ISon2016/papers/ISon2016-02-FridElbhausBresin.pdf

Derey, K., Formisano, E., Valente, G., Zhan, M., Kupers, R., De Gelder, B., Intra-modal plasticity for binaural spatial processing in the auditory cortex of early blind individuals. Poster presentation at FENS Forum of Neuroscience, Copenhagen, Denmark.
http://dance.dibris.unige.it/user_files/documents/papers/Derey_IntraModalPlasticityBinauralSpatialProcessingAuditoryCortexEarlyBlindIndividuals.pdf

Kolykhalova, K., Alborno, P., Camurri, A., Volpe, G., A serious games platform for validating sonification of human full-body movement qualities, 3rd International Symposium on Movement and Computing, MOCO 2016, 5-6 July 2016, Thessaloniki, Greece
DOI = http://dx.doi.org/10.1145/2948910.2948962

Lussu, V., Niewiadomski, R., Volpe, G., Camurri, A., Using the Audio Respiration Signal for Multimodal Discrimination of Expressive Movement Qualities, *Proceedings of the 7th International Workshop on Human Behavior Understanding (HBU 2016)*, M. Chetouani and J. Cohn and A. A. Salah Eds., Springer International Publishing, 102 - 115, ISBN/ISSN: 978-3-319-46843-3, Amsterdam, The Netherlands.
doi: 10.1007/978-3-319-46843-3_7
http://dance.dibris.unige.it/user_files/documents/papers/2016-HBU-UsingAudioRespirationSignal-CamLusNieVol.pdf

Paloranta, J., Lundström, A., Elblaus, L., Bresin, R., Frid, E., Interaction with a large sized augmented string instrument intended for a public setting, Proceedings of Sound and Music Computing Conference 2016, Hamburg.

Piana, S., Alborno, P., Niewiadomski, R., Mancini, M., Volpe, G., Camurri, A, Movement Fluidity Analysis Based on Performance and Perception, In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA '16). ACM, New York, NY, USA, 1629-1636.
DOI: http://dx.doi.org/10.1145/2851581.2892478

Piana, S., Staglianò, A., Odone, F., Camurri, A., Adaptive Body Gesture Representation for Automatic Emotion Recognition, *ACM Trans. Interact. Intell. Syst.* 6, 1, Article 6 (March 2016), 31 pages.
DOI=http://dx.doi.org/10.1145/2818740

Piana, S., Coletta, P., Ghisio, S., Niewiadomski, R., Mancini, M., Sagoleo, R., Volpe, G., Camurri, A., Towards a Multimodal Repository of Expressive Movement Qualities in Dance, 3rd International Symposium on Movement and Computing, MOCO 2016, 5-6 July 2016, Thessaloniki, Greece.
DOI: http://dx.doi.org/10.1145/2909132.2909262

Singh, A., Tajadura-Jimez, A., Bianchi-Berthouze, N., Marquardt, N., Tentori, M., Bresin, R. & Kulic, D., Mind the Gap: A SIG on Bridging the Gap in Research on Body Sensing, Body Perception and Multisensory Feedback. In: *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*, 7-12 May, ACM, New York, NY, USA, 1092-1095.

Volpe, G., Alborno, P., Camurri, A., Coletta, P., Ghisio, S., Mancini, M., Massari, A., Niewiadomski, R., Piana, S., Sagoleo, R., Designing Multimodal Interactive Systems Using EyesWeb XMI, Smart Ecosystems cReation by Visual dEsign Workshop (SERVE 2016), held in conjunction with AVI 2016.
http://dance.dibris.unige.it/user_files/documents/papers/Designing_Multimodal_Interactive_Systems_Using_EyesWebXMI.pdf

2017

Derey, K., Rauschecker, JP, Formisano, E., Valente, G., de Gelder, B. Localization of complex sounds is modulated by behavioural relevance and sound category. 2017. The Journal of the Acoustical Society of America. 142(4), 1757–1773.
http://asa.scitation.org/doi/10.1121/1.5003779

Frid, E., Elblaus, Bresin, R., Sonification of a Fluid Dance Movement - An Exploratory Study on a High-Level Movement Feature, SUBMITTED to Journal on Multimodal User Interfaces, December 2017

Niewiadomski, R., Mancini, M., Piana, S., Alborno, P., Volpe, G., Camurri, A., Low-intrusive Recognition of Expressive Movement Qualities, in *Proceedings of the 19th ACM International Conference on Multimodal Interaction*, ACM, pp. 230--237, ISBN/ISSN: 978-1-4503-5543-8, New York, NY, USA.
doi: 10.1145/3136755.3136757

Vaessen, ML, EAbassi, E., Mancini, M., Camurri, A., de Gelder, B., Combining computational modeling and brain imaging reveals distinct processing of different movement qualities. In Society for Neuroscience (Washington DC, 2017) (conference poster)

Zhan, M., Goebel, R., Vaessen, M., De Gelder, B., Action categories are represented as distributed patterns in ventral and dorsal structures: A high field and high resolution fMRI (7T) study. In Society for Neuroscience (Washington DC, 2017) (conference poster)

2018 (submitted papers)

de Borst, AW, de Gelder, B., Mental imagery follows similar cortical reorganization as perception: intra-modal and cross-modal plasticity in congenitally blind. Cerebral Cortex, revision submitted

Derey, K., Formisano, E., Valente, G., Zhan, M., Kupers, R., de Gelder, B., Intra-modal plasticity in human auditory cortex: altered sound location processing in blindness. PNAS, revision submitted

Zhan, M., Engelen, T., de Gelder, B., Influence of continuous flash suppression mask frequency on stimulus visibility. Neuropsychologia, revision submitted

Zhan, M., de Gelder, B., Unconscious fearful body expression perception enhances discrimination of conscious anger expressions under continuous flash suppression. Neuropsychologia, revision submitted

In preparation:

Alborno, P., Volpe, G., Mancini, M., Niewiadomski, R., Piana, S., Camurri, A., The Multi-Event-Class Synchronization (MECS) Algorithm, to be resubmitted to IEEE Transactions on Human-Machine Systems.

Lussu, V., Niewiadomski, R., Volpe, G., Camurri, A., Movement Qualities Recognition from Respiration Audio, to be submitted to Journal of Multimodal User Interfaces.

Niewiadomski, R., Mancini, M., Cera, A., Piana, S., Camurri, A., Embodied Experience of Model-based Sonification of Expressive Movement Qualities, in preparation

Vaessen, J., Abassi, E., Mancini, M., Camurri, A., de Gelder, B., Neural convergence of computational and behavioral movement features of dynamic bodies, in preparation

Zhan, M., Goebel, R., Vaessen, M., de Gelder. B., Whole body action categories are represented as distributed patterns in the brain – evidence from 7T fMRI, in preparation

2. Organization and Participation to International Workshops and Other Scientific Events

Several scientific events and activities were organized by members of the Consortium which are related to DANCE Project such as eNTERFACE Workshop in Mons (2015), EyesWeb Week in Genoa (2016) and SIG meeting at CHI 2016. We also participated in STARTS Symposium in Brussels (2015), BIENNALE EC Workshop organized during La Biennale di Venezia (2015), and AISC - XII annual Conference on Language, Cognition & Society (2015). The Deliverable D6.2, dedicated to dissemination activities in first 18 months of the project, describes events listed above in detail. Below, we just present new activities that took a place in a second half of the project.

2.1 Interactive sonification of body motion qualities. DANCE workshop at ISon 2016, Bielefeld, 15 December 2016

Roberto Bresin (KTH) was part of the organizing and scientific committee of ISon – Interactive Sonification workshop 2016 in Bielefeld. This was the fifth ISon workshop after those in Bielefeld (2004), York (2007), Stockholm (2010) and Erlangen (2013). More information about ISon workshop can be found here:

- http://interactive-sonification.org/#AboutISon

In the framework of the ISon 2016 workshop, KTH and UNIGE organized a half-day hands-on workshop on the interactive sonification of body motion qualities. The aim of the workshop was doublefold: (1) validation of research results obtained within the DANCE project, (2) dissemination of DANCE project.

More specifically the workshop was organized by Roberto Bresin (KTH), Emma Frid (KTH), Ludvig Elblaus (KTH), Maurizio Mancini (University of Genova), and Stefano Piana (University of Genova).

The focus of this workshop was on the interactive sonification of body motion qualities. We provided data from motion capture and IMU (Inertial Measure Units) recordings of dancers moving with different qualities (e.g. fluid, rigid) in three different formats, videos, data files, and real-time streaming via OSC.
Three were the main activities that workshop participants could choose to work with at the workshop:

1. Identification and discussion of sounds (for example from freesound.org for) which best represent the body motion qualities represented in the provided videos (e.g. fluid, rigid)
2. Designing own sonifications of motion data provided by using own sonification tools
3. Fine tuning of existing sound synthesis models (provided at the workshop), by real-time manipulation of their parameters

At the end of the workshop, the sonifications were discussed and presented to all the participants of the workshop.

More detailed information about the workshop including instructions for the participants can be found here:

- https://goo.gl/T5V06t

2.2 Special Issue on Interactive Sonification, Journal on Multimodal User Interfaces 2018

Roberto Bresin (KTH) is the main editor together with co-editors Thomas Hermann and Jiajun Yang (both from Bielefeld University) of a special issue on Interactive Sonification for the Journal on Multimodal User Interfaces (JMUI). The focus of this special issue, is on works focussing on Adaptivity and Scaffolding in Interactive sonification, i.e. how auditory feedback and interactive sonification provide a scaffolding for familiarizing with interaction and learning to interact, and how users adapt their activity patterns according to the feedback and their level of experience. For example, a sports movement sonification could initially focus the displayed information on the most basic pattern (e.g. active arm) and once the user progresses (i.e. feedback indicates that they understand and utilize this information), increasingly emphasize subtle further cues (e.g. knees) by making such auditory streams more salient. This feeds into the important question, how we can evaluate the complex and temporally developing interrelationship between the human user and an interactive system that is coupled to the user by means of Interactive Sonification. The special issue will include contributions from DANCE project partners KTH and UNIGE.

More information on the special issue can be found at the following links:

- http://www.springer.com/computer/hci/journal/12193
- http://static.springer.com/sgw/documents/1629412/application/pdf/CFP_JMUI_Special%2BIssue_InteractiveSonification_2017_v2.pdf

3. Organization of Public Events Related to the Topics of the Project

One of the aims of DANCE Project was to give a chance to visually impaired people to participate in public art performance. Thus, it is not surprising that DANCE Project was involved in several artistic projects such as Maastricht Jazz Festival (2016), Festival della Scienza in Genoa (2015), Genova OutsideR DanceR Festival (2016), An Unveiled Dance Workshop (2016), and Sónar+D Festival in Barcelona (2015). The events that took place during the first 18 months of the project are presented in the Deliverable D6.2. Below, we just present new activities that took a place in a second part of the project.

3.1 The *L'atlante del gesto_Genova* Workshop - Genoa, January - March 2017

In collaboration with the choreographer Virgilio Sieni and his dance company we organized a 30 hours long (split into several meetings) workshop titled "Atlante del Gesto_Genova". The workshop took place in Genoa in the period of January - March 2017 and was addressed to experienced and participant dancers who were taught to gain sensibility about their body expressive movements.
In detail, the expressive vocabulary that was developed choreographer Virgilio Sieni and DANCE Partners (see Deliverable D2.2) has been taught in these dance seminars, and DANCE system for interactive sonification (see Deliverable D5.3) was used in real-time to help them to adjust their movements and teach them to perform movement qualities.
In total about 150 voluntary citizens from Genoa participated to the workshops.

The workshop has its own blog on Facebook (see Section 5):

- https://www.facebook.com/atlantedelgestoGenova/

It was also described in local press, internet portals, and local TV channels:

- "Atlante del gesto_Genova"
  https://www.goethe.de/ins/it/it/sta/gen/ver.cfm?fuseaction=events.detail&event_id=20907174

- "Virgilio Sieni, la ricerca scientifica Horizon2020 e l'Atlante del Gesto a Casa Paganini"
  http://www.mentelocale.it/genova/eventi/61462-virgilio-sieni-ricerca-scientifica-horizon2020-atlante-gesto-casa-paganini.htm

  "Atlante del Gesto: azioni coreografiche per genovesi da 1 a 90 anni"
- http://www.primocanale.it/video/atlante-del-gesto-azioni-coreografiche-per-genovesi-da-1-a-90-anni-90994.html

3.2 Europa: Gestures of History, Dancing Science and Art not to forget EU identity - Rome, 23 March 2017

The DANCE Project participated in the celebrations of the Treaty of Rome. A DANCE performance called "*Europa: Gestures of History, Dancing Science and Art not to forget EU identity*" was exhibited during the official dinner that took place in Rome, 23 March 2017 at La Lanterna, The artistic performance narrates the story and the evolution of Europe and it is presented by means of a short choreographic actions, enhanced by interactive sonifications. During the performance a dancer expresses the four gestures inspired to the foundational myth of Europa: the afraid but intrigued

walking of Europa toward Zeus/bull; her abandonment on his strong and powerful body; her last look, back to the land she is leaving for ever; her free flight in the sky to reach her destiny. Each of them is expressed with different expressive quality: hesitation, heaviness, fragility, lightness. The dancer dialogues with alternating wall-projected pictorial representations of the above qualities identified in the *Rape of Europe* painting, and automatically generates a coherent sounds.

The event was introduced by Antonio Camurri who explained the main objectives of the DANCE project to the public.

An extract of the performance is available in the home page of the DANCE web site and at:
https://youtu.be/ZuV8KznIDVI

Figure 3. Two extracts of the "Europa: Gestures of History, Dancing Science and Art not to forget EU identity", Rome, March 23, 2017. Presentation of Project by A. Camurri (left picture), performance (right picture).

3.3 The *Di Fronte agli Occhi degli Altri* Performance - Genoa, 24 March 2017

The public performance called "Di Fronte agli Occhi degli Altri", was organized 24th March 2017 in Casa Paganini (Genoa) in collaboration with the Goethe Institut of Genoa, Museo Palazzo Reale, Teatro dell'Archivolto e CANGO – Centro di produzione della Compagnia Virgilio Sieni.

DANCE platform (see Deliverable D4.3) able to recognize in real-time two expressive qualities (i.e., Lightness and Fragility) from the movement data captured by inertial sensors placed on the dancer limbs, and to sonify them in real-time was used during the performance. At first, two professional dancers, one of which is visually impaired, performed a dance improvisation wearing the IMU sensors: the performer wearing the sensors was generating a sonification that influenced the movements of the other. In a second phase, the dancers invited the persons from the audience to participate by wearing the sensors (a dancer and a member of the audience) and creating the sonifications.

The audience consisted of 80 persons and it included visually impaired young attendees of the Istituto Chiossone of Genoa. The event was described in local press.

Figure 3. Extracts from "Di Fronte agli Occhi degli Altri" performance. The black straps on the wrists of the blind dancer G. Comuniello (the one wearing the orange shirt) cover the IMU sensors (see the right arm of the dancer in the left-bottom picture). The event obtained large audience (bottom-right picture).

Video from this performance is available online at:

- http://dance.dibris.unige.it/index.php/dance-media#a_vid_fronteocchialtri

3.4 The *Esodi* Performance - Genoa, 25 March 2017

In collaboration with the Goethe Institut of Genoa, Museo Palazzo Reale, Teatro dell'Archivolto e CANGO – Centro di produzione della Compagnia Virgilio Sieni the public dance performance called "Esodi" was organized at historical building of Palazzo Reale in Genoa. Under the supervision of the choreographer Virgilio Sieni, a group of around 130 amateur dancers performed a set of choreographies dedicated to the topic of exodus undertaken by humans to rescue themselves. The different choreographies were performed in parallel in several locations of Palazzo Reale: the Mirror Gallery, the Dancing Hall, and the Monumental Terrace. The audience was free to move between different locations and assist the dancers. During the performance, one of the dancers in each room wore IMU sensors. Her movements were analysed in real-time by DANCE Platform and translated into sonifications. The audience and the other dancers were able to perceive the expressive qualities of the sonified dancer. The event brought few hundreds spectators to Palazzo Reale and it mentioned in Italian papers, electronic medias, and local TV channels.

Figure 4: Extracts from "*Esodi*" performance: choreographies are performed in parallel in locations of Palazzo Reale: the Dancing Hall (up-left picture), the Monumental Terrace (up-right picture), and the Mirror Gallery (bottom-left picture). The event obtained large audience (bottom-right picture).

Video excerpts from this performance are available at:

- http://dance.dibris.unige.it/index.php/dance-media#a_vid_esodi

Online resources about the spectacle:

- "Questa sera Virgilio Sieni a Casa Paganini"
  https://www.ligurianotizie.it/questa-sera-virgilio-sieni-a-casa-paganini/2017/03/24/240550/

- "Ballando con gli sconosciuti"
  http://ricerca.repubblica.it/repubblica/archivio/repubblica/2017/03/23/ballando-con-gli-sconosciutiGenova13.html

- "Virgilio Sieni a Genova per *L'Atlante del gesto*"
  http://www.informadanza.com/blog/2017/03/23/virgilio-sieni-a-genova-per-latlante-del-gesto/

- "Atlante del gesto Virgilio Sieni"
  http://www.archivolto.it/atlante-del-gesto-virgilio-sieni/

- "Sieni: danza, ricerca scientifica, comunità. **e** L'atlante del gesto a Genova"

http://www.mentelocale.it/genova/articoli/72566-genova-virgilio-sieni-danza-ricerca-scientifica-comunita-atlante-gesto-genova.htm

- "Con Virgilio Sieni Genova diventa palcoscenico"
https://www.goethe.de/ins/it/it/kul/mag/20964238.html

- 'Atlante del gesto', nel weekend eventi e manifestazioni per la conclusione del progetto"
http://www.primocanale.it/notizie/-atlante-del-gesto-nel-weekend-eventi-e-manifestazioni-per-la-conclusione-del-progetto-183869.html

- "L'Atlante del gesto sbarca in città con diverse performance in luoghi simbolici della città"
https://genovaquotidiana.com/2017/03/23/latlante-del-gesto-sbarca-in-citta-con-diverse-performance-in-luoghi-simbolici-della-citta/

Local TV channel:

- RAI TG3Liguria ATLANTE DEL GESTO
https://www.youtube.com/watch?v=Cyo9E0f5xXU

3.5 The round table: Coreofonie – il suono della danza - Genova, 20 October 2017

On October 20th, 2017 we organized with the choreographer Virgilio Sieni a meeting and round table entitled "Coreofonie - the sound of the dance". In the event opened to public partecipated serveral invited guests: Serena Bertolucci (Palazzo Reale, Genova), Roberta Canu (Goethe-Institut Genova), Federica Loredan (perfomer), Stefania Opisso (Teatro Archivolto, Genova) and Laura Santini (Unige).
The topics of the round table were related to interactions between the research and performing arts.
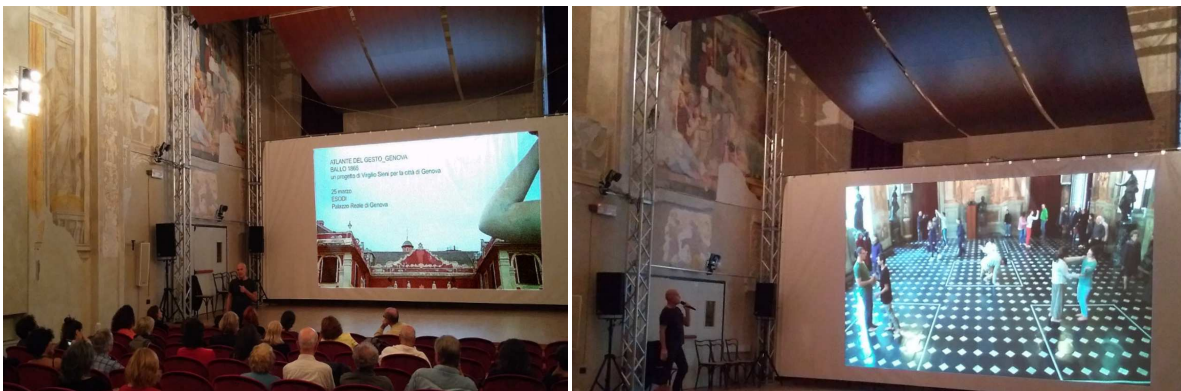

Figure 5. Some extracts from the event: *Coreofonie – il suono della danza*. The presentation by Virgilio Sieni.
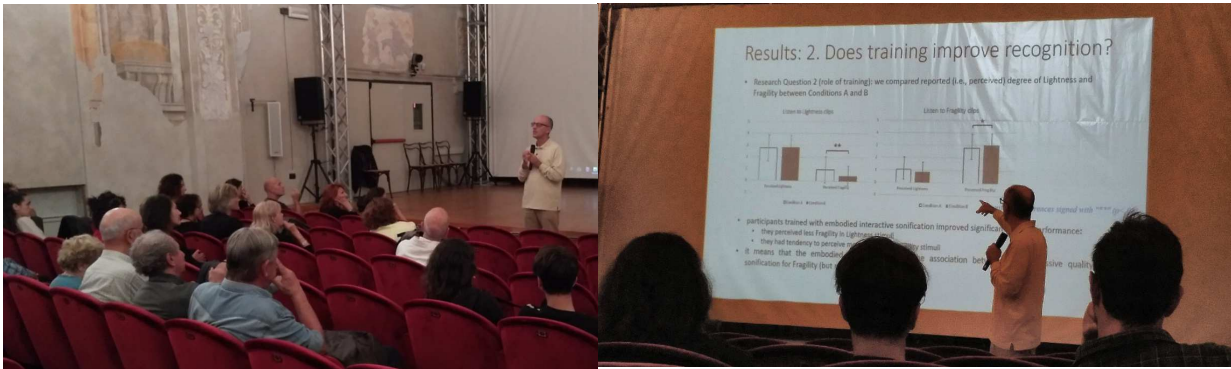
Figure 6. Some extracts from the event: *Coreofonie – il suono della danza.* **Presentation of the research results of DANCE Project.**

Virgilio Sieni shared with audience his personal experiences on the collaboration with researchers and citizens of Genova within DANCE Project and the organization of the Atlante del Gesto (See Section 3.1). We also presented the results of the research on interactive sonification embodied training (see Deliverable D5.3).

Around 50 persons participated in the event.

3.6 Public Performance of Digital Humanities Students – Genoa, 6 December 2017

The students of the Master's Degree in Digital Humanities at University of Genoa presented an installation inspired by the results of DANCE Project. The students used the algorithms and the platform developed in the DANCE Project to create the artistic installations of "intelligent mirrors" which respond immediately and interactively to the quality of the movement of the public.
Two interactive installations give visitors the opportunity to explore their expressive qualities and receive visual feedbacks. Subsequently, the third installation models the social situation (i.e., the interaction of two persons moving contemporarily) producing the appropriate visual and sound feedback.

The event was opened to the audience and gathered more than 50 visitors.

4. Publicly Available Datasets

4.1 Multimodal Dataset of Lightness and Fragility

We collected multimodal data of short dance performances containing full body movements displaying two different expressive qualities: Lightness and Fragility. The dancers were asked to perform an improvised choreography containing movements that, in the opinion of the dancer, expressed convincingly the quality. The dancers had different dance backgrounds (classic dance, pop, contemporary dance), and different levels of professional experience. For each dancer and each expressive quality, between 5 and 6 segments 10s each long were chosen that correspond to a uniform, coherent sequence of movements.
In total we collected 150 segments by 13 participants of the total duration of 25 min 46 s.

The data consists of multiple 3D accelerometer data, video channels as well as audio of respiration and physiological signals. Data was recorded and synchronized using the EyesWeb XMI platform. Synchronization of data streams is obtained by using SMPTE time-codes.
The raw data (2 video cameras, audio, 5 IMU sensors, 2 EMG sensors) can be freely used for research purposes.

The dataset is published on line:

- http://dance.dibris.unige.it/index.php/dance-datasets/dance-dataset-1

The all videos can be seen (the link may running slow):

- http://dance.dibris.unige.it/index.php/2-pagedance/39-multimodal-dataset-of-lightness-and-fragility

4.2 Expressive Vocabulary by Virgilio Sieni

We collaborated with the choreographer Virgilio Sieni to define a set of expressive qualities that corresponds to his expressive vocabulary. The dataset constitutes the choreographic language of Virgilio Sieni: some of the most identifiable and isolable gestural figures and movement sequences (his "words") have been chosen to be mutually compared in different interpretations to investigate movement qualities.
For this purpose, Virgilio Sieni participated in a number of multimodal recording sessions during the first and second year of DANCE project (see Deliverable 5.2). We were able to collect a dataset of multimodal movement fragments for a number of qualities such as Lightness, Fragility, Suspension, Transmission, and Figure.

The extracts from the dataset are published on line and can be seen at:

- http://dance.dibris.unige.it/index.php/dance-datasets/dance-dataset-2

The corresponding motion capture data can be downloaded from DANCE Project website and used for research purposes.

5. Activity in Social Media

The Project Partners conducted dissemination actions of the DANCE Project in several Social Networks. They are present on a large set of popular social network services such as Facebook, Pinterest, Twitter, YouTube etc. by publishing regularly posts on DANCE related events and papers with some posts. For instance, we published 56 posts on Casa Paganini - InfoMus institutional Facebook page on explanation of the research works, announcement of public events, photo repositories, and demonstrating videos. These posts were reached more than 4400 times, and triggered 450 reactions (likes, shares, etc.). The Casa Paganini - InfoMus Facebook page can be seen at this address:

- https://www.facebook.com/cp.infomus/

Additionally some public events related to DANCE dissemination activities such as *Atlante del Gesto_Genova* (see Section 3.1) were disseminated using dedicated Facebook pages. The *Atlante del Gesto_Genova* Facebook page was active in the period January - November 2017. During this period 79 posts were created, 200 images, and 35 videos were posted on this page. In total all the posts have the high visibility (with the range of 58000 times), were clicked 12400 times and they triggered more 3100 different reactions (likes, shares, etc.) More detailed statistics about this page can be found in the Deliverable D5.3. The *Atlante del Gesto_Genova* Facebook page can be visited at the address:

- https://www.facebook.com/atlantedelgestoGenova/

Also, DANCE website (http://dance.dibris.unige.it) was an important dissemination channel of Project activities. The visitors may discover information about the new events, download the publications and see the videos. Apart of some extracts of the artistic performance, it contains the complete datasets (see Section 4), and the examples of the sonifications.

Additionally, the YouTube channel of the project is available at:
- https://www.youtube.com/channel/UCakTGI5hkshVAcrfw_iMSSg