

JOINT INTERDISCIPLINARY CONFERENCES

The 10th International Interdisciplinary Symposium
on Art/Science/Technology

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on Legal Implications of Cyber Society

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on Physics, Technology and Art

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Interactive Art Exhibition

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Architecture Exhibition

Modified Architecture

Exhibition

MEDEA 2022 Ex Machina

3 September – 10 September 2022, Naupilon and Tolo, Peloponez, Greece

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The Curation of "Haiti/Greece 2021: Conversations":
Unraveling Haiti Through Words and Images of
Mystery and Freedom

S. Dimitrakopoulou

*University of the Peloponnese
Karaïskaki 70, Tripoli, Greece*

As part of the artistic and historical research for the preparation of the exhibition *Haiti Greece 1821-2021. Voyage to Freedom/RESPECT* I curated the event *Haiti/Greece 2021: Conversations*. The event consisted of three online discussions and presentations with Haitian and Greek speakers and the central aim was to better understand the contemporary reality of Haiti. In this talk I will present in a nutshell the multiplicity and complexity of Haiti that gradually unfolded through the words and images of the invited speakers. In total Haiti is presented as a synonym for misery and as the mother of freedom.

Reflections on the Multimedia Performance Meditations on Xenakis's Motions, Bodies and Textures

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The presentation reflects on the process and creation of the multimedia performance *Meditations on Xenakis's Motions, Bodies and Textures* with the Department of Performing and Digital Arts with 2nd and 3rd year students, in collaboration with Theodora Skipitares, the distinguished visual artist and professor of the Pratt Institute to investigate the principles of Xenakis' Polytope: a live multimedia structure designed for specific architecture and archeological sites. Students set up a multimedia performance installation based on the artist's musical works and basic texts on life and death, and his philosophical search on space and time. They combined creations of digital animation, video projections, constructions actions, texts and music in space to create an audiovisual promenade installation. The performance incorporated the development of abstract and procedural animation and visuals with movement driven by the philosophy of the devised theater. During the talk we will show video extracts on the performance and will focus on the opportunities and implications of using Xenakis's music and text to create this performance as a driving force for the collaboration of the different modules.

Ex Machina of Modern Architecture of Historic Cities? — Originality Against Schemes and Unification

P. Fiuk

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The originality of modern architectural concepts implemented in the areas of historic districts surprises all of us with the individual structures, forms and hi-tech solutions, referring to the most outstanding projects from past eras of classical styles. An apparently unsolvable problem of harmonizing modern compositions with the historical landscape and heritage of past-centuries is actually solved and imposingly presented in many outstanding works of the latest architecture. It happened thanks to great inventions of modern artists who would shape space with the use of unconventional, modern structures and forms, using the potential of advanced technologies. The face of modern architecture reflects the current complex conditions from areas of economy, politics, culture and technology, as happened in past centuries and millennia. Regardless of the objective circumstances and the influence of the surrounding factors, the creativity of the most outstanding artists is truly groundbreaking.

Contemporary Architecture in the Landscape of Former Cities.

Modernization — Contrast — Symbiosis

The canon of the art of shaping the space in historic cities has evolved over the centuries, reflecting changes in construction technologies, functional requirements and aesthetic taste. During the epochs of classical styles, the landscape of cities was characterized by comparable features of the appearance of buildings, despite their different locational, economic and artistic conditions. A radical change occurred in the 20th century, along with multifaceted civilizational and cultural changes. Modern metropolises have a radically different appearance, compared to the old urban centers. Old cities have undergone great changes in terms of spatial structure and architectural compositions. In the twentieth and early twenty-first centuries many excellent examples of modern architecture integrated into the traditional landscape were realized. Modern architecture is shaped by the most outstanding designers, whose original concepts reflect multifaceted ideological and artistic explorations, becoming role models for the whole international design community.

Rebus Sic Stantibus Clause in International Law

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The main motive of the Tenth International Interdisciplinary Symposium on Art, Science and Technology MEDEA 2022 - Ex Machina in legal sciences can be seen as a distant glimpse of the rebus sic stantibus clause in the law of treaties. Generally speaking, any treaty will be adopted on a solid ground, if the circumstances surrounding it are relatively stable and do not go through significant changes. The idea of adopting treaties between states is to create the possibility and conditions of their sustained and effective cooperation. In this perspective the possibility of using the rebus sic stantibus clause as a way to withdraw from a treaty has to be seen as a strict exception. The author analyzes, how - by virtue of their unquestioned authority - the International Court of Justice and the International Law Commission have understood the clause in the public international law over decades of its operation in the international society.

Poetical Machines - Making Art in Dialogue with the Computer

A.(Andreas) Guskos

*Chair of Game Design and Virtual Reality
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The recent development of sophisticated computer software for visual creation has made a shift in the way of the use of tools in artistic creation. Computers are no longer passive, instead, they are contributing to the work of the artist. The most recent manifestation of this kind of collaboration is the use of Artificial Intelligence algorithms in the process of creation. In this presentation I will show my most recent projects that are associated with this kind of approach to visual creation.



Figure 1 Andreas Guskos & MidJourney, Astrolabium Universe Model Precision Tool.
Work made in collaboration with AI

Functional Materials and Art (τέχνη)

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Functional materials are a group of engineered and advanced materials designed and synthesized for some specific function with proper surface morphology and tailored properties [1]. At the end of the twentieth century, we are able to produce nanoparticles. The twenty-first century saw a rapid development of nanotechnology (midget - *νάνος*). These are the sizes, i.e. one millimeter in the ruler should be divided one million times. The advancing nanotechnology has led to a revolution in human development. We have colossal changes to the development of artificial intelligence, in medicine and art. The most important bio-compounds in the construction of living organisms are nano-sized. For example, we can introduce magnetic nanoparticles into cancer cells, and if we control the shield by protecting healthy cells, then we can heat destruction.

1. *Nanomaterials: Synthesis, Characterization, Hazards and Safety*, Micro and Nano Technologies, 2021, Pages 55-95 , Chapter 4 - Fabrication strategies for functionalized nanomaterials.

A Digital Journey to Freedom in the Years of the Pandemic

F. Ikonomidou and I. Leontakianakou

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On the occasion of the 200th anniversary of the Greek Revolution, an old story came to light, one we were never taught at school, according to which Haiti was the first country to recognize the Greek state, which formed out of the struggle for independence from the Ottomans. 100 Haitians were to embark in order to come to the Greeks' assistance and, furthermore, that 45 tons of coffee were to be offered for sale, the proceeds of which would aid the Greek Revolution. None of the volunteers and probably not a single coffee bean ever reached Greece. The exhibition under the title *Haiti-Greece 1821-2021, Voyage to Freedom, Respect*, after an original idea of the artist Leda Papacontantinou, curated in cooperation with the Department of Product and Systems Design Engineering (DPSDE) of the University of the Aegean, under the supervision of Associate Professor Florentia Oikonomidou, as well as with the Department of Performing and Digital Arts (DPDA) of the University of the Peloponnese, under the supervision of Associate Professor Marina Kotzamani, focuses on this little known story, shedding light on an alternative, subversive view in relation to the established patriotic narratives of the Greek revolution. The presented works are digital compositions, prints and animations since teaching took place only via the Internet due to the pandemic. In contrast to the historical approach, which stresses the realistic description of the past, the particular visual approach made use of the imagination in order to interpret events from the past.

Haiti Greece 1821-2021. Reading Revolution in Coffee Beans

M. Kotzamani

*University of the Peloponnese
Karaiskaki 70, Tripoli, Greece*

The multimedia exhibition *Haiti Greece 1821-2021. Voyage to Freedom/RESPECT* opened at Spetses and Nafplion last year, as part of the celebrations of the 200th anniversary of the Greek Revolution. The exhibition which honored Haiti, the first country to recognize Greece's sovereignty in 1822, was a collaborative effort between the Department of Performing and Digital Arts of the University of the Peloponnese and the Department of Product and Systems Design Engineering of the University of the Aegean. The output consisted of student works, complemented with some works by professional artists, including young artists from Haiti. Combining historical fact with myth, I show that the exhibition offered the opportunity to explore lesser known facts about the Greek revolution from a historical and a contemporary perspective. The two departments approached Haiti's role in the Greek revolution in distinct, yet complementary ways. Adopting a historical, non nationalist perspective, the Aegean proposes new readings of 1821, placing the Greek revolution in the tradition of the great modern revolutions. Focusing on the present, our own department explores the contemporary relevance of Haiti's demonstration of solidarity towards Greece, highlighting issues of gender, race and citizenship. Works also reveal interest in getting to know contemporary Haiti in performative ways, through the writing of revolutionary symbols associated with that country on the body. I conclude that prevalent in these as well as in other works is emphasis on the powerlessness of citizens to intervene politically.

Between the Worlds

B. Koszałka

*West Pomeranian University of Technology in Szczecin
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Deus ex machina - "god out of the machine". A concept introduced into the ancient drama by Euripides¹.

Meaning:

1. "a solution of the plot in an ancient tragedy, consisting in a sudden and unexpected appearance of a deity; also: this deity"²;
2. "unexpected savior"³;
3. "solving a complicated plot in a play or literary work by introducing a new character or circumstances unexpectedly"⁴;
4. in the scientific sense, it means the introduction of an unproven new concept that hypothetically explains a certain problem⁵.

In the ancient Greek theater, theatrical (mechane) machines were used, one of them was used to carry an actor - playing a god (e.g. Apollo) - to the stage; God often resolved a situation that could not be solved in a different way. This year marks 20 years from the stage set and design of costumes made by students of the Schola Posnaniensis Academy of Applied Arts in Poznan to the theatrical performance of Aesop by Bosch. Bosch's paintings were transferred in this performance into a spatial dimension. The Students Art Theater presented them at the MALTA 2022 Theater Festival. The directing supervision was provided by Roman Kordzinski, for many years the artistic director of Teatr Polski in Poznan.

I participated in the implementation of the set design (zone I) and I would like to present a video of the performance and tell about the separate worlds brought together by this performance:

- The world of Schola Posnaniensis - situational context - circumstances of the performance;
- Bosch's Worlds - stage set - props - students - educators - scope of activities (zones);
- Aesop's Worlds - references to universal and timeless values as perceived by the director and narrator - Roman Kordzinski;
- Prague Quadriennale'03 (World Exhibition of Stage Design and Theater Architecture) - the presentation of a mock-up stage scenery and a video recording of the performance of the Student Art Theater Schola Posnaniensis in Poznan, Aesop, based on Bosch; the video records the show presented.

1. Deus ex machina [entry], https://pl.wikipedia.org/wiki/Deus_ex_machina (access: 27.06.2022).
2. Deus ex machina [entry], <https://sjp.pwn.pl/sjp/deus-ex-machina;2452154.html> (access: 27.06.2022).
3. Ibid.
4. Ibid.
5. Deus ex machina [entry], https://pl.wikipedia.org/wiki/Deus_ex_machina (access: 27.06.2022).

Deus ex

T. Koudela

University of Ostrava

Dvořákova 138/7, 701 03 Moravská Ostrava a Přívoz, Czech Republic

In his video project, Tomáš Koudela thematizes the influence of human experience and its imprint on the physical human body (especially the face) in the setting of the post-industrial digitalized world. The protagonist of Elem Klimov's film *Come and See* (*Иди и смотри*, 1985) in the wake of his wartime experience undergoes a physical transformation from a naive young man into an emotional wreck full of despair. This is visualized by a dramatic change of a fourteen-year-old face into a visage of a seventy-year-old. Koudela in his video does not go through such a dramatic transformation but plays with visual nuances of his face and etudes of his mimic which can be closely related to the Hellenic statues of God heads on the Anatolian Mount Nemrut. An important element of Tomáš Koudela's video is the theme of connection between the defenceless human body and the totality of the machine, which could be expressed by the Spenglerian term "Faustische Maschinenkultur". The video also implements Jan Melena's illustrations used in the poetry collection by Jan Vrak ("John Wreck" is a pseudonym of Tomáš Koudela), which was a major turning point in the author's personal mythology of creative work. At the same time Koudela makes an audiovisual paraphrase of Oscar Wilde's sentence from his novel *The Picture of Dorian Gray*: "Experience was of no ethical value. It was merely the name men gave to their mistakes".

Repeated Mechanical Gestures in Performance Art

J. Kurek

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We use performances of many subspecies, including the Balance Performance, Long Duration Performance, Photo Performance, Literature Performance, Net Performance, contemplative performance or Life Sculpture in which the frozen, immobile form of the artist's body has often become a reflection of the main idea of the performance. What I am interested in is the recent times to be repeated in the performance. A repeatability that manifests itself on many levels. constructing it in activities, the construction of which is based on specific tasks, spoken words / phrases or gestures. Gestures are repeated because they are painfully limited, but giving them different meanings also gives them new senses. Some artists repeat their actions in order to perfect the form, or test it in another time or space. Phanta Rhei. So is it a repetition or not? What about a remake show? Is a repeated performance full of mechanical gestures more authentic than the one that is mostly improvised? Everyone should find their very own answer to that question.

For me, repeating the same gestures within a specific artistic action is a very intriguing idea as either a word loop or a gesture loop can give way to new and interesting senses. All the same, I have never been interested in repeating my actions. There are way too many new interesting threads to go back to the old ones.

NFT, crypto, Metaverse... or a new age in social media

R. A. Marcinkowski

Be

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As Stanley Kubrick has said, creative people are always on the go and can see a lot. Wiz Khalifa was a young resident in many places, including Germany. Taco Hemingway was born in Cairo and lived in China in his youth.

Following this scheme, in my young years, I was with my parents in Japan and ever since I can remember our house has been filled with artists, and professors and they are not afraid of a challenge.

When using the service, I always tried to pay attention to more than just monuments for tourists, which are of great importance in the structure of the city. Thanks to this approach, I recently happened to deliver food on a Swedish road in Munich and the year before selling real estate in Malta, which is fortunately bilingual as a former British Crown colony.

Movement is life. We one can travel to another place where one can better get to know these people than others and their way of life. It has given me a lot of creativity and an insatiable momentum to use it.

I try between those experiences, create and describe the reality of my works. Good social influence is the highest value of my every project.

What is the good of life? Be happy. We want you to feel good in your life and know that life has meaning. Whatever you do, your actions leave some trace with the mark of yourself. In BE, you will find new friends, maybe a love of your life and every other interpersonal interaction that can be carried between people. It is your choice to decide how you are going to spend your time. Silent walk alone? Maybe an exhibition with a group of friends? A tennis game with a stranger? And as long as we are watching - nothing can happen to you because of safe AI tracking algorithms providing our users with the highest possible security.

Do you want to be a part of this project? After the 56% Meta collapse, we all see that there will be new social media in future. When everybody in our environment looks into metaverses which is just a new name for sandbox games. We are looking into the real world so unpredictable for human imagination and creativity. We are creating an event app that can show a new manner for mobile entertainment. Let me know what you think.

BE is a Digital Health Tech providing a whole spectrum of possible emotions around you. It is an infinite feed of events detected close to your location and matching your interests. Inside the BE you have friends and memories, not photos. And it is all for free.

The Theater of My Life - a Metaphysical Spectacle of the Structures of Matter

E. Miśkiewicz-Żebrowska

*West Pomeranian University of Technology in Szczecin
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By creating the world of Euclidean spaces combined with the play of lights, I am looking for geometric forms as a means of artistic expression. The geometry in my graphic and painting projects is more than just a structure or an arrangement of shapes. By resigning from representations of reality and using specific forms in favor of representations on the border of nature and geometry, I emphasize their equal role. The series of works contain a layer that stimulates the viewer to ponder and reflect on the complexity of nature and our existence. Reflecting on these final concepts with which human consciousness has been tormented for centuries, I have created the idea of nature, inspired by phenomena observed in nature.

The presented Nature is unreal, as if not from our world, and yet our imagination tells us its closeness and knowledge of imaginary things. Compositions creating a separate world of images captured beyond the obviousness of seeing, reveal fragments of reality in its unexpected presentation, extracted between reality and imagination. Nature in its countless beings, shapes, colors, mystery, woven into human existence, is an inexhaustible theme of creative inspiration and the eternal inspiration of humanity. By creating my own inner landscapes of the soul, graphic and painting worlds, I compose the whole of elements that can be found in nature and find my own signs to show the objective laws of the world.

Presentation of the work: Cycles Here, Sonnets to David, Between Nature and Geometry, Spaces, Impatient Oceans.

Virtual Reality in Medicine

J. Palka

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Medicine has undergone significant changes in recent decades, and the same applies to the development of the device technology and computer graphics including video games, in which more intuitive interaction with three-dimensional computer-generated environments is possible. This transformation, and the interdisciplinary nature of these components, are opening up new opportunities in medicine from diagnostics, medical education, preoperative planning, and intraoperative support or rehabilitation. The educational environment is now changing to simulation-based training, where advanced procedures can be planned and practiced in a safe virtual environment. The virtual reality has also proven useful in working with patients to encourage physical activity in rehabilitation or during dialysis. Video games are useful in providing environments in which patients can, for example, practice repetitive, functional movements. The video game design often focuses on several basic principles, such as goals, challenges, rewards, and the concept of meaningful play, and these same principles are important when designing rehabilitation games or virtual spaces designed with medical applications in mind.

HistorEYE: Development of a 360° video application for the promotion of cultural heritage sites

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The use of virtual reality (VR) and in particular the spherical video (SV) for the visualization of historical data appears to be a fertile field of study. Virtual reality, unlike a regular image or video, enables the viewer to explore the entire 360° of a scene, capturing every part of a location. Spherical Videos are used for virtual tours to museums and sites of cultural and historical interest, as well as for the demonstration of lab experiments, or surgical procedures. Also, they are used for the teaching of courses/subjects at all levels of education, such as science, geography, first and second language, for construction-safety or healthcare education and for delivering university lectures. In addition, the use of regular smartphones as VR viewers keeps the entry barrier low for users. Furthermore, the companion analytics application allows the stakeholders to monitor the VR application usage in real time. This study focuses on the development of a VR application, called HistorEYE, utilising 360° videos for the promotion of cultural heritage sites. As a case study, the Fortress of Palamidi archaeological site was used, producing four virtual tours, with interactive elements.

Islands, Intentions and Seas: Reflections on Contemporary Performances On/Across/Upon the Sea

B. Psarras

*University of the Peloponnese
Karaïskaki 70, Tripoli, Greece*

The talk will focus on the intermedia and methodological aspects of the collaborative art project/exhibition "Haiti-Greece", highlighting how gestures in undergraduate students' works were shaped through performative, poetic, site-oriented and audiovisual ways. The talk will also reflect on the fruitful historical case of Haiti, the author's art practice and the potential of the sea, the ocean and a journey across contemporary artistic practice that integrates the sea, technology, performance and participation towards sea-oriented works that highlight further poetics and politics of waters.

Orchestrating artistic, academic and research threads through the Xenakis 22 project: Perspectives of the Department of Performing and Digital Arts

B. Psarras

*University of the Peloponnese
Karaïskaki 70, Tripoli, Greece*

The talk will focus on the interdisciplinarity and intermedia potential that the Xenakis 22 workshop with undergraduate students from 11 Greek academic institutions made apparent. Xenakis polymorphic and cross-disciplinary art and theoretical research form a dynamic platform for reconceptualisations across different media on arts, humanities and technology. The talk will show fragments from this project and works highlighting the potential of inter-academic collaborations across Greek academia.

Polish Bridges

J. Rybicki

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Outstanding bridge structures by Polish engineers of the 19th and 20th centuries, built on the Polish territories and - above all - outside Poland: in both Americas, in the Russian Empire, and in several other countries, will be discussed. In addition to these structures, the profiles of the bridge designers who often made their contributions in other areas as well, and who - as it unfortunately usually happens - are non-existent in the Western studies of the history of technology will be presented.

Sensual perception of architecture

K. Słuchocka

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Perceiving architecture engages the sense of sight, but other senses also take an active part in perceiving space. The main topic of the article is an attempt to classify architecture into a specific group of sciences and other creative fields. The article attempts to answer the questions of whether the subjective perception of architectural forms has an impact on the emotional state of the user and whether the translation of the feeling of architecture into a written message can reflect the perception of architecture and facilitate its recognition. The factor of the external environment is also interesting, as it influences the direct reception of architectural spaces. The whole discussion is embedded in the observational and heuristic method along with a case study confirming the purposefulness of expanded perception in the process of recognizing and defining architecture.

Understand an object - designing interactions with objects of cultural heritage in a virtual environment

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The aim of the article is to present the assumptions of an innovative way of presenting a work of art in virtual space (VR) with the use of gamification and gameplay rules in the representation of the exhibit. Defined conditions will be presented for the challenge set before the recipient in order to understand the work, get to know its functionality and read the stories and information contained in it. The interpretation of the work, i.e. the process of "reading it", as an element based on the convention of a video game in the developed concept will refer to classic solutions in puzzle adventure games and will force the recipient to take up activity and interact with the object. The subject of the discussion as part of the research is the method of creating the recipient's involvement supported by the gamification process, and thus rewarding reaching new information and stories related to the presented exhibit. The assumptions for the research assume the implementation of two virtual exhibition stands with two works of art (a small-sized work and a functional design object) and one development of a physical object and a proposal of an original design for an exhibition installation for a real space using and transferring gamification and gameplay rules and methods to the real world (possibility of continuation if a museum or a cultural institution is interested in introducing the object to a collection or exhibition, e.g. Center for Comics and Interactive Narration at EC1).

The author will justify not only the research process but also the use of the GUESS questionnaire, which will allow combining research dedicated to video games with the experience dedicated to the recipients of exhibition spaces and compare the satisfaction with this form of presenting a work of art.

The presentation will be supported by a poster explaining the assumptions and methods of carrying out the research.

A new way to build a saliency map for virtual environments based on the position of scene objects in a virtual camera

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A saliency map is a way of representing an image in computer vision that highlights the region or regions on which the human vision is likely to focus first. The purpose of the saliency map is to reflect the degree of importance of the image region to the human visual system. The proposed solution is based on a representation of a three-dimensional scene, where the significance of the individual objects that make it up is determined by their presence in the central part of the frame during the exploration of space by the user. Linking the direction of looking with the objects will allow us to propose a new method of generating a saliency map based on the way of exploring space, and not only on image analysis. The article will present a pilot research concept relating to the solution developed by Rafal Szrajber for generating three-dimensional significance maps for virtual environments, embedded in the designed environment and not requiring image analysis or eye tracking.

Alternative design doctrines

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In our presentation, we look at alternative concepts of the packaging design while looking for an answer to the question “Where such a serious problem of packaging waste comes from” - despite the involvement of legal systems, economy, non-governmental institutions and developing technologies in the area of LCA (life cycle assessment), the situation is not under control. About 10 million tones of packaging waste are produced in the United Kingdom annually, while in the United States, it is 68 million tones. According to Eurostat, the sectors that are mainly responsible for generating packaging waste are households and services. The article asks a question, but the answer to it is neither simple nor pleasant - for users, designers, and the public in general.

Connecting Xenakis's Work to Telematic Dance: Reflections on a Collaborative Educational Workshops

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This presentation is about aspects of a technologically mediated embodied interaction in dance-driven music performance. It centers on a collaboration between a computer music researcher and a dance researcher in the context of an educational research project. In this project we explored how a system that permits dancers to generate sounds by means of simple wearable sensors which transmit their body movements, can be used in a new setting of musical-dance performance shared remotely over the Internet. This telematic collaboration took place between two undergraduate courses which we conducted at the Department of Audiovisual Arts of the Ionian University in Corfu and the Department of Performing and Digital Arts of the University of the Peloponnese in Nafplion, Greece. The main aspect of the theoretical background for this work was given by the international conference on Iannis Xenakis in Greece during May 2022, in which we presented a workshop based on the above collaboration.

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