Speakers of AIFA Workshop 28/29/30, 2021

Speaker(s)	Bio	Abstract
Timotheus Kampik	Timotheus Kampik is a PhD Student at the Department of Computing Science at Ume˚a University, Sweden, where he conducts research on the engineering of intelligent systems, as well as on formal models of reasoning and decision-making for humans and machines. He has a decade of experience in the software industry, as well as a keen interest in music, in particular drums, having played in several bands – mostly hardcore punk bands – during his teenage and undergraduate student years.	**Title:** A Sound-Driven Installation of Conway's Game of Life **Abstract:** John Conway's Game of Life is one of the earliest and most well-known examples of how unexpected patterns emerge from societies of artificial agents that act in accordance with simple rules. To commemorate Conway's death (a consequence of the covid-19 pandemic), I present a new version of his Game of Life, in which the agents' rules change based on digital signals the agents are exposed to. These signals are fed into the agents' environment using an electronic drum set, and hence allow for an interaction between the agents, who react to the "sound of the drums" and the drummer, who wants to keep the agent population somewhat stable and to facilitate the emergence of interesting patterns.
Egberdien van der Torre	Egberdien van der Peijl Egberdien van der Peijl has a master's degree in Dutch literature and recently attended two art academies in Belgium and Luxembourg. She specializes in conceptual art from the seventies and she uses this knowledge for	**Title**: The hardcore Concept Art Gallery: Theory and Practice of Situational Art **Abstract**: By appropriating a "tiny gallery" (former liquid storage) in Lasauvage (Luxembourg) that I use as an exhibition space, I show how curating methods and activities within conceptual art were realized in

	her research in Ai and Art at the department of computer science in Luxembourg, which also participates with the 'Pavilion project' in Esch 2022 European Capital of Culture.	the 1970s. The gallery also has conceptual exhibitions and I will explain how they differ radically from the events that are taking place within contemporary art today.
Yolanda Spinola-Elias	Yolanda Spinola-Elias is Professor at the Faculty of Fine Arts of the University of Seville, Spain. Her artistic production is composed by more than 165 exhibitions at national and international level (Taiwan, Italy, Germany, United States, Russia, Argentina, Czech Republic, Canada, England, France, Colombia, Spain, etc.), among which stands out her participation as an artist and curator in the CF (The Research Pavilion) project at the 57th Venice Biennale (2017) or the Artificial Intelligence and Art (AI + Art) project at the LuxLogAi summit and Esch´22 Kick-off meeting, Luxembourg (2018 and 2020). Being awarded on various occasions at fairs, festivals, contests, and exhibitions, it has been incorporated into art collections of public and private institutions (Real Academia de Bellas Artes Santa Isabel de Hungary, Seville City Council, Fondazione Peano en Italia, Círculo of Fine Arts of Madrid, University of Seville, FEE Foundation in New York, Gruas Lozano, Cruzcampo Foundation, etc.). Likewise, she has been visiting professor at the MIT Media Lab (Cambridge, MA) and researcher and / or resident artist at Le Laboratoire (Paris and Cambridge, MA), Colegio de España in Paris, The Metropolitan Museum of New York, Museum of Modern Art de New York,	**First talk title**: Architectures for future bodies: Intelligent wearable art and fashion design **Abstract:** This work will analyze some examples of how wearable art and fashion design are conformed as new architectures to enhance our bodies and how these are being influenced by the evolution of the machine. The results underline the interrelation between art, science and technology built under sociological, cultural and political factors. **Second talk title**: What is being published on AI&Art: a state of the art **Abstract:** This talk will focus on the results of a systematic review research developed in the Scopus database about what is recently capturing the attention to be published related to Artificial Intelligent and Art. The main themes, goals, authors, works, publishers and editors will be identified and discussed.

	Washington University (W St.), Tamarind Institute (New Mexico) or Accademia di Belle Arti di Carrara (Italy). Currently her research interests revolve around the ACTS system (Art, Science, Technology and Society), Art + Artificial Intelligence and transdisciplinary and inclusive creative and educational processes.	
Collectivo GIIPVR	The Collective GIIP VR integrates the research line 'Accessible Devices for Virtual and Augmented Reality' from the GIIP International and Interinstitutional Group of Research in Art, Science, Technology of the Institute of Arts of the Paulista State University "Julio de Mesquita Filho" (UNESP), campus Sao Paulo, funded in 2010, under the leading of Prof. Dr. Rosangella Leote. The aims are to understand and explore narratives, artistic and educative possibilities of technologies such as virtual, augmented and mixed reality, including artificial intelligence by means of collaborative experiments, artistic projects, and development of hardware, software and low cost devices which allow exploring these new forms of interactivity. It has been promoted discussion, reflection and diffusion of scientific, artistic and technological knowledge through physical and virtual means. The coordination of GIIP VR research line is of the Prof. Ms. Andy Barac and the current research members are: Ana Raquel Gonçalves Sanches, Andrés Suárez, Caio André, Christian Grinstein, Daniel Boanerges Rodrigues, Enzo	**Title**: (Dis)memories 2: Spectrums of the Machine **Abstract**: (Dis)memories 2 – Spectrum of the machine, for beyond the dystopia, is a place of freedom meetings, where it is possible the appropriation of the virtual space within an active and affective manner, which promotes exchanges and prose, inventions and propositions, be them, among others, of artistic, social, anthropological, ecologic and scientific nature. The iterator can act herself / himself as protagonist or spectator, alone or in a collective way. It is her / him who activates the installation, the one who organizes and qualifies her/ his conduct in the work, and because of that the artwork only happens with a visitor's presence. The collective presents an interactive artistic installation of virtual reality, constituted by a three-dimensional ambience of immersive and creative nature, in real time, accessed by means of a link in cyberspace. The collective presents an interactive artistic installation of virtual reality, constituted by a three-dimensional ambience of immersive and creative nature, in real time, accessed by means of a link in cyberspace. The artwork is constituted by three different moments which stimulate a reflection about the past and the present, based on the memory concept. They are: 'A Minute for Reflection', 'Ghost Room', and 'Archive of Souls'. During a visitor's trajectory in the artwork, the artificial intelligence records the individual's choices, mediates and, at the same time, stimulates one's experiencing this artwork. Depending on those choices, the iterator will receive a 'gift from the system'.

	Bressan Crivellaro, Iasmin Pereira, Jonathan Jota, Jorge Ferreira Franco, Rodrigo Crissiuma, Rodrigo Dorta, e Lima Bo.	
José Manuel Berenguer	José Manuel Berenguer is coordinator and professor of Psychoacoustics and Experimental Music of the Master in Sound Art of the University of Barcelona and director of Orchestra del Caos at Centre de Cultura Contemporània de Barcelona. He has been a sound consultant in multimedia systems at the GMMD-Open University of Catalonia and Digital Sound at ESDI-Universitat Ramon Llull. He has also collaborated with other universities and artistic research institutions such as Metrònom, MECAD, IUA-Pompeu Fabra University, Polytechnic University of Catalonia, Autonomous University of Barcelona and Elisava. Inter-media artist, founder of Côclea with Clara Garí - where he directed the Music Festival for more than a decade - and also of Orquestra del Caos, collaborator of the Institut International de Musique Electroacoustique de Bourges (France), was the designer and the first person in charge from the Sound and Music Laboratory of the CIEJ of the Fundació la Caixa de Pensions, as well as Professor of Electroacoustic Music at the Conservatory of Bourges (France). Former President of the Electroacoustic Music Association of Spain, he is currently President of Honour of the International Conference of Electroacoustic Music of the CIM /	**Title**: Artificial Improvisation **Abstract**: Artificial improvisation is an application based on 16 agents that take information from a database feed from a previous musical improvisation made by me in my studio. As it could be running for unlimited time, it could be considered as an Installation. It could be considered as an IPSpace installation when emitted to the IP space from a remote computer, a site installation, when then running in an architectural space, or both. The general idea is to try to emulate the behavior of musicians during an improvisation, where they use to follow what others are doing or decide to completely change the discourse trying to modify the future the whole musical object. Each agent behaves as follows : 1. If no other agent has made a choice of a zone of the database to run, then it randomly chooses a launch zone and runs it for a certain amount of time chosen between certain limits. 2. If other agents have already chosen their area of the database to perform, then, with a high probability, it chooses a performance area whose musical descriptors are similar to the already working agents, or makes a choice at complete random according to a probability complementary to the previous one, which, if the first is high, it must be low. In both cases, the chosen zone is executed during a given time between certain limits. 3. Regardless of the sound fragment chosen for the performance, it chooses from a range of computational processing possibilities, such as, for example, transposition of its spectrum to multiple zones different from the original ones, granulation or spatialization by means of convolution reverberation.

	UNESCO, President of Quantum Art Lab, Vice President of Fundació d'Artistes Visuals de Catalunya, member of the Académie Internationale de Musique Électroacoustique / Bourges, of the Academy of the National Council of Music of the CIM / UNESCO and of the Board of Trustees of the Phonos Foundation.	4. At the end of the execution of the chosen zone, go back to point 1. A visual database was created by associating the images with the improvisation sections, so that each sound section corresponds to one and only one section of the image sequence. In the same way that sound sections are processed during the performance, the visual sections are also processed by means of very basic logical operations that are carried out between the currently chosen section and the one that was most recently chosen. This application was programmed in Max 8.1.11 and it was finished on May 30, 2021.
Tania Fraga	Tania Fraga has worked with interactive Computer Art since 1987. In her work, she creates poetic virtual and material realities integrating art, science, and technology; holds a bachelor's degree in Architecture and Urbanism from the Minas Gerais Federal University, a Master's in the same area from the University of Brasília, and a Ph.D. in Communication and Semiotics from the São Paulo Pontifical Catholic University. In 1986 received a Fulbright grant to be an artist-in-residence at the Bemis Project. She was a professor at the University of Brasilia for 16 years, a visiting professor at the Department of Computer Science at The George Washington University in 91/92 and 2010. In 1999, developed a postdoctoral degree in Interactive Arts at CAIIA – STAR, England; and in 2010/11, developed post-doctorate research integrating Virtual and Material Realities at the Communication and Arts School at USP. She has performed	**Title**: Symbiotic Interstices **Abstract**: Symbiotic Interstices aims to allow the public to dialogue with an AI agent, Hermeticum, interactively. The images algorithmically created entwined with texts results in a poetic interchange projected on a large screen — Humans input text on a keyboard; the AI answers with a robotic voice. Both shapes and texts interlace, creating visual poems in constant change over the screen. It is like waves on the sea and clouds in the sky, always the same, never the same. It is an artwork built over a collective intelligence that weaves art, science, and technology in unfathomable and humorous ways.

	numerous curatorships and exhibitions of Computer Art exhibitions, has participated in art exhibitions and events nationally and internationally; has won numerous awards, including the 5th Biennale of Art e Technology, 2010, and Rumos: Transmídia, 2003, both from Institute Cultural Itaú; she represented Brazil at the Prix Mobius International, in China, in 2001, among many others. Website: http://taniafraga.art.br	
Triana Sanchez Hevia	My area of research addresses the aesthetic-body in connection with identity, the anthropo- logical and the objectual. Making use of a stark, methodically compositional and conceptually concentric vision, where I am juxtaposing both analogical, mechanical and digital procedures. In this sense, my artistic discourse is closely linked to the symbiosis of research and experimen- tation on the concept of the machine and its application in current art. In general terms, un- der the influence of Artificial Intelligence and the concern about what will happen to our pro- fession in the future, I intentionally explore the connection between the human / artist and the machine, emphasizing the creative-spectator symbiosis through the new technologies present and future in their relationship with art. In addition, making use of multidisciplinary te- chniques, I address issues that have to do with emotion and the sinister and their appearance in the phenomenon of artificiality, the new media and how this is projected in the present and in the future to	**First talk Title** : Like having you close **Abstract**: In the fine line that separates what we were, an analogous species, and what we are, a technological spe- cies, we find the work of Like having you close that investigates the possible mutations between human and machine. The uncomfortable point, where we recognize something that is real and tangible, which is the human being but which, nevertheless, presents a feeling of strangeness. We say that these two mutations in themsel- ves are sinister representations, as sinister is our link with the machine and the connections we have, with and through it, with other users. We are an identity distorted by the machine, the one we want to create but the one we do not control, and we relate through the new medium with other virtual and distorted identities, generating emotions and sensations that do not have physicality. Can we start loving through a machine? This piece is intended to be an installation with two screens that reproduces two animations. These anima- tions are based on an image delivered to an AI software without programming that reinterprets it to make new images of the same portrait. These images change in real time in a unique way depending on the para- meters that have been chosen. This conceptual work is an installation designed solely to be observed, inviting the viewer to reflect on how we let the machine distort our old model of life and interpersonal relationships. Humans have lost physicality to be a new extended and virtual being. And thanks to the networks we can be new extensions of ourselves, new distortions. In this work we talk about a social fact through an Artificial Intelligence tool.

	come.	**Second talk title**: Real non-humans **Abstract**: This presentation will question the value of "human" and "natural" in the current context and based on the role we occupy as living beings in society and culture, or rather, in the technological age. From the idea of “post-human”, the Cartesian body-mind duality will be approached to establish an interrelation linked to the development of AI's and our tolerance and acceptance of this phenomenon.
Roc Parés & Colectivo Estampa	Estampa is a group of filmmakers, programmers and researchers who work in the fields of experimental audiovisual and digital environments. Our practice is based on a critical and archeological approach to audiovisual technologies, the possibilities of interactive tools and the resources of experimental animation. Estampa are Roc Albalat, graphic designer and filmmaker (Barcelona, 1980), Pau Artigas, developer (Barcelona, 1978), Marcel Pié, filmmaker, animator and university professor (Barcelona, 1980), Marc Padró, developer (Barcelona, 1990) and Daniel Pitarch, filmmaker and researcher (Barcelona, 1980); Roc Parés (Mexico, 1968) is an interactive communication artist and researcher. Committed to an interdisciplinary culture, advocating for its emancipatory potential, he has explored the intersections between art, science, technology, and society. His work is characterized by poetic and critical experimentation with digital technologies and has been presented, published and exhibited internationally. Doctor in Audiovisual Communication (UPF) and degree in Fine Arts (UB). Honorary Artistic	**Title**: JANUS. Generation of Binocular Rivalries with Adversarial Networks **Abstract**: In this work, we want to draw the layers composing this big image as a map of convergences following the direction of a utopia: to grant the machines the ability to feel and amass knowledge in order to dream. The AI languages that are being developed might offer us the structures, but an amplification of its meanings can be expanded to the arts, as we also want to dream when faced with this simulation of dreamlike processes. In the assembly of this project, we thought about a fully enclosed dark room, where the big picture can be projected in the main wall and in a side wall, a highlighted part of it would be displayed. This second projection would change every 15 seconds, highlighting another piece of the main picture.

	Creator of the National System of Art Creators of the FONCA (Mexico).	
Grégoire Danoy	Grégoire Danoy received the Industrial Engineering degree in computer science from Luxembourg University of Applied Sciences, Luxembourg, in 2003, and the master's and Ph.D. degrees in computer science from the Ecole des Mines of Saint-Etienne, France, in 2004 and 2008, respectively. Since 2008, he has been a Research Scientist with the Parallel Computing and Optimization Group (PCOG), University of Luxembourg. He is also currently the manager of the SwarmLab and the Deputy Head of PCOG. He has published over 100 research articles in international journals and conferences. His research interests include optimisation and machine learning and their application to unmanned autonomous systems (e.g., drones), satellite communications, vehicular networks, bioinformatics, high-performance and cloud computing.	**Title:** Art and Swarm Robotics **Abstract**: Swarm robotics consists in obtaining emergent collective behaviour from simple entities, i.e. robots, which self-organise based on local rules to achieve mutual objectives. Inspired by nature, these distributed systems bring multiple advantages over traditional monolithic systems, such as a lower operational cost and an increased resilience, which motivated their usage in multiple domains including art. This talk will provide an introduction to the concept of swarm intelligence in robotics, describe current and future approaches and applications with an emphasis on art.
Anastasia Tavares vanden Berghe	**Anastasia Vanden Berghe** is a contemporary visual artist who lives and works in Luxembourg while pursuing her MS in Psychology. Her work is a dynamic combination of realism and innovative ideas that challenge the boundaries of traditional Art. Emerging from a traditional artistic training, she ventured to explore the interplay between Art, AI, machine learning, and psychology. Her recent	**Title**: Art Installation: Interactive Mirror featuring Deep Fake and Neural Style Transfer Technologies **Abstract**: Creative arts have always been considered the domain of the human creative processes. However, recent developments in the field of artificial intelligence (AI) and new techniques are challenging this concept. In recent years, artists collaborate more often with engineers to create innovative projects that challenge the traditional views of Art. To explore further those concepts, we are presenting an experimental interactive Art installation "Interactive Mirror featuring Deep Fake and

	artworks explore AI & machine learning, examining the technology and philosophical underpinning behind it. In particular, she focuses on how Art, interpreted through the stylistic algorithms that utilize artistic elements to create backgrounds and rework a person's image, used together with deepfake techniques can influence a person's self-perception.	Neural Style Transfer Technologies" that will transform a person's image and background to make the viewer question their version of self and surrounding reality. We discuss deep fake techniques and neural style transfer, as well as the impact of visual representation of oneself through a pervasive real-time camera on the person's feelings and behavior. We also address the creative and artistic, as well as technical and scientific parts of this collaborative project.
Fatima Zahra Fathi	I am a master's student in the Information and Computer Science program at Luxembourg University. I am to be part of the AIRoboLab to work on the implementation of AI projects. As part of Esch 22, I contribute along with my colleagues to create the AI&ART pavilion, multidisciplinary projects, while collaborating with artists to create an artistic experience powered by artificial intelligence.	
Thorsten Kressig	TeeKay (originally Thorsten Kreissig) is a German-European artist with an intense background in the creative industries and education. He combines a multitude of professional backgrounds including careers as performer and theatre director and his studies of psychology. And he applies all these skills to make the world a better place – step by step, idea by idea. With more than 200 projects on international stages including ballet, opera and musical comedy TeeKay also keeps	**Title**: Religion chatbot conversation based GPT3 with Qt Robot **Abstract**: In this talk we will present the Deus Ex Machina project, in the context of the AI and art exhibition of 2022, which will happen in Belval. This project uses AI to simulate dialogues with deities and other kinds of religious entities. The main challenges linked to this project will be discussed, along with some insights from the artist. The technical and artistic parts will be presented by Eliott Bonte, the main developer and researcher. Please note that this project is also an opportunity to do research about the GPT3 model, a state of the art generative model, and that the project is still ongoing at the time of this talk.

	exploring the limits of the arts. In 2007 his project „Dance the Cranko made the whole City of Stuttgart dance in unison. Today his artistic projects also include robots, drones and Artificial Intelligence. "U&I-Robotic-Dance" is the first flash mob for robots (and humans) and can be easily adapted for a variety of events. He is also part of the artist group developing "Singularity42" for Esch2022, the European Cultural Capital in Luxemburg.	
Eliott Bonte	Eliott Bonte Student in computer Science at Uni Lu Experiences in teaching (Teacher assistant since 2020) (personal teacher since 2017) Interested in religion & philosophy Artificial Intelligence enthusiast (multiple projects linked to AI - SMARTgarden - Deus Ex Machina - AlexNet Quantization)	
Gabriel Spadoni	I am Gabriel Spadoni, a third-year student in Computer Science in the BiCS. My interest concerning the project is how we can use technology to convey story-telling, specifically how AI can be used to narrate the story of a given character. I am also interested in AI and Machine Learning in general.	**Title**: Self-playing AI avatar **Abstract**: Project STEFT is about a self-playing AI avatar that can log into Roblox 1867 and play. Our avatar, Steft, is a 10-year-old street boy living in Luxembourg City in 1867. In our project, first, we had to change the approach to navigation within the game. Second, we had to implement a chatbot: what kind of sentence will the avatar answer to and how.
Thiago Jorge Bourscheid	Thiago Bourscheid is a Senior Bachelor of Computer Science Student at the University of Luxembourg. Together with his tutor Amro Najjar, since 2019 they have been working on multiple projects involving Generative Adversarial Networks and Procedural Generation. He is in charge of "Project Randomon", a component of the	**Title**: A Monster Catching Game with Infinite Possibilities **Abstract**: Procedural Generation is a technique prominently used in the gaming industry to streamline the production of easily created assets through specific algorithms and artificial intelligence architectures. These technologies offer the consumer a wealth of content for little cost to the developers of the game. So far, these techniques have only been employed for predictable and easy to automate types of applications; what if we attempt to generate assets typically needing the expertise of

	game corner aiming to demonstrate the utility of GAN's in the artistic domains of game development.	human craftsmanship procedurally? StyleGAN is a cutting-edge technology developed by the hardware manufacturing company nVidia and allows us to tackle this type of advanced problem precisely. In Project Randomon, we have attempted to clone a game of the popular Pokèmon franchise, but with a particular twist: All the monster sprites are created on the spot by a StyleGAN agent, meaning that each creature is unique, and no player will ever encounter the same monster twice. But are the results convincing enough to replace a human's work?
Sergio Venancio	Sergio Venancio is a brazilian artist, computer scientist, researcher and teacher. His current research interests involve relations between arts, design, artificial intelligences and human behavior. He is currently a PhD candidate in the Visual Arts Postgraduate Program at University of São Paulo (USP), and has a Master's degree from the same institution (2019). Graduated in Fine Arts (2006) and Computer Science (2011) at State University of Campinas (UNICAMP). He worked as a software developer and product owner at different tech companies in Brazil for more than 11 years. Today he is a Digital Design teacher in UNICAMP since 2015, and a Parametric Architecture teacher in Belas Artes SP since 2020. He is also a member of Realidades group (USP) and COM.6 art collective, for which he has participated in national and international exhibitions and festivals with interactive installations. His works and lectures range from UI and UX design, parametric and generative design, computer art and artificial intelligence for creative professionals.	**Title**: How to draw and be drawn **Abstract**: "This is a typical session of the artist's self-portraits made by his AI extension. The artist sees the way the machine sees him, and see himself at the same time. The gesture is no longer that of hands but of a body in front of an unfamiliar, mediated mirror. While the artist delegates many creative decisions to the machine, he still wants to control the results, even though only by final judgements. This is an essay on behaviors for the near future: the performativities of the artist, the eye, the camera and the software are at stake. Ambiguities between observing and being observed, between drawing and being drawn."

COM.6 collective (Agda Carvalho, Clayton Policarpo, Daniel Malva, Edilson, Ferri (In memorian), Miguel Alonso, Sergio Venancio)	The COM.6 collective, created in 2017, is composed of Brazilian artists and researchers, Agda Carvalho, Clayton Policarpo, Daniel Malva, Edilson Ferri (in memoriam), Miguel Alonso, Sergio Venancio. Working in the fields of art, technology and design, the collective discusses themes of corporeality, orality and materiality. Recently, they have been exploring remote and collaborative creative processes of artistic works and academic texts. The group production present a critical positioning on the merging issues of the body, culture, behavior and technology. Their works include the installation "Sala dos Milagres" (2018-2019) and the series of online performances "Janelas Afetivas" (2020-2021).	**Title**: Sala dos Milagres (Miracle Room) **Abstract**: Sala dos Milagres (Miracles Room) is an interactive performance, an artwork that integrates the interdisciplinary Ex-votos project. It is an interactive installation about the sense of unquestioned and continuous sharing of fragments from our daily experiences in the networks, a sharing of images which present traces of existences. In this context, the body is treated as a receptacle of conflicts and desires under constant change, and it projects itself in multiple ways, inhabiting internal and external spaces, being virtually and constantly changed within technological interfaces.The installation consists of an electronic oratory, where the participant kneels to start the interaction, which happens as it follows: At first the visitor “donates” his portrait, through a capture made by a camera connected to a facial recognition and segmentation software; The donated image is projected on a head shaped sculpture, which refers to the ex-voto, in reference to the offerings made in the religious practice; The sculpture with the projected images are captured by another camera which, through a custom made software, generates a hybrid visualization from the overlapping of donated images.This donation practice is confronted to the new models of contemporary relationships, with its infinity of individual and collective representations shared over social networks, as a donation of a lived time, action that elaborates a remote presence, continuously modified with the overlayering of daily fragments.
Fernando Velásquez	Fernando Velázquez [Montevideo, Uruguay, 1970, lives and works in Sao Paulo] is a multimedia artist, curator and teacher. He has a Master in Fashion, Art and Culture from Senac-SP, a postgraduate degree in Video and On and Offline Technologies from Mecad de Barcelona, and Contemporary Cultural Management from Itaú Cultural/Singularidades. He has participated in exhibitions such as The	**Title**: Rite: Approaches to strategic primitivism **Abstract**: Rite, invites us to imagine formal, conceptual, grammar and semantic syncretisms that point out ways for technological development based on hybrid epistemological matrices. The images were created by a styleGan artificial intelligence algorithm, which allows the transfer of style between models. It was fed with African masks and Greek sculptures. The music brings a counterpoint between a composition that uses classical orchestration and a ritual to Oxum recorded in the sacred forest of Osum-Osogbo in Nigeria.

	Matter of Photography in the Americas (Cantor Arts Center, Stanford University, USA, 2018), Emoción Art.Ficial, Bienal de Arte y Tecnología (Itaú Cultural, Brasil, 2012), Bienal del Mercosur (Brazil, 2009), Mapping Festival (Switzerland, 2011), WRO Biennale (Poland 2011) and Pocket Film Festival (Center Pompidou, Paris, 2007). He received, among others, the Competitive Fund for Culture (Uruguay, 2019), the Sergio Motta Prize for Art and Technology (Brazil, 2009), Locative Media Arte.Mov (Brazil, 2008) and Artificial Life (Spain, 2008). He was a professor at the universities PUC-SP, FAAP-SP and Senac-SP and coordinates with Lucas Bambozzi the group of studies in art, science and technology MOLA. He gave conferences and workshops at institutions such as Stony Brook University (New York), Cyberfest (Saint Petersburg, Russia), Naustruch (Sabadell, Spain) and Visiones Sonoras (Morelia, Mexico). As curator, his exhibitions Adrenalina and Periscope stand out. Between 2015 and 2018 he was curator and artistic director of the Red Bull Station in São Paulo. He is currently a professor in the Contemporary Cultural Management course at Itaú Cultural / Singularidades and a member of the GAIA - Art and Artificial Intelligence group incubated at the INOVA -USP laboratory. More information at www.fernandovelazquez.art	
Christoph Shommer	Christoph studied Artificial Intelligence at the German Research Centre for AI in Saarbrücken before working 8 years at	**Title**: Getting creative - AI and Arts

	IBM R&D as IT Architect in worldwide Business Intelligence service projects. In parallel, he received his PhD at Goethe University Frankfurt/Main (summa cum laude) before joining the University of Luxembourg as an Associate Professor in 2003. Today, he leads a research group with several postdocs, PhD candidates and Master students, performing interdisciplinary research using AI, Data Science, and Machine Learning. Christoph is a scientific reviewer for the Dutch Research Council, Elsevier, Leibniz, Springer, IEEE; he has reviewed many research papers for more than 100 conferences (IJCAI, AAMAS, ACM, CogSci, ECML, and others). Christoph regularly organises lecture series and is author of about 100 scientific papers. He has (co)supervised 27 PhD students in Luxembourg, Leuven, Bologna, Torino, and London and has given about 150 courses at universities in Luxembourg, Berlin, Beijing, Singapore, and others. Christoph is constantly present in newspapers, radio, TV and at schools; his research also encompasses projects with industry (RTL, P&T, Thomson Reuters, and others). Christoph is the Vice-Head of the UL Robolab, member of the Management Board of the Doctoral Training Unit Digital Humanities & History, and a partner of the financialcomputing.net, a financial computing innovation platform with London, Lisbon, and Rio. Christoph has designed and implemented the Master in Computer Science and is currently leading the Bachelor in Computer Science. He is	**Abstract**: Artificial intelligence is increasingly determining our lives and for some years now has also been gaining more and more followers in areas such as art. The often cited concept of artistic creativity and creative power is increasingly coming into focus: does AI-based art, and in particular artistic work based on Deep Learning, still contain a form of creativity? In the lecture, I will present some examples and give a personal outlook on the future.

	honoured to be part of the AI Pavilion as part of Esch2022 and to support the new Centre of Ethics.	
Caio André e Enzo Bressan	Caio André is a Programmer and Data Scientist, who helps companies to present and sell their products through the internet, building websites and applications for mobile devices, working from the beginning to the end of the creation and development process, always looking for the best for the clientIn addition, he also performs an analysis, treatment and use of data from the enterprise, building not only the present but also the future of the client and business. Caio worked for two years in a German multinational providing support, control and handling of network and data, always looking for process automation. After acquiring this experience with data and dealing with people, he specialized in the data area, web and mobile designer. Now he helps in the construction and evolution of companies, dealing with transparency and tranquility, always seeking the client's interests. Caio is a martial artist and musician in his spare time. To learn about Caio's work or need help with your business, contact caiopazandre@gmail.com. ========== Enzo Bressan Crivellaro is a student who currently attends two colleges, one of visual arts and the other of data science and artificial intelligence, he is currently studying ways to make works that contain a mixture of these two study media. Enzo studied at a technical digital game	**Title**: Computer vision and its application in subjective data analysis. A study of its branch in artificial intelligence . **Abstract**: The work to be presented is based on the study of artificial intelligence within computer vision; which, in short, can be defined as the attempt to develop the machine's autonomous reasoning. Thus, computer vision is the branch of artificial intelligence that seeks to understand the cognitive processing capacity of the human brain with the eye and the neural transmissions of element interpretation and aims to apply this functionality through the machine, with the identification and classification of the elements that compose them. In human vision, the eyes capture the image, after which the neurons identify characteristics that define the objects contained in it, thus being able to understand what the image is composed of, classifying it based on memories (knowledge base). Like the biological system of human beings, computer vision starts the process by capturing the image with devices that can be called peripherals (which serve to help the computer read). Corresponds to the image that allows us to use and manipulate to obtain information contained in the image with the appropriation and application of different techniques. All these procedures favor the machine's understanding of the image and enable the detailed identification of image elements, as well as brain activity, working to understand each object. Over the years, with the evolution of studies on the development of the machine, it has become increasingly possible to create a process that approaches the functioning of the human system, including the possibility of recreating the interpretation that the natural cognitive system presents since one is based on the other. However, this article will show the development of this system from the acquisition of the image acquired through the use of peripherals, whether it is two-dimensional (2D), three-dimensional (3D) or even a sequence of images until the completion of four other steps, namely: 1) image acquisition (image capture); 2) pre-processing (image processing to facilitate the process of identifying elements within the image, such as filters, temperature, etc.); 3) feature extraction (search

	development school, which led him to work games as a programmer, game designer, and concept artist for both analog and digital games in freelance work, but is currently working more on personal projects. To learn more about Enzo's work, contact: enzo.crivellaro@unesp.br	for references similar to the identified object); 4) detection and segmentation (the use of mathematical algorithms begins to identify dense features for identification of the element in the image, separation of identified elements) and 5) self-level validation process (classification and validation of elements based on already known data). It is noteworthy that this sequence is not a rule, it is just a format covering the steps, as it does not make it impossible to skip or add steps, respecting the general individuality (individual or machine). Therefore, there is a similarity between the capture, transmission, and interpretation of the image that comes from each other, and it is possible to observe the complexity of the system, focusing on the way the computer interprets through mathematical algorithms, which handle pixel matrices for acquisition and classification of objects within the image. That is, with this system it is possible to locate subjective information in images and identify patterns within subjectivity, which can be applied in various areas, such as the capture and identification of the individual, but using computational logic to accelerate and improve everyday processes, such as civil construction with calculations and spatial identifications, as well as stock exchange graphics, among others.
Thibaud Latour	Thibaud Latour is Head of Outreach and EU Affairs at the Luxembourg Institute of Science and Technologies (LIST) and carries out parallel scientific and artistic activities. He holds a PhD in Theoretical Computer Chemical-Physics and has devoted his scientific career to research into the representation of knowledge and the natural interaction between humans, objects and physical spaces. He was also an actor and musician before devoting himself to visual and digital arts. He takes part in events dedicated to the relationship between art and science and coordinates the creation of a collective installation for the AI&Art Pavilion of the University of Luxembourg in the framework of ESCH	**Title**: Singularity42! When artistic experience questions the technological singularity **Abstract**: TBD

	2022.	
Emilia Obradó Santaoliva	Emilia Obradó holds a PHD and was graduated in Fine Arts with the thesis Extended reality technologies applied to creation and university artistic teaching which she ended in 2019 with the Cum Laude rating. She began her research activity in 2012. After starting a master's degree, her growing interest in technology associated with artistic creation and education, led her to develop her scientific interests to the influence of new technologies in education and contemporary artistic creation, more specifically, in everything that concerns Virtual and Augmented Reality. During the development of her PhD research and since then, she combines her training and education in the area of Fine Arts and Design, working as an art teacher and focusing her specialization through different contributions based in the triad of her researching interests (art-technology-education). Her works have been exhibited in different places, like the Seville Town Hall or the Antiquarium museum.	**Title**:The Cristal Series II: Through my own looking glass **Abstract**: The Cristal series starts from the expression of the development of a creative and researching journey which tries to unite the visual story through the technological medium, to establish the deconstruction of the aesthetic discourse through the machine, not only as a channel of plastic and visual expression but also as an interpreter of contemporary aesthetics. A.I. is proposed as an intercessor of the most intimate visual expression, which in this case, is represented through the transmitting channel that in Artificial Intelligence supposes the intervention of the machine. The Deux ex machina became viable in different media, prior to the concept of “digital concept”. The basic and metaphorical representation of the technological intermediary finds in the mirror a type of corporeal manifestation, which finds new ways for a type of personification, through the discourse of visual poetics in graphic and plastic creation.
Mar Garrido	Mar Garrido was born in Madrid and currently lives in Granada. She holds a degree in Fine Arts from the Complutense University of Madrid and a PhD in Fine Arts from the University of Granada. She did postgraduate studies at the School of	**Title**: Flicker **Abstract**: For some time now, the animal rights movement and Artificial Intelligence have been questioning the anthropocentric world. While animals and algorithms have been evolving, the place, the territory of the human being has become increasingly problematic precisely

	Visual Art and Parsons School of Design in New York City. She worked as a creative in TVE making headers and special promotions in programs related to cinema. She is currently a professor at the University of Granada, where she teaches Audiovisual Projects at the Faculty of Fine Arts. She has had solo and group exhibitions in London, Dominican Republic, Malaga, Granada, Murcia, Jaen, Turkey, Almeria, Cadiz and Madrid. And participated in international video art festivals in Barcelona, Braga, Buenos Aires, New York, Venice, Edinburgh and Cuba among others.	because of the destruction of the natural environment to which we subject the planet. Without nature to return to, the world has become a human artifice increasingly alien to humans themselves. Perhaps close observation of animal behavior. FLICKER is a video creation made with fragments of royalty-free videos that articulates a dialogue between Artificial Intelligence and its aesthetics, with natural mechanisms and, where the title itself, Flicker, alludes to both human and animal flicker and the visible and repetitive change in the intensity of light caused by voltage fluctuations in electrical networks. Next, I will describe the symbology that conceptually constructs the piece.
Clara Boj & Diego Díaz	Clara Boj (Universitat Politécnica de Valencia) and Diego Díaz (Universitat Jaume I) have been working together since 2000. Their work critically engages new media technologies and the notion of public space within the hybrid city. Recently they are working with Machine Learning techniques in order to analyze how computers can understand and predict our future. Their projects and works have been shown world wide and they have enjoined residencies in many international art and research institutions. They both combine their research with teaching positions. Currently, Clara teaches in the Fine Arts degree at Valencia Polytechnic University, Spain. Diego is associate professor at Jaume I University where he teaches in the Videogames	**Title**: Machine Biography: Can machines predict our future? **Abstract**: In this project we generate a predictive biography of Clara Boj and Diego D az for the year 2050 made from all our digital activity (locations, digital conversations, photos, videos, etc.) collected during 2017. Year in which we hacked our mobile phones with a spyware software that captured all this information to create the Data Biography work consisting of 365 printed books (one for each day of the year with a total of more than 48 million records) and a 24-hour movie film. In this new project we use this data to train different deep neural networks (RNN, CNN and others) in order to generate our predictable activity during the year 2050 and we have reprinted all this data to create another set of 365 books that make up the work Machine Biography; a fictional and predictive biography created by artificial intelligence where the limits of the true and the false are blurred, the predictive capacity of the algorithms is questioned and the veracity of the information itself, while proposing to analyze the creative possibilities of artificial intelligence. :

	Design Degree. At present time they are developing, together with a small group of researchers, the project Reset Mar Menor, with the financial support of the Carasso Foundation and the Machine Biography project funded by the BBVA Foundation in the 2019 Leonardo Grant for Researchers and Cultural Creators. More info at: www.lalalab.org	
Iury Lech	Iury Lech is a video artist, sound sculptor and a transdisciplinary artist who was one of the pioneers of electronic music and the digital audiovisual of the Spanish scene with his hypnotic and experimental AV performances and installations. In his role as cultural manager, from 2009 he directed in Madrid the prestigious New Media Art festival MADATAC. Among his diverse projects highlights the creation of the Transmadatac Virtual Museum [https://vimeo.com/83326393], an interactive online multiplatform for Audiovisual Art and Advanced Technologies.	**Title**: Quantum of time inside light **Abstract**: Quantum of time inside light, as a creation of the new media digital and audiovisual art, takes up the concept of the Hellenistic philosopher Plotinus, who stated that the evidence of existing beauty is not only found in complex objects, but also in a color or a sound, in light or in lightning, in which it is not possible to distinguish elements shaped according to symmetry. For Plotinus, matter is not beautiful, color, shape or size are not beauty, but the soul is. Matter is a dark mass, while spirit is light. Therefore, the Quantum of time inside light dispenses from depths and shadows and presents the luminous surface of things, in order to get out of matter and reach spirit. Depth is matter, and that is why it is dark. The light that illuminates it is instead form, and thus the mind can perceive it.
Rafael Garrido Vilchez	My personal investigation is closely related to the body, the flesh and identity, focusing on the relationship between them and how it can be represented in the audiovisual field. Deeply interested in anatomy, anthropology and the virtual world, I like to create a dialogue between the viewer and the piece. Dialogue that takes place in an uncomfortable inflection point where the	**Title**: Artificial Identity **Abstract**:*Artificial Identity* discuss the dichotomy of our technological era, focusing on the Nexus between the digital, the flesh and the AI. Connection that directly affects our life and identity, showcased in a post-produced video with prosthetic makeup and 3D structures. The connection between human and identity is so fragile that it can be altered or distorted by anything at any moment. Any kind of fluctuation in our life can lead to huge changes, shaking the anatomy of our existence and reorganizing each one of our cells, creating new

	line between reality and fiction is blurred, framed by a sinister aura and usually presenting a nerve-wracking illusion that leads to a moment of disconnection. Disconnection that generates questions that sometimes have no answer. For this purpose, I use prosthetic makeup and the digital medium, taking advantage of its strange and changing nature and playing with the corporeal identity and its vehicle: the body. By modifying the body in a organic and virtual way, I seek to create the perfect audiovisual experience. A moment where the viewer interacts with the concept in an immersive way, leaving reality behind and entering a new world where the normal operation of nature is disrupted and the body is just a mutating concept.	appendices in order to adapt to a new environment. In its maximum exponential, the work Artificial Identity presents the idea of a forced evolution guided by the constant development of technology. Focused in the nexus between the digital, the flesh and the AI; this piece is designed to perform as a link, connecting humanity and its corporeal identity with the emerging world of the artificial. Connection that will provoke an evolution – or mutation – in our species, triggered by a new environment completely submerged in the AI era. An era that surely will change the definition of human forever.
Rosangella Leote from Giip	Giip, The "International and Interinstitutional Research Group on Convergences between Art, Science and Technology" (GIIP) since 2010, attempts to develop the possibilities for innovation and diffusion beyond those that are currently commonplace in artistic practice; In this way, Art, Science and Technology need on a multidisciplinary approach. It is a research group accredited and based at the Institute of Arts at Unesp (Universidade Estadual Paulista), Brazil, and certified by CNPq and led by Prof. Dr. Rosangella Leote and Prof. Dr. Fernanda Duarte. https://sites.google.com/unesp.br/giip/inicio	**Title**: Guarani's face - from underground to space **Abstract**: This proposal brings the intertwining of Art and Science to discuss possible futures through the reflection of a balance between a natural ecosystem articulated with a mechanical ecosystem. In this way, it is observed the liquid attributes that exist in nature, focusing on the significance of the water resources of the Guarani aquifer for the balance of the ecosystem. The relevance of this aquifer is that (breath) it is the largest subterranean transboundary reservoir of fresh water of the world and it is located in South America, encompassing Argentina, Paraguay, Uruguay, and several states in Brazil. It is important to note that this reservoir reverberates its flows, changing the soil quality and these contribute to the environment in various ways. It also supplies up to 70 percent of the water in 8 Brazilian states and the various cities there. The Guaranis are indigenous native people of Brazil. The artwork named “Guarani’s face”, which in Portuguese can also mean “contemplating Guarani” it is an interactive installation. It captures bodily

		signals, without physical contact whose data become parameters that intersect with other data captured from the Guarani aquifer resulting in a visual and sound projection mapped inside a dome that surrounds the participants. The projected images at the dome are data visualizations that brings memories of running water and body fluids. The sound components bring together space technology and Earth ancestry, mixing sounds of underground water, indigenous flutes, singing birds, corporeal pulses, and outer space in the orbit of Jupiter. All these images and sounds are reinterpreted by an artificial intelligence (machine learning) that manipulates the data, adding the presence of the body and the aquifer data. So, inside the dome there are three layers of mixed data: the spectator's bodies interacting with the work (proximity), the sound and the hydrological data of the aquifer (volume, extension and water quality), available at the Brazilian national water agency. The proposal of the artwork "Face Guarani" is a collective creation made by some researchers from the international research group GIIP, from the Institute of Arts of UNESP/SP/Brazil. The group is focused on Art, Science and Technology and it has 6 research lines and elaborates artistic exhibitions, conferences, workshops, extension events, and bibliographic production in an international network of research.
Iván Paz	Iván Paz has backgrounds in physics, music and computer science. Iván's work is framed in critical approaches to technology centered around from-scratch construction as an exploratory technique. Since 2010, he has been part of the live coding community and has presented workshops, conferences and concerts around America and Europe. He currently explores real-time feedback during the learning process while using machine learning within live coding performance.	**Title:** Live coding Machine learning **Abstract:** This talk presents a general view and some ideas about the use of machine learning within the live coding practice. Live coding revolves around writing algorithms in real time with creative purposes, generally to produce sound or visuals. The consequences and possibilities of mixing these fields are discussed from the artistic and scientific perspectives.
María del Mar García-Jiménez	Maria del Mar Garcia-Jimenez studied Fine Art and two official Master at the University	**Tittle:** Ian Cheng´s live simulations processes for art-making as social analyzing tool

	of Seville. In 2019 she gained a doctorate from the same higher education institutions with a dissertation on more activists and subversives aspects of Steven Meisel's fashion photography. For this purpose, she carried out researches at the Institut für Medienwissenschaft / Zentrum für Medienkompetenz of Universität Tübingen, Germany, at Institute for Contemporary Art Research (ICAR) of Zürcher Hochschule der Künste (ZHdK), Switzerland and the Archivio Fotografico Edizioni Condé Nast, Italy. Since 2017 she work as an art teacher.	**Abstract:** The main objective of his work is to probe the validity and efficiency of the cited live simulations generated by AI systems as an artistic enunciation through algorithmic art. To understand this, we focus on two of his more celebrated works: the Emissary trilogy (2015-2017). This is a video game that uses predictive technologies and is described by the artist as “a video game that plays itself”. Emissaries introduces a narrative agent, the emissary, whose motivation to enact a story was set into conflict with the open-ended chaos of the simulation. Cheng describes the archetype of the emissary as one who "is caught between unravelling old realities and an emerging weird one," - an embodied way to explore the relationship between meaning and meaninglessness (MOMA, 2017). Cheng also created BOB which is in the form of a huge worm or red snake. This simulates an artificial life generated by algorithms and energized by simple programming techniques. The result is an interaction with the audience in terms similar to the successful virtual mascot of the nineties Tamagotchi. BOB shows that a human and computer can work as a team (as against competing as in computational chess). BOB demonstrates that the hybrid intelligence of the ‘worm’ can actually beat pure artificial intelligence on its own.
Leon van der Torre	Full professor in Artificial Intelligence at university of Luxembourg, Member of executive committee ERCIM representing Luxembourg, member of faculty council. ● I was born in Rotterdam, the Netherlands, and at the Erasmus University of Rotterdam I held positions at EURIDIS and the Department of Computer Science during which I obtained my MS (August 1992) and my PhD in computer science (February 1997). I worked on deontic logic in computer science (with Yao-Hua Tan). ● In the following two years I visited the Max Planck Institute for computer	Closing address

	science and the IRIT laboratory in Toulouse, France as a Marie Curie fellow, where I worked on qualitative decision theory (with Jerome Lang and Emil Weydert), and started to work on input/output logics (with David Makinson). • Returning to the Netherlands, I worked at the Vrije Universiteit van Amsterdam in the SINS project and at the CWI on the ArchiMate project. I worked on agent theory and cognitive science. I initiated the BOID project (with Jan Broersen, Mehdi Dastani, Zhisheng Huang and Joris Hulstijn) and the normative multiagent systems (with Guido Boella). • I started January 2006 at the University of Luxembourg. I am COST ICT Domain Committee member for Luxembourg, ERCIM executive committee member for Luxembourg, and responsible for priority P1 on security and trust within the University of Luxembourg.	

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