28/09/22 to 29/10/22	
Art and	technology DAO NFT
	ove the public's understanding of the interconnections between art and plogy, their possibilities, and the issues they raise in society.
collab	erate debate and reflection on who and what an artist is, on the oration between humans and machines, and on group co-creation and ented creativity.
zatior per w the pu by a d traine than a each y	is an "artist-algorithm" of the DAO (Decentralized Autonomous Organi- ) type, capable of creating hundreds of creative proposals or fragments eek, confronting its own originality as an artist and submitting its work to blic's choice. Botto is powered by Artificial Intelligence (AI) and governed ecentralized community. Like all Artificial Intelligence, Botto needs to be d with a large data bank: its algorithm has been exposed to more images ny human in its lifetime. Botto also makes use of blockchain technology, as veek its community decides which fragment will end up becoming a digital rk coined as NFT (Non Fungible Token).
the Go with a an int imple	hed in October 2021, Botto is gestated thanks to a whitepaper signed by erman artist Mario Klingemann, an international reference in the creation rtificial intelligence. Is then launched through the artist's collaboration with ernational team led by ElevenYellow and Carbono. The set of algorithms mented by Botto connects two artistic approaches, generative art and tralised art, both with historical roots.
	NTATION

03/03/2023 Etopia, Zaragoza (Spain) FZC
 Artists and creative professionals, researchers, technologists.



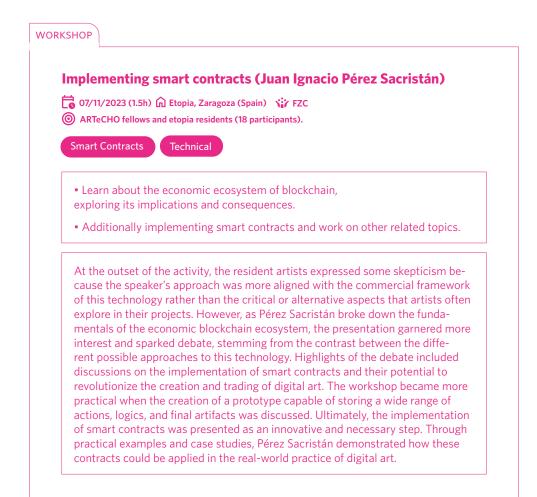
Blockchain Natural ecosystems

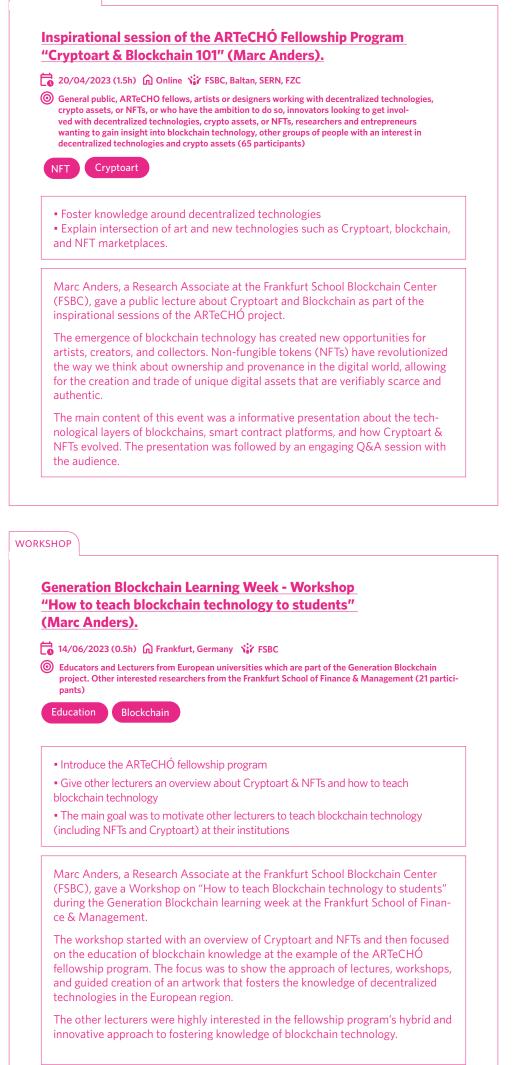
• Share knowledge and generate debate on the possibilities offered by blockchain technology in terms of ecological transition and decentralised ecosystem management.

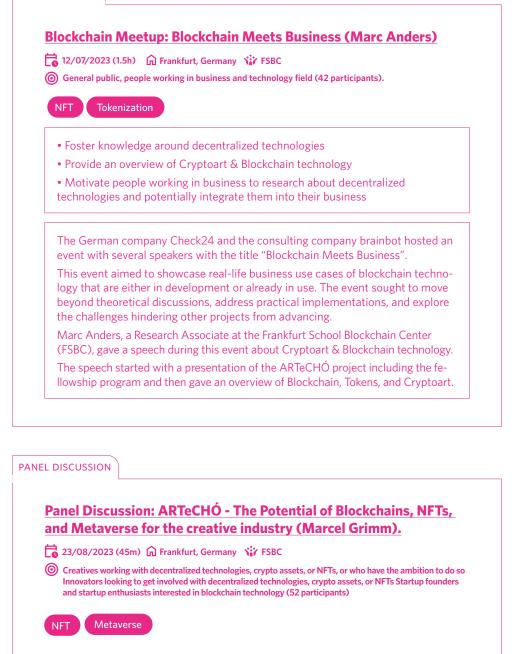
The artist Carlos Monleón gave a public presentation of his project wetcoin.eth, which explores the intersection of art, science and technology by researching methods of water remediation and care within DAO frameworks. The project aims to bridge the physical and digital realms to foster new models of ecological transition, while also generating social capital related to water stewardship through blockchain and Web3 technologies and principles. University researchers, programmers and artists joined us for this inaugural exploration of DAOs and blockchain technology for ecosystem remediation.

L	
Special visi	t of Energeia exhibition with Alicia Valero
17/06/2023	(1.5h) 🔓 Etopia, Zaragoza (Spain) 🤺 FZC
General public	ic, artists and creative professionals (8 participants).
Technology	Sustainability Raw materials
technology	wledge and stimulate discussion on the implications of blockchain development in terms of ecological footprint, particularly regarding al extraction.
constructio 17, 2023). E usage of tec final visit of the Univers lecturer add exhibition. S to technolo	s an exhibition of art and new media about energy, its uses, and the n of possible alternatives focused on people's needs (March 2 – June nergeia sought to create knowledge promoting a more sustainable chnology in the creative sectors, including NFTs and blockchain. The the exhibition featured a special guest: Dr. Alicia Valero, professor at ity of Zaragoza, international specialist in critical raw materials. The dressed a series of questions that arose throughout the months of the She invited the attendees to reflect on the use of raw material related gical development, its ecological footprint, and the role of Science enhancing people's awareness of this issue.

DLIC	PRESENTATION, INMERSIVE EXPERIENCE
"	lumanverse" by Martin Romeo
Ē	04/11/2023 (3h) 🏠 Etopia, Zaragoza (Spain) 🎲 FZC
0	) Artists and creative professionals, researchers, technologists (20 participants).
	AO Blockchain Natural ecosystems
	<ul> <li>Share knowledge and generate debate on the possibilities offered by blockchain technology in terms of ecological transition and decentralised ecosystem management.</li> </ul>
	The artist Carlos Monleón gave a public presentation of his project wetcoin.eth, which explores the intersection of art, science and technology by researching methods of water remediation and care within DAO frameworks. The project aims to bridge the physical and digital realms to foster new models of ecologi- cal transition, while also generating social capital related to water stewardship







- Foster knowledge around decentralized technologies
- Explain intersection of art and new technologies such as Blockchain, Cryptoart & NFTs and the metaverse

The Frankfurt School Blockchain Center invited for an online panel discussion with the title "ARTeCHÓ - The Potential of Blockchains, NFTs, and Metaverse for the creative industry". The discussion on the Potential of Blockchains, NFTs, and Metaverse for the creative industry, moderated by Marcel Grimm is available on YouTube, and features expert insights from Anna Graf, Dr. Annette Doms, Kerstin Gold, and Florian Adolph. They explored how creators benefit from the use of Blockchains, NFTs, and Metaverse including the challenges such as monetization, royalty fees, ownership, and IP rights.

Key-take-aways from the panel:

- Blockchain serves as a base layer for digital assets including tokenized physical assets

- Metaverse as an additional layer for visualization, interaction, and connection

- Initially, NFTs were a shock for the traditional artworld but they brought Tech, Art, and Brands together to develop projects together

- Serious digital art can be separated from NFT collectibles and often follows perceptions from traditional art in terms of value creation

Creatives can monetize digital art and get a direct connection to their audience
It is difficult to force the payment of royalties when artworks are sold again but artists can choose their curators and marketplaces wisely

- Intellectual Property (IP) rights are still being discussed and metadata standards for IP rights are challenging but important



## How to Teach and Learn Blockchain Technology & Crypto Assets (Marc Anders)

### 🔂 14/11/2023 (30m) 🔓 Frankfurt, Germany 🤺 FSBC

Anyone interested in learning more about teaching and learning blockchain technology Thought leaders and didactics interested in hybrid and learning environments as well as self-guided and inverted learning approaches, students that aim to further their knowledge of blockchain technology, consultants with a focus on digital assets researchers and scholars wanting to gain insight into teaching skills of the 21st century and innovative forms of teaching and learningThought leaders and didactics interested in hybrid and learning environments as well as self-guided and inverted learning approaches, students that aim to further their knowledge of blockchain technology, consultants with a focus on digital assets, researchers and scholars wanting to gain insight into teaching skills of the 21st century and innovative forms of teaching and learning (25 partipants + 50 online).

Education Blockchain

- What is blockchain technology and why is it important?
- Introduce the ARTeCHÓ fellowship program
- Overview about Cryptoart & NFTs and how to teach blockchain technology

The Frankfurt School Blockchain Center hosted a hybrid conference titled "How to Teach and Learn Blockchain Technology & Crypto Assets" supported by ARTeCHÓ. During this conference, Marc Anders, a Research Associate at the Frankfurt School Blockchain Center (FSBC), gave a lecture on "ARTeCHÓ - Cryptoart & NFTs". The workshop started with a short overview of Cryptoart and NFTs and then focused on the education of blockchain knowledge at the example of the ARTeCHÓ fellowship program. The focus was to show the approach of lectures, workshops, and guided creation of an artwork that fosters the knowledge of decentralized technologies in the European region. The ARTeCHÓ fellows and their artworks were also briefly presented as an outcome of the project.

PUBLIC LECTURE Guest Lecture at Collegio Carlo Alberto, Torino, Italy (during the module of Assistant Professor Lorenzo Schoenleber) 🔁 29/02/2024 (1h) 🔓 Online 😽 FSBC Students of Collegio Carlo Alberto, Torino, Italy (27 participants). NFT Cryptoart Foster knowledge around decentralized technologies Explain intersection of art and new technologies such as Blockchain, Cryptoart & NFTs and the metaverse Introduce the ARTeCHÓ project to universities Marc Anders, a Research Associate at the Frankfurt School Blockchain Center (FSBC), gave a lecture about Blockchain, Cryptoart & NFTs at Collegio Carlo Alberto The main content was an informative presentation about the technological layers of blockchains, smart contract platforms, and how Cryptoart & NFTs evolved. During this university lecture the basics of DLT & Blockchain were explained, followed by smart contract platforms and tokens. This basic knowledge was necessary to continue with the introduction of Cryptoart & NFTs. The ARTeCHÓ project was briefly presented before diving deeper into the topic of NFTs. The presentation followed an engaging Q&A session.

nodule of	Assistant Professor Lorenzo Schoenleber)
12/04/202	4 (1h) 🎧 Online 🤺 FSBC
Students of	the University of Turin (Unito), Torino, Italy (30 participants).
NFT Cr	yptoart
• Foster kr	owledge around decentralized technologies
	ntersection of art and new technologies such as Blockchain, Cryptoart & he metaverse
Introduce	e the ARTeCHÓ project to universities
	ers, a Research Associate at the Frankfurt School Blockchain Center ave a lecture about Blockchain, Cryptoart & NFTs at the University of
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### **Blockchain Critical Art Practices (Luisa Marchionni)**

🔂 12/06/2023 (1.5h) 🔓 Brussels (Belgium) 🎲 SERN

General Public, ARTeCHO Fellows, Artists/Designers: Working with or interested in decentralized technologies, crypto assets, or NFTs. Innovators: Interested in decentralized technologies, crypto assets, or NFTs. Researchers/Entrepreneurs: Seeking insight into blockchain technology. Others: Interested in decentralized technologies and crypto assets. (12 participants)

#### Blockchain

- 1. Uncover hidden narratives of blockchain.
- 2. Examine interactions among platforms, corporations, and individuals.
- 3. Discuss blockchain's limitations and contradictions.
- 4. Explore Cypherpunk philosophy and "blockchain colonialism."
- 5. Investigate conflicts in blockchain's promises.
- 6. Evaluate blockchain's potential to create inequalities.

To decipher the hidden discourses behind blockchain we need to go beyond cryptocurrency investments, NFTs and metaverses. We need to investigate the relationships between platforms, infrastructures, devices, corporations, governments and individuals. This talk will focus on the limitations and contradictions of this technology, from the Cypherpunk ideology to the so-called "blockchain colonialism," by exploring the tensions between blockchain's promises of transparency, disintermediation and immutability, as well as, its potential to create inequalities.

#### PUBLIC LECTURE

### **Chimerical Intelligence Lab (Luisa Marchionni)**

- 🔂 13/06/2023 (1.5h) 🔓 Brussels (Belgium) 🎲 SERN
- General Public,ARTeCHO Fellows,Artists/Designers: Working with or interested in decentralized technologies, crypto assets, or NFTs. Innovators: Interested in decentralized technologies, crypto assets, or NFTs. Researchers/Entrepreneurs: Seeking insight into blockchain technology. Others: Interested in decentralized technologies and crypto assets (12 participants).

#### Research

New Technologies

- 1. Define new artistic working methods beyond museum spaces.
- 2. Investigate intelligence rooted in matter and relations.
- 3. Map the entanglements of ecology, finance, and governance.
- 4. Explore ecological philosophy and future technology.
- 5. Spark dialogue on a postcapitalist future with vitalist and panpsychist perspectives.
- 6. Discuss blockchain technology's potential to expand financial imagination.

To decipher the hidden discourses behind blockchain we need to go beyond cryptocurrency investments, NFTs and metaverses. We need to investigate the relationships between platforms, infrastructures, devices, corporations, governments and individuals. This talk will focus on the limitations and contradictions of this technology, from the Cypherpunk ideology to the so-called "blockchain colonialism," by exploring the tensions between blockchain's promises of transparency, disintermediation and immutability, as well as, its potential to create inequalities.

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~	023 (30m) 🏠 Brussels (Belgium) 🎲 SERN
gies, cryp Research	ublic, ARTeCHO Fellows, Artists/Designers: Working with or interested in decentralized technolo- to assets, or NFTs. Innovators: Interested in decentralized technologies, crypto assets, or NFTs. ers/Entrepreneurs: Seeking insight into blockchain technology. iterested in decentralized technologies and crypto assets (12 partipants).
Art N	ET Blockchain Project Management
Present	the ARTeCHÓ project
• Publish	the project's results
• Encour	age connections among industry stakeholders
The mai	n goal of ARTeCHÓ Project was to create a peer-to-peer learning
The mai	n goal of ARTeCHO Project was to create a peer-to-peer learning ity for artists to learn more about the technical side of the art-making

_	06/04/2023 (1.5h) 🛱 Online 🎲 BALTAN General audience active within the digital art field and interested in the intersection between art and digita technologies + ARTeCHO fellows (28 participants)
	Art NFT Giving an overview of the NFT hype within the arts and speculating about the role of art and artists in the development of decentralised digital technologies.
	Domenico Quaranta's critically examined the aftermath of the NFT craze, explo- ring the speculative nature intrinsic to the NFT environment. The lecture delved into the possibilities of using blockchains for authentication and creative experi- mentation with smart contracts without succumbing to crypto-related specula- tion. Quaranta questioned the future of NFTs beyond financial speculation and pondered the role of art and artists in reshaping the Web3 scenario.
	tion. Quaranta questioned the future of NFTs beyond financial speculation and

## The Longue Durée of Economic Media: A Prehistory of Crypto (Max Grünberg)

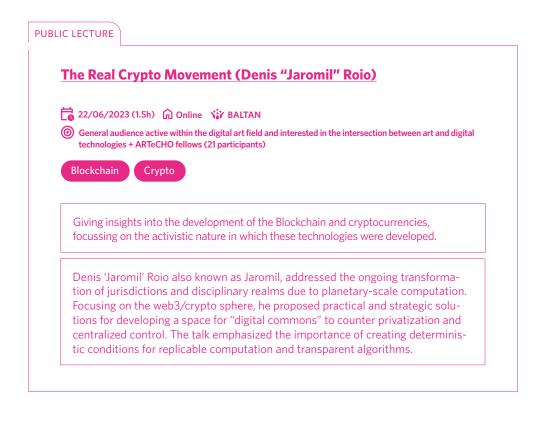
🔂 04/05/2023 (1.5h) 🔓 Online 🤫 BALTAN

General audience active within the digital art field and interested in the intersection between art and digital technologies + ARTeCHO fellows (19 participants)



Giving insights into the historical development of cryptocurrencies.

Max Grünberg explored the historical roots of cryptocurrencies, grounding their emergence in the history of money and accounting technologies. The session aimed to uncover the disruptive potential embedded in economic media, examining its historical context and connections to statehood. Grünberg contrasted past visions of denationalizing money with the then-current crypto landscape, questioning which proposals might prevail.



Artworld	rtworld DAOs for Care and Translocal Belonging (Ruth Catlow)	
6/07/2	023 (1.5h) 🍙 Online 🙀 BALTAN	
	audience active within the digital art field and interested in the intersection between art and digital gies + ARTeCHO fellows (17 participants)	
Art D	AO	
Giving a	n overview of the NFT hype within the arts and speculating about the role of	
0	n overview of the NFT hype within the arts and speculating about the role of artists in the development of decentralised digital technologies.	
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# Open Hardware (Silvia Binda Heiserova)

- 18/05/2023 (3.5h) G Eindhoven (The Nederlands) X BALTAN
   General audience with an interest to learn how to solder, wire and programme with little to no previous expe-
- General audience with an interest to learn now to solder, wire and programme with little to no previous experience. The workshop requires no previous experience or knowledge about elektronics. (12 participants)

## Tech DIY

To teach participants how to solder, wire and programing: Participants will build their own technological device with a screen and speaker. They will learn to solder, wire and programme the device and take it home with them.

Join the Open Hardware workshop and learn to make your own functional technological objects from scratch. You will learn to use, solder, wire, assemble and code for open-source 3D prints of various colours and shapes, microcontrollers, sensors, displays, modules, and other components.

After a brief overview of practical electronics and basic components, we will solder pins to a microcontroller and wire it to the chosen elements. Once all parts are assembled, we will write a code to control the behaviour of our hardware (what is showing on the screen, what sound comes out of the speakers?) and upload it to the microcontroller. At the end of the workshop, you have created your own functional artistic hardware artefact to take home with you.

Participants will gain an understanding of some of the most used electronic components and their functionalities. Furthermore, the workshop aims to empower participants in their technological creativity and insight, fostering a proactive attitude towards the hardware devices they interact with daily.

