Information for the press

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→ Download the exhibition guide and images

Presentation

A musical journey of algorithms, from medieval theory to artificial intelligence

Opening on 20 September, the *Musica ex Machina: Machines Thinking Musically* exhibition is an historical and sensorial immersion into the universe of algorithmic music. From the Middle Ages to present day, it celebrates the heritage of visionaries who, by harnessing the technological advances of their time, have revolutionised the way music is conceived, created and performed.

The current omnipresence of algorithms might seem intrinsically linked to the development of digital technologies and artificial intelligence. However, their origins are age-old, and their sophistication is the result of centuries of scientific and artistic research in a multitude of disciplines and locations.

The evolution of music through in time has been highly influenced by the way humans enrich their creative process with the new technologies. Indeed, from elementary, hand-calculated, systems to generative AI, computational and algorithmic thinking has accompanied the development of music, carried out by successive generations of visionary theorists, artists and scientists. The algorithmic organization of music is a global phenomenon, essential in both western and non-western traditional musical and vocal orchestrations, utilising systematic structures in their composition and performance.

Curated by EPFL professors Sarah Kenderdine and Martin Rohrmeier, and professors Paul Doornbusch and Jonathan Impett, the exhibition offers a unique insight into the conceptual, creative and technological advances that have enabled the integration of machines into the world of musical expression. Following a rich chronological and thematic itinerary, visitors discover a succession of ancient and historical objects, juxtaposed with contemporary works of art, and interactive or immersive musical installations developed by EPFL's Laboratory for Experimental Museology and EPFL's Digital and Cognitive Musicology Laboratory.

Musica ex Machina celebrates prominent individuals who, despite their differences, share a common legacy of pioneering and shaping modern music, and continue to inspire artists, musicians, and scientists today. An extensive and rich panorama, the exhibition highlights the richness of the past and its contemporary heritage, while also opening new perspectives on the future of music.

Information

Musica ex Machina:
Machines Thinking Musically

20.9.2024–29.6.2025

Tuesday–Sunday, 11 am–6 pm
Free Entry

Place Cosandey
EPFL, Swiss Federal Institute of Technology
1015 Lausanne, Switzerland

Free guided tour on the first Saturday of the month at 11.15 am.
No reservation required.

epfl-pavilions.ch

EPFL Pavilions is a place for exhibitions and encounters at the heart of the campus of the Swiss Federal Institute of Technology in Lausanne. At the intersection of art and science, it opens up new perspectives on the challenges of our contemporary society, and positions itself as a place for experimentation and dialogue between scientific innovation, artistic research and emerging technologies.

Central themes

In parallel with the chronological organisation of the exhibition, four central themes link together the pieces on display:

Symbols, spaces and algorithms

presents the way in which music has been symbolically represented and conceptualised by proto-informatic means: from ancient systems to contemporary symbolic manipulation and non-Western algorithmic musical traditions.

Automating the human

illustrates the music machines, automata and instruments automated from the 18th century onwards, which introduced mechanisation into the fields of performance and composition.

Music as information and data

focuses on the emergence of recording technologies that transformed musical sound into data, as well as the first electronic instruments and the use of computers to generate music algorithmically.

Body, mind & machine

explores the interactions between musicians and technology through sensing, sensors and artificial intelligence, presenting works by artists who have integrated interaction and immersion into their creative process.

Typologies

The 41 installations are made up of a wide variety of objects, images and sounds, giving the exhibition exceptional diversity.

50 artworks

ancient or modern, visual or musical, which testify to the richness of the points of view and the search for experimentation of artists from all horizons and eras.

12 audiovisual installations

interactive or immersive, using cutting-edge technology to shed new light on musical works, ancestral traditions or ways of notating and writing music over the centuries.

34 historical documents

original or reproduced, offering an intimate insight into the thinking of pioneering figures in the world of music, who have been responsible for major conceptual, theoretical and artistic advances.

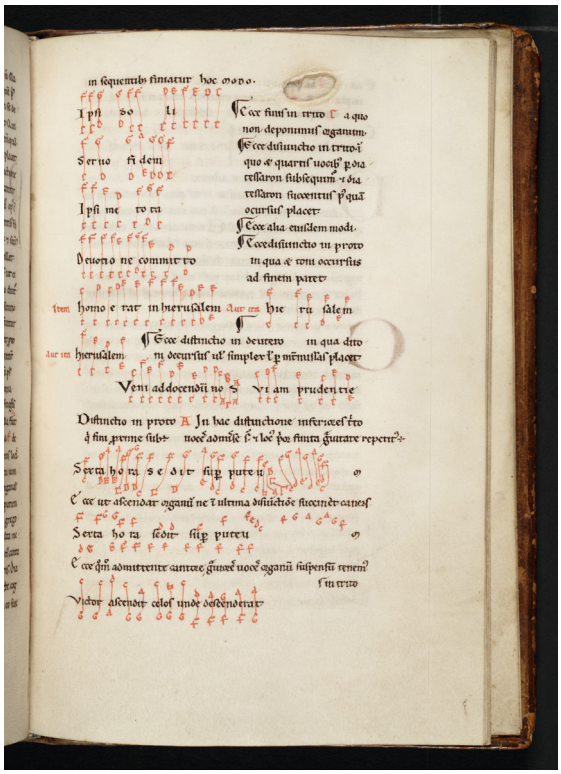
22 heritage objects

rare and exceptional, embodying the technological advances, technical know-how and unique experiments that have marked the history of music.

Sections

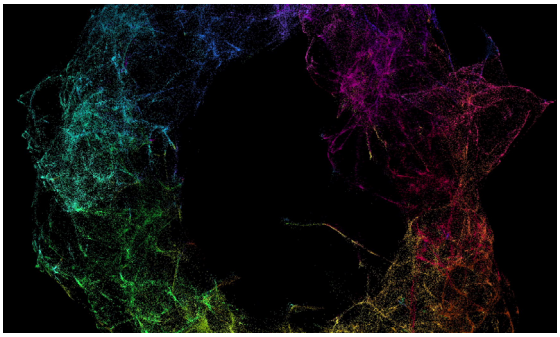
In addition to its chronological organisation and the central themes linking the objects, the exhibition is divided into eight sections.

Symbolic representation of music in tone and time



Polyphonies

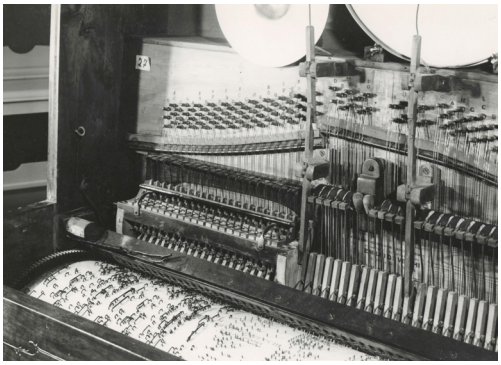
Musical geometries



Non-Western music

Automata

Player Piano



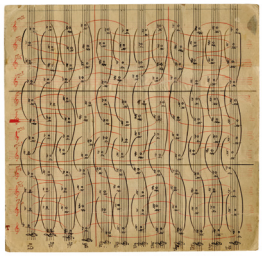
Electronic music

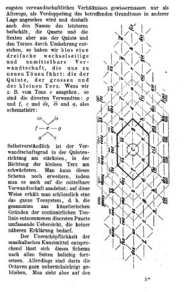
AI & Music

Chronology

Middle Ages & Renaissance

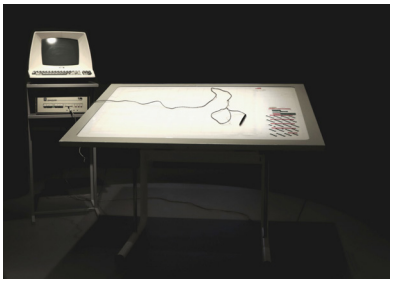
19th & early 20th centuries

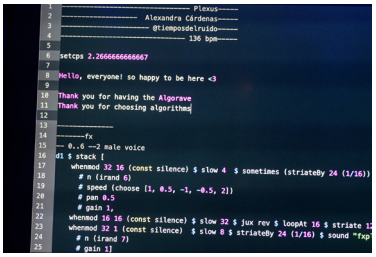


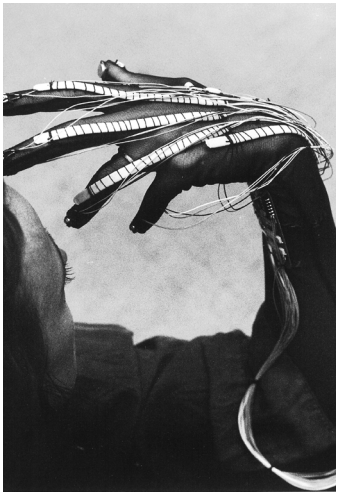


Post-war

Late 20th, early 21st centuries







Exhibited figures

Guido d'Arezzo (c. 991–1050)	Medieval music theorist who developed modern musical notation.
Johannes de Muris (c. 1290–c. 1351)	Mathematician, astronomer, and French music theorist.
Baude Cordier (c. 1380–1440)	French composer and poet from the late Middle Ages.
Josquin des Prez (c. 1450–1521)	Franco-Flemish Renaissance composer.
Pedro Cerone (1566–1625)	Italian priest, music theorist, and composer working at the Spanish-speaking court of Naples.
Athanasius Kircher (1602–1680)	German Jesuit scholar recognized for his contributions to music theory.
Nikolay Diletsky (c. 1630–1681)	Ukrainian composer and music theorist.
Leonhard Euler (1707–1783)	Swiss mathematician and music theorist.
Henri-Louis Jaquet-Droz (1721–1790)	Swiss watchmaker and creator of musical automata.
Charles Babbage (1791–1871)	English mathematician and polymath.
Ada Lovelace (1815–1852)	English mathematician and scholar, computer programming pionner
Otakar Hostinsky (1847–1910)	Czech musicologist, theorist, and professor of musical aesthetics.
Arnold Schönberg (1874–1951)	Austro-American composer who developed the twelve-tone technique.
Josef Matthias Hauer (1883–1959)	Austrian composer and music theorist
Conlon Nancarrow (1912–1997)	American composer known for his compositions for player piano.
John Cage (1912–1992)	American composer, music theorist, writer, and artist.

Iannis Xenakis (1922–2001)	Franco-Greek composer and architect known for his use of mathematical models in music.
György Ligeti (1923–2006)	Hungarian-Austrian composer known for his innovative works.
Luigi Nono (1924–1990)	Italian avant-garde composer.
John Coltrane (1926–1967)	American jazz saxophonist and composer.
Karlheinz Stockhausen (1928–2007)	German composer known for his work in electronic music.
Clarence Barlow (1945–2021)	British composer and pioneer in computer-assisted music.
Michel Waisvisz (1949–2008)	Dutch composer known for his work in electronic music.
Richard Widdess (1951)	Musicologist specializing in Indian music.
George Lewis (1952)	American composer, trombonist, and musicologist.
Geoff Hill (1954)	Mathematician and the first Australian computer programmer.
Laetitia Sonami (1957)	Sound artist and performer known for her work in electronic music.
Jennifer Walshe (1974)	Irish composer and performer.
Michael Wollny (1978)	German jazz pianist.
Alexandra Cárdenas (1976)	Composer and live coder working with electronic music.
Roberto Alonso Trillo (1983)	Violinist and researcher.
Marek Poliks (1989)	Composer known for his work in experimental music.
Nicolas Namoradze (1992)	Georgian pianist and composer working in New York.

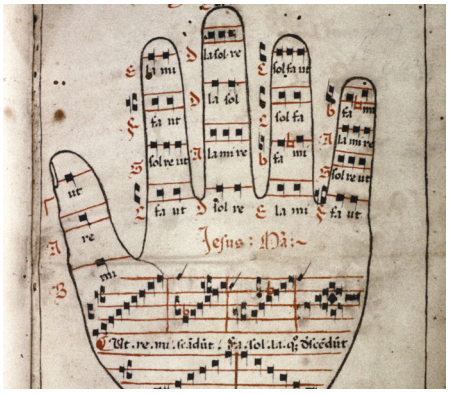
Key exhibits

New ways of representing music

The exhibition begins in the Middle Ages, when new ways of notating and conceptualising music were emerging. The theorist Guido d'Arezzo, a central figure and innovator, revolutionised musicand its teaching by developing the six-note scale that is at the origin of our current solfeggio, as well as a mnemonic tool to help memorise melodies. to help memorise melodies.

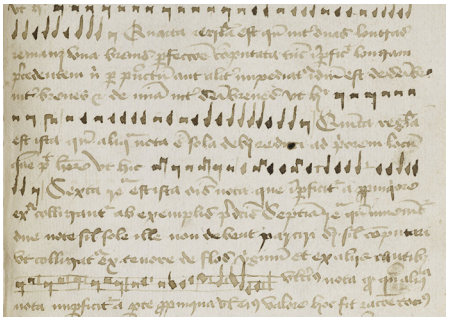
The Guidonian Hand and measured singing

Circa
15th century



Inspired by *Ut queant laxis*, a common chant of the time in which each phrase began a tone higher, Guido d'Arezzo invented the hexachord, the six-note scale. He named each note according to the first letters of the phrases in the chant, and over the years developed a system of notation that would open the door to new musical concepts such as polyphony, and which would become our current Western solfeggio. The exhibition features the famous Guidonian Hand, digitally animated and accompanied by singing, an interactive application for practising the system, and writings by the theorist that bear witness to his revolutionary thinking.

Circa
1340



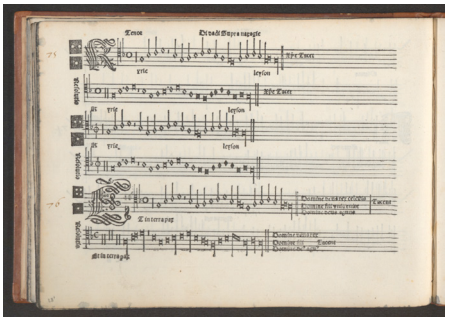
The exhibition then presents the book *Libellus cantus mensurabilis* by the French mathematician, astronomer and music theorist Johannes de Muris. This treatise is one of the most important works of its time, as it introduces and formalises essential concepts of musical notation that were then being developed, focusing mainly on mensuration, i.e. how to measure musical time, and on the notation of rhythmic values.

Pushing the boundaries of musical composition

Fuelled by the new possibilities offered by musical notation techniques, polyphony reached the height of its complexity in the late Middle Ages and Renaissance. A simultaneous combination of several melodies, polyphony is based on a set of rules that dictate how notes can be combined and played. The rest of the exhibition looks at its development and the algorithmic processes that followed.

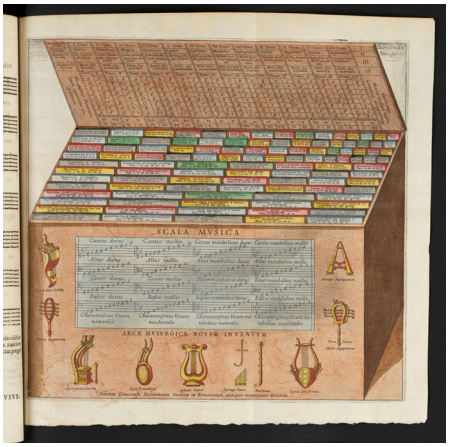
Je Missa Di dadi and the Arca Musarithmica

Circa 1480



In this mass, the Franco-Flemish Renaissance composer Josquin des Prez appears to have used the roll of the dice to determine the temporal relationships between the four voices, and thus to determine how fast the tenor should sing.

1650



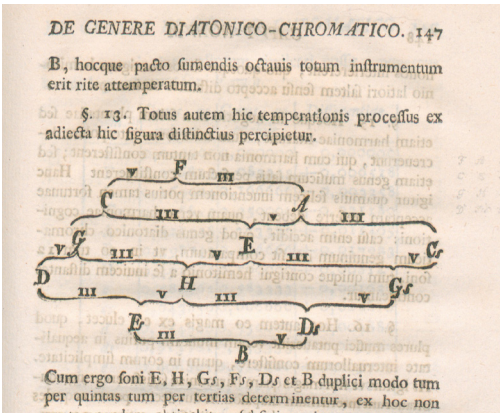
If music is conceptualised and composed in an algorithmic and mathematical way, then it becomes potentially automatable. The exhibition presents the beginnings and practical application of this principle, notably through Athanasius Kircher's *Arca Musarithmica*, a calculating device for automated musical composition developed in the 17th century. The box enabled its users to generate a four-part vocal score in different styles from combinable elements, foreshadowing many of the innovations of the centuries to come.

Representing music geometrically and mathematically

Another fundamental aspect of medieval musical development was the spatial approach to musical notation. To make it easier to understand, D'Arezzo proposed the use of space, in the form of staves, to represent pitches. Over the centuries to the present day, numerous geometric representations have given rise to new ways of conceptualizing the relationships between tones, chords and tonalities. Five of these are presented in the exhibition.

Euler's "Tonnetz" and Hauer's circle

1739

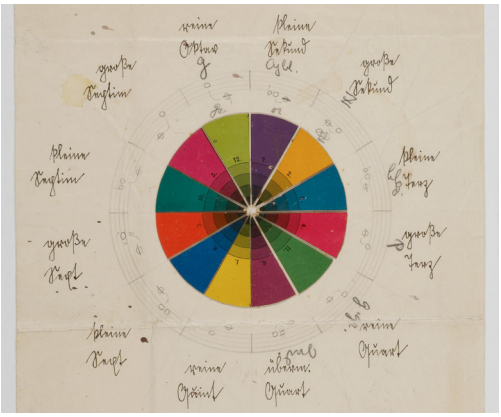

DE GENERE DIATONICO-CHROMATICO. 147

B, hocque pacto fumendis octauis totum inſtrumentum erit rite attemperatum.

§. 13. Totus autem hic temperationis proceſſus ex adiecta hic figura diſtinctius percipietur.

Cum ergo ſoni E, H, Gs, Fs, Ds et B duplici modo tum per quintas tum per tertias determinentur, ex hoc non

1919



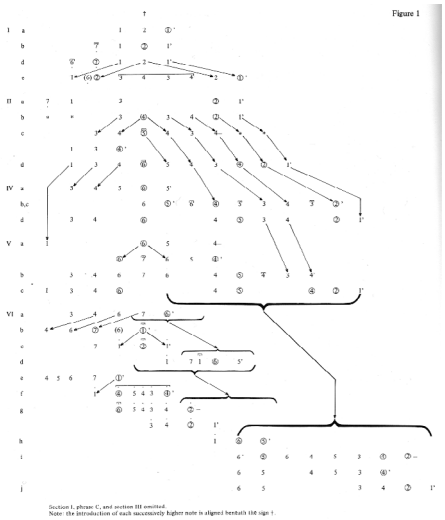
In his treatise *Tentamen novae theoriae musicae* (Attempt at a new theory of music), Swiss mathematician and physicist Leonhard Euler developed the concept of the “Tonnetz”, or network of tones - a contribution still central to music theory today. This network enables the relationships between different tones to be represented in a two-dimensional geometrical way, in the form of a space made up of musical intervals. This application of numerical concepts prefigured a number of later developments in this field.

Two centuries later, Josef Matthias Hauer depicts the synesthetic relationship between music and color. Synesthesia is a neurological phenomenon that occurs when the brain mixes two or more senses. the 12-Part Colour-Sound Circle, matches musical and chromatic tones. It illustrates Hauer's innovative approach to musical composition and his efforts to combine aural and visual art.

Algorithmic thinking, an ancestral and universal composition tool

The exhibition also highlights the algorithmic processes specific to certain ancestral musical traditions around the world, from Indonesian gamelan to Central African polyphonic music and North Indian rāga. All testify to the universality of algorithmic thinking in music and the diversity of its expressions.

Gamelan and North Indian classical music



The gamelan is a traditional Indonesian instrumental ensemble made up of a variety of percussion instruments, mainly chimes (gongs) and/or blade keyboards. Instruments in the same ensemble are interdependent, playable only collectively, made simultaneously (from the same bronze, iron or bamboo) and tuned only to each other. In the exhibition, a real Balinese metallophone and an interactive application help visitors to see and understand the complexity of this musical ensemble, its playing and its compositions, whose overlapping rhythms and interlocking cyclical patterns are the result of a precise, community-based algorithmic process.

A parallel installation highlights the algorithmic principles that characterize North Indian classical music. Developed by Martin Rohrmeier (Professor of Digital Musicology at EPFL and co-curator of the exhibition) and Richard Widdess (Professor Emeritus of Musicology at the School of Oriental and African Studies, University of London), it digitally illustrates the complex melodic frameworks of this traditional music, whose strict rules govern note selection, progressions and emotional expressions.

2024

Reproducing human musical performance

The idea of reproducing the human musical gesture has fascinated people down the centuries, from the Islamic Golden Age to the first computers and the watchmakers of the 18th century. The exhibition presents a number of objects, veritable gems of ingenuity and technique, that embody this quest and the progress of their time.

The Persian Automaton and The Musician

Circa 17th century

This illustration of an automaton from the Islamic Golden Age demonstrates the advanced knowledge of the period in terms of engineering, clock-making and art. Designed to entertain and impress royal courts and wealthy households, the machine shown uses gears, levers and waterwheels to produce music automatically. A true technical feat, this automaton demonstrates the extent to which technological progress has always been applied to the world of music, and embodies an early form of computational and systematic thinking.

1772–1774

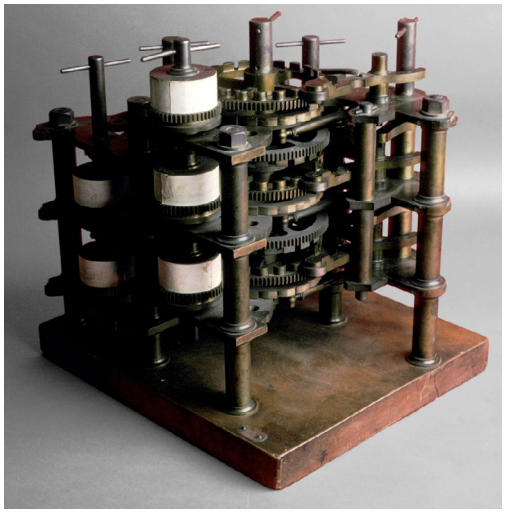
Heirs to Persian creations, the automata of the 18th and 19th centuries are also remarkable examples of human ingenuity. La Musicienne, by Swiss watchmaker Henri-Louis Jaquet-Droz, uses her mechanical fingers to operate the keys of a small organ, breathes as she plays, and ends each performance with an elegant bow. A video in the exhibition explains the sophisticated mechanism behind the organ.

Manipulate symbols representing musical notes

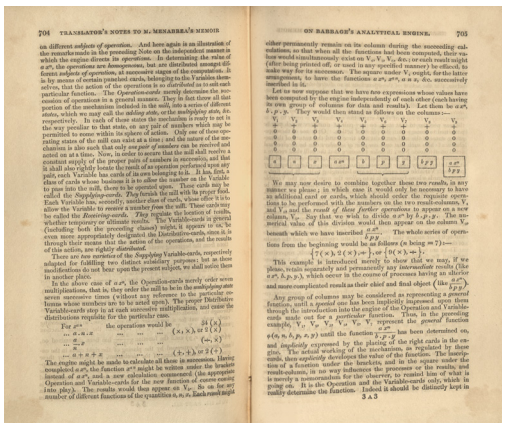
As the idea of performing rudimentary mathematical operations using mechanical machines emerged, so did the possibility of manipulating symbols that represented not numbers but musical notes.

Babbage's difference machine and Lovelace's notes

1822/1879



1843



Conceptualised between 1822 and 1834 by Charles Babbage, then produced as a partial prototype by his son around 1879, the Difference Machine No. 1 is an automatic mechanical calculator. Its machinery and system of punched cards, inspired by eighteenth-century automata and the Jacqard loom, enabled it to perform only very simple calculations, but made it one of the ancestors of the modern computer.

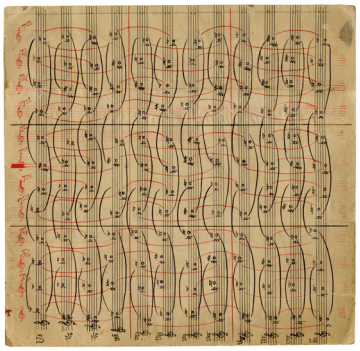
In her writings published in 1843, the English mathematician and scholar Ada Lovelace, a pupil of Babbage, hypothesised that the machine could manipulate symbols representing notes and musical compositions. She thus foreshadowed the modern use of computers for musical synthesis and composition by means of algorithms and codes. Today she is regarded as a pioneer of computer programming.

Thinking up new sound horizons

To push back the boundaries of the musical world, it was first necessary to break with tradition. Two centuries after the foundations of tonal music were laid, the composer and theoretician Arnold Schönberg sought to emancipate himself from them and go beyond the notion of harmony by producing ‘atonal’ pieces.

Schönberg's dodecaphonic system

1924–1926



Arnold Schönberg (1874-1951) was an influential Austro-American composer, teacher, music theorist, writer and visual artist who pioneered twelve-tone musical techniques. Breaking with centuries of tradition, he departed from nineteenth-century harmony to produce ‘atonal’ pieces from 1908 onwards.

In 1923, he developed a revolutionary technique known as dodecaphony, or the ‘twelve-tone technique’. This technique consisted of arranging the twelve notes of the chromatic scale in single rows or series, with no tonal centre. A series of twelve notes is chosen so that no note is repeated until all twelve have been played.

By organising atonal freedom into a coherent system, dodecaphony sought to explore new forms of musical expression beyond the limits of atonal music.

In the exhibition, the public is invited to listen to his *Suite op. 29* and discover several documents that give a glimpse into Schönberg's compositional process.

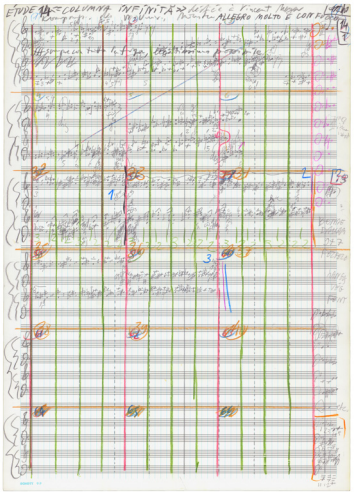
Going beyond the limits of the human being

An evolution of barrel organs and orchestrions, the player piano was very popular in the early twentieth century, before being supplanted by radio and phonographs. A copy of its contemporary digital heir takes pride of place at the centre of the exhibition, providing an opportunity to listen to modern and contemporary works that continue to explore automated musical performance, beyond the physical limits of the human being.

Study 41B by Nancarrow and Étude 14A by Ligeti

1969–1977

1985



Patented in 1890, the player piano used foot-operated pneumatics to read rolls of perforated paper and operate the keys accordingly. The first medium for sound recording and music playback, it facilitated the creation of ever more complex compositions and made access to them more democratic. Its original mechanical version and its digital evolution have enabled many composers to compose works that surpass human interpretative capacities.

Study 41B is a work for mechanical piano by the American composer and pioneer of algorithmic music, Conlon Nancarrow. His compositions often use algorithmic techniques to generate temporal and musical structures that are impossible for humans to interpret.

György Ligeti's *Etude 14A* is also a work written specifically for player piano. It explores interwoven ascending motives that provoke auditory illusions such as Shepard's infinite scale of tones, which seem to rise endlessly. A composition at the very edge of what is humanly possible.

The transformative impact of technology on musical creation

Many of the works presented in the exhibition illustrate the extent to which technological innovation is broadening the scope of musical possibilities. Driven by the advent of techniques for generating and modulating synthetic sounds, electronic music will give rise to new sonorities that will have a lasting impact on the world's musical landscape.

The Gramophone and Studie II by Stockhausen

1930

The first gramophones, phonographs and record players had a profound influence on the development of music, including electronic and algorithmic genres.The Expert Senior Gramophone featured in the exhibition dates from the 1930s, and was the first to feature a bell whose shape was mathematically calculated to provide optimum sound quality.

Today's music owes much to the emergence of recording technologies that have transformed musical sound into data. Invented by Thomas Edison in 1877, the phonograph was the first device capable of recording and reproducing sound.

1954

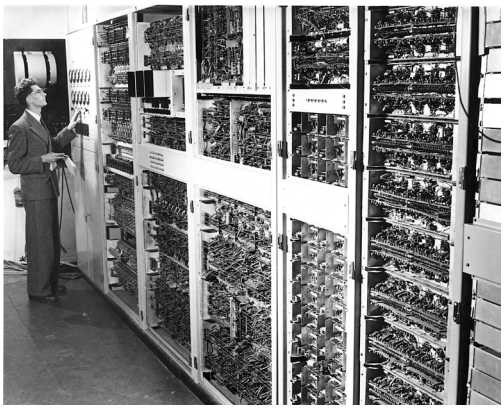
In the wake of these innovations, German composer Karlheinz Stockhausen's *Studie II* is a landmark in the history of music, representing one of the first explorations of purely electronic sound composition. With a meticulous, mathematical approach, using tape assembly techniques and synthetic sounds generated and manipulated by electronic means, Stockhausen demonstrates the potential of these technologies in the creation of new sound experiences.

Using computer programmes to create musical artworks

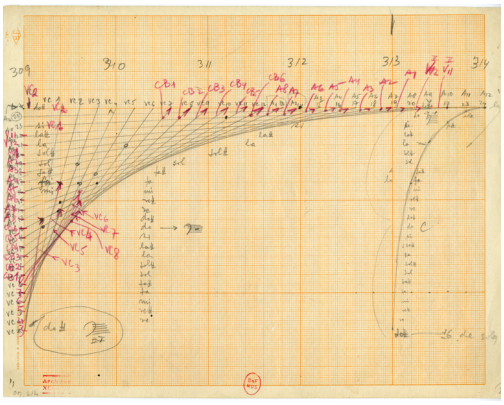
Whereas the automaton reproduced human musical performance, the advent of computers heralded a new era for the act of sound production. Starting with the very first experiment in computer-generated music, the exhibition then plunges into the creative world of a composer who pioneered algorithmic computer composition, Iannis Xenakis.

The CSIRAC computer and Iannis Xenakis

1952



1954–1994



Completed in 1949, CSIRAC was the first Australian computer and the fourth in the world. In 1951, mathematician and computer programmer Geoff Hill succeeded in getting it to run a program which, using a small loudspeaker, resulted in a simple melody, the first ever played by a computer. CSIRAC marked a key moment when mathematical coding and musical expression converged for the first time, illustrating once again the human desire to explore the artistic potential of new technologies.

The exhibition focuses on the pioneering Greek-French composer, architect and mathematician Iannis Xenakis (1922-2001), renowned for his groundbreaking work in computer-assisted algorithmic composition. Through an immersive sound installation (→ page 24), an architectural model, an innovative sound creation interface (→ page 26) and an interactive installation giving access to his archives, it celebrates his revolutionary work, characterised by the use of computer programmes, mathematical structures and probability systems to generate musical compositions.

The emotional and immersive dimensions of electronic music

The Concert Room is an immersive space that invites you to discover two major and masterful works of spatialised algorithmic music. Faithful to the original performance conditions, it allows the audience to fully appreciate the complex spatial and algorithmic elements of these visionary compositions.

The spatialised works of Nono and Xenakis

1977–1978

A landmark in the history of electronic music, the first is one of the seminal works by the Greek-French composer, architect and mathematician Iannis Xenakis. *La Légende d'Eer* is a complex immersive sound experience, composed using mathematical models. A continuous flow of sounds and textures, the work invites the audience to become deeply immersed in an ever-changing soundscape. It illustrates Xenakis's revolutionary approach, translating his mathematical and architectural visions into music. Commissioned for the opening of the Centre Georges Pompidou in Paris, it was composed to be performed in a dedicated architectural and acoustic space called Diatope, designed by Xenakis himself.

1984–1985

The second, *Prometeo. Tragedia dell'ascolto*, is one of the most ambitious works by the Italian composer Luigi Nono. Originally performed in an architectural space designed by Renzo Piano, it is a unique fusion of music, theatre and spatial acoustics, immersing the audience in a profoundly meditative and contemplative state of listening. An important work in the canon of contemporary music, it illustrates Nono's relentless quest for new musical and expressive possibilities.

Interacting with the machine

As digital tools develop and become more widely available, artists are integrating their presence and their relationship with the human body. This exhibition presents works that explore this interplay, injecting a new sensibility and physicality into the growing flow of electronic music.

The Hands and the Lady's Glove

1984-2000

In 1984, the Dutch composer, performer, musician and inventor Michel Waisvisz created a portable instrument, an extension of his body, which he called *The Hands*. Equipped with sensors capable of detecting the movements and gestures of his hands, these two controllers enabled him to manipulate the sound thus produced in a dynamic and nuanced way.

In the same vein, Laetitia Sonami created her emblematic work, the *Lady's Glove*, in 1991. The fourth generation of this elbow-length glove is equipped with numerous sensors capable of translating the movements of the artist's hand and body into sound, foreshadowing today's wearable technologies. Born in France and living in the United States since 1975, Laetitia Sonami is a sound artist, performer and researcher who has pushed back the boundaries of electronic music and gestural performance.

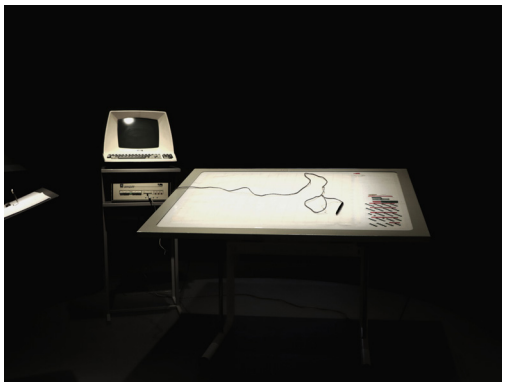
1991–1994

Democratising digital music creation

Just as Kircher's *Arca Musaritmica* made it possible for anyone with no musical knowledge to compose complex music, other examples over the centuries demonstrate a quest for democratisation shared by many artists. As well as involving the listener in the musical process, these works also encourage physical and emotional involvement.

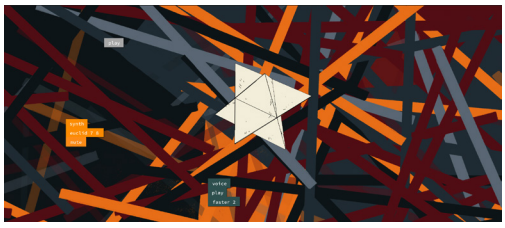
UPIC and Life Codes

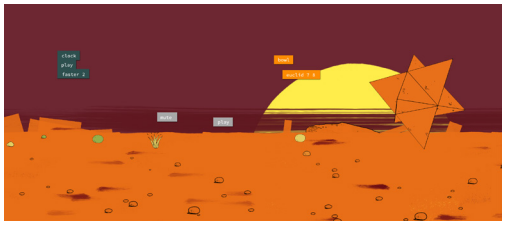
1985

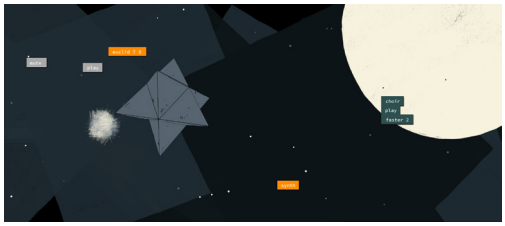


In 1985, the composer Iannis Xenakis invented the UPIC, a digital computer system that converts the visual representation drawn by the user on its graphic interface into sound. With this computer, Xenakis sought to democratise the composition process and make it accessible to those with no formal musical training. He was also convinced that music could be composed by visual means, reflecting his training in architecture and mathematics.

2024







Decades later, Alexandra Cárdenas, a Colombian composer and live coder based in Berlin, took a similar approach with her interactive and immersive sound and visual installation, *Life Codes*. Here, users are assigned a cursor by scanning a QR code with their phone, and take part in a performance of algorithmic music in real time. Pieces of code, floating among the illustrations, which are also generated live, can be moved and assembled to change the composition being played.

Music in the age of artificial intelligence

Artificial intelligence has already had a profound impact on the field of music, and promises to further revolutionise the creation, reception and understanding of music. In the exhibition, a series of works embrace these new tools, raising questions about their place, role and future.

Voyager and 13 Ways of Looking at AI, Art & Music

1986–

Created in 1986, *Voyager* was originally a software programme designed by composer George Lewis in which human improvisers interact with a programme that analyses their music in real time. After 2004, *Voyager* became an interactive improvising pianist who performs with solo instrumentalists, chamber ensembles and symphony orchestras. Versions after 2022 incorporate machine learning algorithms that recognise musical gestures. In the exhibition, a video shows the execution of the computer programme, and the work is played on the player piano.

2021–2024

13 Ways of Looking at AI, Art & Music is an essay by Irish composer and performer Jennifer Walshe that proposes radical new ways of thinking about AI. The five works presented in the exhibition embody the 13 ways of looking at AI presented in the essay.

Curation

Prof. Sarah Kenderdine

Prof. Sarah Kenderdine is the curator-at-large of EPFL Pavilions, and director of EPFL's Laboratory for Experimental Museology (eM+), where she conducts research at the cutting edge of interactive and immersive experiences for galleries, libraries, archives and museums.

A pioneer in the fields of digital heritage, digital museology, digital humanities and data visualisation, she is regularly invited to speak at international forums. In addition to her exhibition work, she designs large-scale immersive visualisation systems for the public, industry and researchers. Sarah is the author of numerous scientific articles and six books. She has created 80 exhibitions and installations for museums worldwide.

In 2017, Sarah was appointed Professor of Experimental Museology at EPFL) and Director of EPFL Pavilions.

Prof. Martin Rohrmeier

Prof. Martin Rohrmeier is Director of the Digital Musicology and Cognitivism Laboratory (DCML) at EPFL.

After studying philosophy, mathematics and musicology in Bonn, Germany, he obtained his master's degree and then his doctorate in musicology at Cambridge University. He conducted three postdoctoral research projects on computer modelling of music at Microsoft Research, Freie Universität Berlin and MIT respectively. In October 2014, he was appointed to the Chair of Systematic Musicology and Music Cognition at Technische Universität Dresden, Germany. In 2017, Professor Rohrmeier joined EPFL as Associate Professor for Digital Musicology and acts as Director of the Doctoral School of Digital Humanities.

The overarching research question is simply stated as: ‘How does music work? Within this framework, the laboratory's main research interests lie in bringing together music theory, computer science and cognition. The research combines methods from music theory, digital musicology, corpus research, cognitive science, linguistics, philosophy and music analysis, and aims to take the methodological spectrum of musicological research to a new level.

Prof. Paul Doornbusch

Prof. Paul Doornbusch is Adjunct Professor of Computer Science at the University of Melbourne, Associate Dean of the Australian College of the Arts and Visiting Professor at the BNU-HKBU United International College Zhuhai.

He is also responsible for the audio production programme. With over ten years of international experience in practice and teaching, he is considered one of the major players in the electronic and computer music scene in Australia.

Composer, sonologist, researcher and occasional performer, works primarily with algorithmic composition systems for traditional instruments and electronics.

His work has been presented internationally in concerts in Europe, the USA, Canada and Australia.

Prof. Jonathan Impett

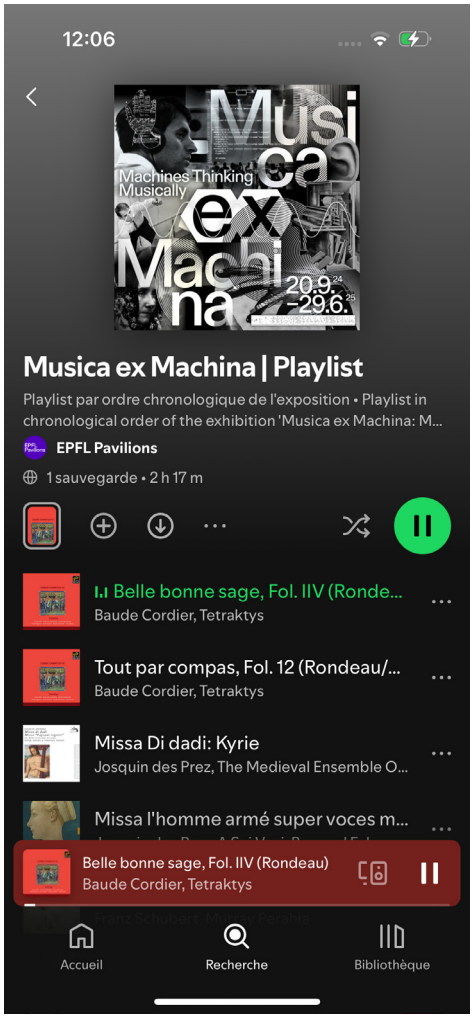
Prof. Jonathan Impett is Director of Research at the Orpheus Institute in Ghent and Associate Professor at Middlesex University in London.

His professional and research activities as a trumpeter, composer and theorist cover many aspects of contemporary musical practice. He heads the ‘Music, Thought and Technology’ research group at the Orpheus Instituut. His research focuses on the discourses and practices of contemporary musical creativity, in particular on the nature of the contemporary musical artefact situated in a technological context.

He is a long-standing member of the 18th Century Orchestra and the Amsterdam Baroque Orchestra. He is also a member of the experimental chamber ensemble Apartment House. As a soloist, he has premiered works by composers such as Scelsi, Berio, Harvey and Finnissy. He has directed the electronic chamber ensemble Metanoia, and was awarded the Ars Electronica prize for his development of the Meta-Trumpet(er).

Playlist

A selection of works from the exhibition can be discovered via a Spotify playlist accessible via the QR code below.



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→ Télécharger le guide de l'exposition et les images