

Barbican marks beginning of 2019 *Life Rewired* season

For release: Monday, 14 January, 2019

The Barbican marks the beginning of 2019's *Life Rewired* season, exploring what it means to be human when technology is changing everything, with a new short film series, Fertility Fest programming and new free video installation.

The Barbican's Life Rewired Shorts launch today with the release of **Gary Dumbill's** *Uncanny Valley*, an animated world populated with familiar scenes, landscapes, people and objects that feels strange yet familiar. Now available on the [Barbican's YouTube channel](#), this short film is the first in a series of twelve film commissions inspired by *Life Rewired*, the Barbican's 2019 arts and learning season.

The Life Rewired Shorts, produced by global video commissioning platform **The Smalls**, will present a unique take on the issues at the heart of the Barbican's 2019 *Life Rewired* season, tackling themes including Artificial Intelligence, ageing, relationships and technology, modern fertility and surveillance. A new film will be released on the first Friday of each month throughout 2019 and be shown in the new Life Rewired Hub, a new venue for public programming on the Barbican's Level G opening 4 February, 2019.

Designed by architects **Dyvik Kahlen**, this flexible new structure will host a year-long programme of talks, performances, workshops and residencies, co-programmed in partnership with the **Royal Society** and the **British Council**, inviting audiences to explore the dizzying impact of technological and scientific change on what it means to be human today.

The Hub will also house an exhibition featuring a series of specially commissioned essays from writers and thinkers – including **James Bridle**, **Urvashi Aneja** and **Jaron Lanier** – who are navigating the complex, vast, and all-too-often confusing discourse taking place around the impact of technology on our lives.

Opening 23 February on Level G, **Nye Thompson's** video installation *INSULAE (Of the Island)* will contemplate the impact of island geography on national identity in a perpetually looping virtual tour of the waters just off the British mainland.

Also newly announced today is the full line-up for **Fertility Fest**, this year presented in association with the Barbican. In its third year, Fertility Fest features a unique programme bringing together artists, audiences and medical specialists to discuss the subject of modern families and the science of making babies. Tickets are now on sale for all Fertility Fest events on the [Barbican's website](#).

In addition to the world premiere of *Avalanche: A Love Story*, a dramatisation of **Julia Leigh's** memoir about her IVF journey, Fertility Fest highlights include the Modern Families Project, which will see six emerging young artists take over the Life Rewired Hub from 6–12 May, transforming it into an 'installation of ideas' for a new piece of digital campaigning artwork. Other events include the Big Fat Festival Day on 3 May, The Queer Family, an evening of creativity and conversation celebrating queer families in all their forms, and The Fertility Freedom Scratch night, an open mic showcase of new and emerging work.

Further dates for Barbican Cinema's perennial Science on Screen season, in partnership with the London Mathematical Laboratory, are also announced today. Over the course of 2019, a series of screenings and presentations by leading scientists will uncover the

connections between advances in technology and cinema, and explore how filmmakers are responding to the impact and pace these developments are having on society.

Newly announced Science on Screen events include a screening of **Damien Chazelle's** *Whiplash* with a presentation by **Elaine Chew**, professor at Queen Mary University of London, about how we use computers to understand how musicians mark and shape time. **Thore Graepel**, principal research scientist at DeepMind, the world's leading AI research organisation, will give a presentation following a screening of **Greg Kohs'** documentary *AlphaGo*, discussing how the AlphaGo computer programme's inventive winning moves overturned conventional wisdom about the ancient Chinese game of Go and what they might mean for the future of Artificial Intelligence. In September, a screening of **Stanley Kubrick's** 1968 classic *2001: A Space Odyssey* will be followed by a talk by **Peter Robinson**, Professor of Computer Technology at the University of Cambridge, about progress in the development of human-like machines.

Louise Jeffreys, Artistic Director, Barbican said:

'With scientific and technological change having the potential to alter everything we think we know about being human, the arts are uniquely placed to find creative and accessible ways to present and respond to the complex ideas and technological developments that will affect us all. The Barbican's cross-arts approach enables us to offer something for everyone, presenting work that showcases the creative potential of new technology, while starting a conversation about the role we want it to play in our world.'

The first performance in the *Life Rewired* programme is **Pantha Du Prince's** *Conference of Trees* on 19 January. *Conference of Trees* is a new audio-visual project by Berlin-based techno composer-producer Hendrik Weber, aka Pantha Du Prince, exploring the communication of trees and translating it into music with a live ensemble.

Opening 31 January in The Curve is *Tonight The World* by recent Jarman-award winning artist and filmmaker **Daria Martin**. In this, her first solo commission for a major London public gallery, Martin combines film and computer gaming technology to create an atmospheric environment in which visitors can explore the vivid memories of her grandmother, an artist who fled from the Holocaust.

Previously announced highlights from the *Life Rewired* programme include:

- [*AI: More Than Human*](#) – a major new exhibition offering an unprecedented survey of creative and scientific developments in Artificial Intelligence, examining the evolution of the relationship between humans and machines. Featuring immersive new commissions and projects that allow visitors to experience AI first hand from artists, researchers and scientists including **Joy Buolamwini, Stephanie Dinkins, Mario Klingemann, Kode 9, Lawrence Lek, Massive Attack, Lauren McCarthy, Yoichi Ochiai, Neri Oxman, Anna Ridler, Chris Salter, Sam Twidale and Marija Avramovic** and **Universal Everything**, and the interactive **Data Space**, which demonstrates how AI works and its potential to revolutionise how we live. Asking big questions around what it means to be human, whether machines will ever outsmart us and what happens if they do, *AI: More Than Human* will provide an essential guide for anyone curious about AI's role in our current and future society
- [*Strange Loops*](#) – a series of collaborative projects and events inspired by Pulitzer Prize-winning book *Gödel, Escher, Bach: An Eternal Golden Braid* by Douglas Hofstadter, and exploring whether a machine can become conscious or creative. With mathematician **Marcus du Sautoy**, musician **Mahan Esfahani**, actor and mathematician **Victoria Gould**, composer **Robert Thomas** and visual artist **Ben**

Kreukniet

- Two ambitious new projects from American artist **Trevor Paglen**:
 - [Sight Machine](#), a collaboration with **Kronos Quartet**, which focuses attention on the growing ubiquity of AI technology in our lives by analysing a shared human experience – a concert – with machine-vision systems
 - [A new Curve commission](#) that responds to the themes of the *Life Rewired* season and continues the artist's preoccupation with the historical moment we live in
- [Smart Robots, Mortal Engines: Stanislaw Lem on Film](#), a film season devoted to cinematic adaptations of the work of Polish science fiction author **Stanislaw Lem**, and *Anime's Human Machines* which explores how Anime has imagined the future relationship between humans and technology
- *Unclaimed*, a free Level G installation by **The Liminal Space** connected to a major research project undertaken with 2,000 over 70s in Camden to explore what it means to grow old in today's society and put forward new narratives around ageing
- The world premiere of a new Barbican-commissioned work by composer **Emily Howard**, Director of the RNCM's Centre for Practice & Research in Science & Music (PRiSM), to open the **London Symphony Orchestra** and **Sir Simon Rattle's** 2019 season
- [Tesseract](#), a new piece combining choreography and 3D film that explores the relationship between the human form and technology, developed by former Merce Cunningham Dance Company members **Rashaun Mitchell** and **Silas Riener**, along with video artist **Charles Atlas**

A number of projects in the *Life Rewired* season have been generously supported by Wellcome.

Life Rewired full programme details

Cross Arts

[AI: More Than Human](#)

16 May–26 Aug 2019, Barbican Centre

Media View, 15 May 2019, 10am –1pm

#morethanhuman

An exhibition conceived and curated by **Barbican International Enterprises**

Co-produced with **Groninger Forum**

AI: More Than Human is an unprecedented survey of creative and scientific developments in Artificial Intelligence, exploring the evolution of the relationship between humans and technology.

It tells the rapidly developing story of AI, from its ancient roots in Japanese Shintoism and Ada Lovelace and Charles Babbage's early experiments in computing, to AI's major developmental leaps from the 1940s to the present day.

With digital media, immersive art installations and a chance for visitors to interact directly with exhibits, this festival-style exhibition takes place all over the Centre to

examine the subject from multiple, global perspectives. It will ask the big questions: What does it mean to be human? What is consciousness? Will machines ever outsmart a human? And how can humans and machines work collaboratively?

Told through some of the most cutting-edge research projects, from **Deepmind, Jigsaw, Massachusetts Institute of Technology (MIT) Computer Science Artificial Intelligence Laboratory, Sony Computer Science Laboratories, Google Arts and Culture, Google PAIR, Affectiva, Wake-Forest-Institute-for-Regenerative-Medicine** and **Wyss Institute** and **Emulate Inc, Hiroshi Ishiguro**, who famously created a robot version of himself.

The exhibition also presents new commissions and projects by artists, researchers and scientists **Memo Akten, Joy Buolamwini, Es Devlin, Stephanie Dinkins, Daisy Ginsberg, Mario Klingemann, Kode 9, Lawrence Lek, Lauren McCarthy, Yoichi Ochiai, Neri Oxman, Anna Ridler, Chris Salter, Sam Twidale** and **Marija Avramovic, Universal Everything, Stefan Hurtig & Detlef Weitz** and **Rhizomatiks**.

At the heart of the main exhibition in The Curve is the **Data Space**. This responsive environment invites visitors to experience how AI works through a series of digital interactives looking at AI's real-life application and addressing ethical issues such as bias, control, truth and privacy.

In **Sony CSL's Kreyon City**, visitors plan and build their own city out of LEGO, learning about the complex interplays within good cities. In **Memo Akten's Learning to See**, a neural network creates landscape artworks from everyday household objects - it can see only what it already knows, just like us; **Lauren McCarthy's** experiment to become a human version of a smart home intelligence system explores the tensions between intimacy vs privacy, **Affectiva's** Human Perception AI tracks drivers' emotions and reactions through a driving game and **Joy Buolamwini** examines racial and gender bias in facial analysis software.

Elsewhere in The Curve, highlights include:

Artist and electronic musician **Kode 9's** newly commissioned sound installation on the golem; **Mario Klingemann's Circuit Training**, which invites visitors teach a neural network to create an evolving piece of live art; **Anna Ridler's** piece inspired by 'tulip-mania' in 1630s Netherlands, which looks at the politics and process of using large datasets to produce a piece of art; **Stephanie Dinkins's Not The Only One**, which looks at AI and race, gender and ageing; Architect, designer and MIT Professor **Neri Oxman** and The Mediated Matter Group, who explore what it means to design (with) life; Japanese media artist **Yoichi Ochiai** who presents projects, including a half-real, half-artificial butterfly; **Resurrecting The Sublime** by **Christina Agapakis** from Ginkgo Bioworks, **Alexandra Daisy Ginsberg**, and **Sissel Tolaas** which brings back the smell of flowers made extinct through human activity; Japanese art and technology specialists Daito Manabe from **Rhizomatiks**, who presents his new research project to question the cognitive relationship between sound and images.

Massachusetts Institute of Technology (MIT), Woods Hole Oceanographic Institute (WHOI), Australian Center for Field Robotics and **NASA** present pioneering research that took place in Costa Rican waters on Schmidt Ocean Institute's Research Vessel Falkor, using the deep sea as a testbed for exploration of Europa, one of Jupiter's moons; **Wake-Forest-Institute-for-Regenerative-Medicine** is engineering tissues and organs made from human cells in the lab and **Wyss Institute** and **Emulate Inc** present their human Organs-on-Chips technology.

A series of new digital commissions will also run across the Barbican's Level G throughout the exhibition.

Digital art and design collective **Universal Everything** will create a new installation in which visitors can interact with an AI version of themselves; **Lawrence Lek's** site-specific open-world video game *2065* gives visitors a chance to play the role of an AI and imagine what life might be like in future years and **Chris Salter's** *Phos* is a large-scale, dynamic installation that uses sensing and machine learning to inform its patterns, rhythm and behaviour. Artist and designer **Es Devlin's** *PoemPortraits* is a social sculpture that brings together art, design, poetry and machine learning. It has been created in collaboration with Google Arts & Culture and Ross Goodwin.

[Marcus du Sautoy, Mahan Esfahani, Robert Thomas, Ben Kreukniet, Victoria Gould – Strange Loops](#)

Mar 2019, Various Barbican Venues

Strange Loops is a collaboration between mathematician **Marcus du Sautoy**, musician **Mahan Esfahani**, composer **Robert Thomas**, visual artist **Ben Kreukniet**, and performer **Victoria Gould**. In a series of curated events at the Barbican in March 2019, this collaboration seeks to create musical, visual and theatrical 'strange loops' to explore what it means to be human and whether a machine can become conscious or creative. It will leave audiences wondering what distinguishes human and machine.

The project is based on *Gödel, Escher, Bach: An Eternal Golden Braid*, a Pulitzer Prize-winning book by Douglas Hofstadter which celebrates its 40th anniversary in 2019, about the common themes in the lives and works of logician Kurt Gödel, artist M. C. Escher and composer Johann Sebastian Bach. In his books, Hofstadter examines the concept of a 'strange loop' to explain consciousness and the sense of 'I'. A 'strange loop' is a hierarchy of levels, each of which is linked to at least one other. A strange loop hierarchy is tangled, in that there is no well-defined highest or lowest level. Moving through the levels, one eventually returns to the starting point.

Strange Loops launches with a **performance lecture** entitled *The Eternal Golden Braid* on Artificial Intelligence and the arts. With the help of harpsichordist Mahan Esfahani and composer Robert Thomas, mathematician Marcus du Sautoy guides the audience through the extraordinary architecture of Bach's work and beyond, explores the paradoxical world of Escher and introduces the elusive logical ideas of Gödel. Bach's work has always been considered mathematical but is it possible to algorithmically generate music that convinces an audience that it is in fact composed by Bach and not a machine? As part of this event, Mahan Esfahani performs a musical Turing test with the audience to see if it can differentiate between music by Bach and a piece created by a machine.

The second event in the series is an algorithmic **installation** titled *Behind a Facade of Order*. Dutch artist Escher was fascinated by spatial loops and seemingly impossible worlds. Inspired by the self-referential, the infinite, and the nature of illusion, this installation by Ben Kreukniet creates a complex digital world of feedback loops and visual paradox, building a tangled hierarchy between human, machine and architecture.

The final chapter in this project is a **theatrical performance** called *I is a strange loop* featuring mathematicians and actors Marcus du Sautoy and Victoria Gould – both collaborators on Complicité's hit show *A Disappearing Number*. This two-hander is an intriguing take on mortality, consciousness and artificial life. Alone in a cube that glows in the darkness, X is content with his infinite universe and abstract thought. But then Y appears, insisting they interact, exposing him to her sensory and physical existence. Each begins to hanker after what the other has until a remarkable thing happens...involving a strange loop.

Strange Loops is generously supported by the **Royal Society**.

Art & Design

[Daria Martin – *Tonight the World*](#)

Thu 31 Jan–Sun 7 Apr 2019, The Curve

The Barbican presents *Tonight the World*, London-based artist, filmmaker and 2018 Jarman award-winner **Daria Martin**'s first solo commission for a major London public gallery, in The Curve.

Combining film and computer gaming technology, Martin creates an atmospheric environment, in which visitors can explore the vivid memories of her grandmother, an artist who fled from the Holocaust. Martin draws on an extensive archive of her grandmother's dream diaries amounting to over 10,000 pages. These forensically recorded accounts were created over a 35 year period, initially for the purposes of psychoanalysis. Martin's grandmother's dreams frequently return to the curious and traumatic history of her childhood home, a modernist villa, still standing today in the city of Brno located in then Czechoslovakia.

Entering the exhibition, visitors encounter a film created using computer gaming technology which journeys through a rendering of the villa in Brno as it was when Martin's grandmother lived there. A second film, shot with actors, reveals a reimagining of five of the dreams set within the house. Martin envisages that the installation will become simultaneously a portrait of her ancestor, a self-portrait and an exploration of intergenerational trauma, migration, loss, and resilience.

Daria Martin is an internationally exhibited artist living in London, and Professor of Art at The Ruskin School of Art, University of Oxford. Martin's films aim to create a continuity between disparate media such as painting and performance, between people and objects, and between internal and social worlds.

[Trevor Paglen](#)

Sep 2019–Jan 2020, The Curve

Barbican Art Gallery has commissioned the artist and geographer **Trevor Paglen** to create a new work for The Curve. Paglen's work spans image-making, sculpture, investigative journalism, writing and engineering. Among his primary concerns is learning to see the historical moment we live in and developing the means to imagine alternative futures. In 2012 Paglen launched an artwork into distant orbit around Earth in collaboration with Creative Time and MIT, contributed research and cinematography to the Academy Award-winning film *Citizenfour* in 2014, and created a radioactive public sculpture for the exclusion zone in Fukushima, Japan in 2015. In autumn 2018, he launched a satellite into outer space with the Nevada Museum of Art.

Paglen's visual work has been exhibited at the Smithsonian American Art Museum, Washington D.C.; The Metropolitan Museum of Art, New York; Tate Modern, London; as well as numerous other solo and group exhibitions. He won the MacArthur Genius Grant in 2017 and has been nominated for the Artes Mundi 8 Award.

Cinema

[Science on Screen 2019](#)

Tue 5 Feb 2019–Tue 10 Dec 2019, Cinema 2

Reality meets fiction in this year-long series of six talks and films which uncovers the connections between science, technology and cinema. In partnership with the London Mathematical Laboratory, a series of film screenings will be accompanied by talks which

explore how filmmakers are responding to the impact that advances in technology are having on society.

[Robocop \(18\) + Presentation by Will Jackson](#)

Tue 5 Feb, Cinema 2

(US 1987, dir Paul Verhoeven, 102 mins)

The 2019 season begins with Paul Verhoeven's cult classic *Robocop*, which follows a terminally-wounded cop who returns to the force as a cyborg in a dystopian, crime-ridden Detroit. **Will Jackson**, founder and director of robotics company Engineered Arts, will muse on whether technology is to blame for its misuse. Who are the villains, the machines or their masters?

[Whiplash \(15\) + Presentation by Elaine Chew](#)

Tue 7 May, Cinema 2

(UK 2014, dir Damien Chazelle, 106mins)

At this screening of Damien Chazelle's *Whiplash*, **Elaine Chew**, Professor of Digital Media in the Centre for Digital Music at the School of Electronic Engineering and Computer Science, Queen Mary University of London, will speak about how we use computers to understand how musicians mark and shape time, and how the same methods allow us to capture and study rhythms in abnormal heartbeats.

[AlphaGo \(#\) + Presentation by Thore Graepel](#)

Tue 18 June, Cinema 2

(USA 2017, dir Greg Kohs, 90mins)

Greg Kohs' documentary *AlphaGo*, follows the first formal match of the computer programme, AlphaGo, against the European Champion Fan Hui to its landmark win against the legendary player Lee Sedol playing the ancient Chinese game of Go, a feat previously thought to be at least a decade away. Following the screening, **Thore Graepel**, principal research scientist at DeepMind, the world's leading AI research organisation and member of the team that developed the computer programme will explain how its inventive winning moves overturned conventional wisdom about this ancient game and what they might mean for the future of artificial intelligence.

[2001: A Space Odyssey \(U\) + Presentation by Peter Robinson](#)

Tue 17 September, Cinema 2

(UK/USA 1968, dir Stanley Kubrick, 149mins)

Half a century has passed since Stanley Kubrick's film was released, but it remains as a landmark in both the quality of its cinematography and its assessment of technology and artificial intelligence. The quiet determination of a computer system to ensure the successful conclusion of its mission, even at the expense of human lives, is far more threatening than any number of homicidal humanoid robots. **Peter Robinson**, Professor of Computer Technology at the University of Cambridge, will discuss progress in the development of human-like machines and compare their threats to those posed by computer systems hidden in the fabric of the world around us.

[Smart Robots, Mortal Engines: Stanislaw Lem on Film](#)

Thu 11–Tue 16 Apr 2019, Cinema 3

Curated by Barbican Cinema in partnership with **Kinoteka Polish Film Festival**, this season presents a selection of lesser-known adaptations of the work of Polish author **Stanislaw Lem** (1921-2006). Lem wrote across genres, but is best known in the West for his science fiction – a realm inhabited by robots, cyborgs and intelligent machines of all

varieties. Much of his work is concerned with the encounter of human and Artificial Intelligence, and by extension with what it means to be conscious, what it means to be human.

In *The Interrogation of Pilot Pirx* (Marek Piestrak, 1979) the commander of a flight to Saturn must work out which of his crew are androids and which human – is it possible to distinguish the two when all physical clues are eliminated? In *Maska* (Stephen & Timothy Quay, 2010) a killer-robot in the form of a beautiful woman gradually discovers her true identity and, summoning all her will, tries to subvert her pre-programming and not kill the man she was made to destroy. In *Solyaris* – screening in the rare Russian TV version from 1968 directed by Lidiya Ishimbaeva and Boris Nirenburg – an astronaut is confronted with a replica of his dead wife, an emanation of the planet he is orbiting; is she to be discounted as a mere simulacrum, or should she be respected and loved as a human?

[Anime's Human Machines](#)

Thu 12–Mon 30 Sep 2019, Cinema 3

In 1963 Osamu Tezuka's TV series *Astro Boy* brought a new kind of robot to Japan. The robot child with a loving heart began a line of compelling, conflicted cyborgs in Japanese animation whose existence challenges humanity.

Japanese animation has embraced robotics, cybernetics and Artificial Intelligence as major themes. At its most ambitious, it uses these themes to explore complex moral and social questions: humanity's responsibility for its actions, response to the Other, greed, short-termism and failure to care for the ecosystem.

Curated by anime expert **Helen McCarthy** (*The Anime Encyclopedia*) and produced by Barbican Cinema, this season of eight titles examines the challenge of the human-machine interface. Featuring classic Anime from 1989 onwards, the films touch on various aspects of humanity's response to technological change, demonstrating how views about technology have shifted over the years, but how humanity still refuses to take responsibility for the impact of our actions. These films give no answers, but suggest responses.

In *Ghost in the Shell* (Mamoru Oshii, 1995) an Artificial Intelligence named the Puppet Master is roaming cyberspace hacking human and artificial minds. Fighting against it is a police officer conflicted between her cyborg body, her digital enhancements and the residue of her corporeal self. In *Metropolis* (Rintaro, 2001), inspired by Fritz Lang's silent masterpiece, robots have replaced humans in the workforce; against a backdrop of civil unrest a scheming industrial magnate commissions a life-like robot replica of his dead daughter to control the global weapon system concealed in his new skyscraper.

Other films bring audiences into the realms of medical technology. *Paprika* (Satoshi Kon, 2006) features a revolutionary device used by psychiatrists to treat patients by allowing doctors to enter and record their dreams. When the technology is stolen by 'sleep terrorists', dreams start to enter reality.

Concerns about how far cybertechnology has already infiltrated human society surface in *Summer Wars* (Mamoru Hosoda, 2009), in which a teenage maths geek is caught up in a family feud that could bring about the end of the world, unless the whole family can defeat an Artificial Intelligence at its own game.

Also included, in tribute to its status as a key work of Japanese cyberpunk and important influence on anime's post-human imaginings, is SFX classic *Tetsuo, the Iron Man* (Shinya Tsukamoto, 1989), in which a businessman undergoes a bizarre mutation, re-emerging

as a hybrid of flesh and scrap metal.

Framed Nov 2019

In November 2019 Framed Film Club and Framed Film Festival will delve into the world of *Life Rewired* with screenings and events for families featuring cyborgs, super-beings, robots and more.

Narratives for young audiences – both contemporary and past – have often chosen to focus on the effects of technology as a force both out of control, and taking control. Showcasing films like *Wall-E*, *The Iron Giant* and *Astroboy* as jumping off points alongside live events, talks and activities, Framed will ask what it means to be human in the face of ever advancing technology and what the future might hold.

Creative Learning

Design Yourself Throughout 2019

Twelve Young Creatives from Barbican Guildhall's programmes will work with new media artist and curator **Antonio Roberts** to create work that explores what it means to be an artist in the digital age. Through a series of cross-arts collaborations, the artists will explore how scientific and technological advances are allowing artists to become 'more human' by heightening our human qualities or strengthening our natural instincts.

From creating glitch art to performing with Amazon's Alexa, Antonio Roberts' work and curatorial practice uses technology-driven processes to explore issues surrounding open source software, free culture and collaborative practice. Through a series of events and workshops, Antonio and the young creatives will release regular works which will be featured both online and onsite at the Barbican throughout 2019.

The Artist and the Machine Sun 26 May 2019

A Level G programme of activity for visitors of all ages, exploring human creativity in the context of technological change. Inspired by the *AI: More Than Human* exhibition, the programme will ask: how do machines augment our creative abilities? How does technology support creativity? While also exploring ownership in the context of human and machine created work. This event will include a mix of demonstrations, talks and hands-on activity that includes everything from 3D printing to slime mould. As part of the event, work will be showcased by partners Crafts Council and the Institute of Making at UCL.

Performing Art & Neuroscience: Enterprising Adventures In association with: King's College London's Department of Basic & Clinical Neuroscience (IOPPN – Institute of Psychiatry, Psychology & Neuroscience) Jan–Mar 2019; Sharing & Panel: Wed 20 March 2019, Barts Pathology Museum

Artist **Iris Musel** and ex-Guildhall School musician turned medic and neuroscientist **Felix Josza** (KCL/Imperial College Healthcare) will join Barbican/Guildhall School BA (Hons) Performance and Creative Enterprise students and tutors to explore collaborative approaches in arts and neuroscience. Participants will explore this growing field through creative and scientific investigations during a series of labs.

Students will be given a basic introduction to neuroscience and explore the fragility of

identity. The project will culminate in a sharing of practices through performance and a panel discussion exploring the growing field of neuroscience and creativity.

Barbican Box Music 2019: Native Instruments Until Apr 2019

Showcase: Wed 24 April 2019

Barbican Box Music 2019 will be curated by leading manufacturers of soft/hardware for music production, **Native Instruments** and grime producer **Swiffta Beater**. Working with more than 100 secondary school students aged 11–16 in secondary schools across east London, the 2019 Box will explore music machinery that enables teachers and their students to create and compose their own sounds and music.

The Box will inspire students to consider the ever-increasing rate of technological development in the 21st century, and will include pad controllers; old tech objects to upcycle into instruments; and tablets to sketch ideas and sample and manipulate sounds.

Native Instruments is a leading manufacturer of software and hardware for computer-based audio production and DJing. Swiffta is an established producer from Birmingham, producing tracks for the likes of JME, AJ Tracey and Mist in a range of musical genres, from Drum 'n' Bass and Hip Hop to Grime and UK Garage.

Using the contents of the Barbican Box, students will produce their own music shows culminating in a final showcase in the Barbican Hall on 24 April 2019 which will include a performance by Swiffta.

Teacher Labs Autumn 2019

Teacher Labs is a pioneering new programme by Barbican Guildhall Creative Learning, where artists are paired with teachers to co-create new pedagogic approaches to the curriculum through a skills and knowledge exchange.

In autumn 2019, actor and mathematician Victoria Gould will work with teachers and students at our Associate School, Greenleaf Primary School, to explore forces, friction and gravity in a re-imagining of how the primary science curriculum can be delivered both through and with the arts.

M-SET: Schools Tour Autumn 2019

M-SET are a company creating multi-sensory and educational theatre in a variety of settings. Their approach uses the full range of technical resources to encourage children to get involved with all aspects of the performative environment. In 2019, Creative Learning and Theatre will work in partnership with M-Set to commission and produce a new interactive, multi-sensory theatre experience at the Barbican. Taking inspiration from the 50th anniversary of the first man on the moon, the show will be an immersive journey into space and an exploration of our own imaginations with light, shadows and music.

The experience will be supported by off-site workshops in schools across the City and east London.

Level G

Life Rewired Hub Feb–Dec 2019, Level G

Opening 4 February, the Barbican is constructing a temporary new venue for public programming on Level G, motivated by the need to develop and test new models of public engagement. The Life Rewired Hub will explore the key ideas in our 2019 programme, inviting audiences to encounter the voices who are witnessing and revealing some of the elusive forces shaping our lives today.

Designed by architects **Dyvik Kahlen**, this flexible new structure will host a year-long programme of talks, performances, workshops and residencies, co-programmed in partnership with the **Royal Society** and the **British Council**, inviting audiences to explore the dizzying impact of technological and scientific change on what it means to be human today.

The Hub also houses an exhibition which presents new writing and short films from artists and thinkers who are navigating the complex, vast, and all-too-often confusing discourse taking place around the impact of technology on our lives.

The Barbican has commissioned a series of essays which explore topics including: the future of work, the impacts of the 'attention economy' on our democracy, how digital media is changing our concept of time and the impacts of modern technology on our bodies. Commissioned writers include technology and society researcher **Urvashi Aneja**; technology and political journalist **Jamie Bartlett**; artist, writer and publisher **James Bridle**; sociologist **Rebecca Coleman**; writer and academic **Vybarr Cregan-Reid**; ethical fashion advocate **Sarah Ditty**; writer and urbanist **Adam Greenfield**; scientist, writer and musician **Jaron Lanier**; and artist, machine learning designer and digital anthropologist **Caroline Sindors**.

The essays will be paired with illustrations by designer **Catalina Velasquez**, and available as free prints from the Hub. They will also be available online throughout 2019.

The Barbican's two public programme partners for the Hub are the British Council and the Royal Society. It is also supported by Wellcome.

Life Rewired Shorts

Following *The Art of Change* series of short films in 2018, the Barbican is again collaborating with leading global video commissioning platform **The Smalls** to produce a second film series for *Life Rewired*.

The Barbican Film Grant, supported by the British Council, will allow twelve emerging filmmakers to create and present a new film for each month throughout the year, in response to the themes explored by *Life Rewired*. Each film will present a unique take on the issues at the heart of the 2019 season, including artificial intelligence, ageing, relationships and technology, modern fertility and surveillance.

The Life Rewired Shorts launch today with the release of *Uncanny Valley* by **Gary Dumbill**, now available to watch on the [Barbican YouTube channel](#). Dumbill presents an animated world populated with familiar scenes, landscapes, people and objects that feels strange yet familiar, a warped version of reality. Through his animation, Dumbill manipulates images and videos to create an almost living collage representing a world where humans and androids interact.

The series will continue on the first Friday of every month throughout 2019 and can be streamed on the Barbican YouTube channel. The shorts will be screened before selected new release films in the Barbican Cinema and will be on display in the Life Rewired Hub.

The Liminal Space – *Unclaimed*
11 Feb–3 May 2019, Level G

'The UK population is ageing. In mid-2014, the average age exceeded 40 for the first time. By 2040, one in four people will be over 60.'

The ageing of our population is one of the greatest social challenges we face. But in a culture that prizes youth and 'agelessness', there is little meaningful public discourse around what it means to grow old in our society. Commissioned by the Barbican and led by creative public engagement specialists **The Liminal Space**, *Unclaimed* is a cross-disciplinary project which blends cultural, academic and public engagement practice, designed to spark a conversation about what it will mean to grow old in the 21st century.

The project began in spring 2018, based on a research study with 2,000 people aged over 70 from Camden, conducted by University College London's gerontology research team. The Liminal Space team then went on to engage over 150 people from the research cohort and a diverse range of London communities through a series of creative workshops. The personal and philosophical insights of the interviewees and workshop participants uncovered a wide range of narratives about our ageing society.

The installation, which opens on the Barbican's Level G in February 2019, takes the form of a strange but familiar Lost Property office containing a series of everyday objects revealing an array of multimedia stories. The objects will feature text and audio recordings gathered from the interviews and workshops, allowing visitors to engage with the topic creatively.

This project has been commissioned by the Barbican and is led by The Liminal Space, in partnership with the UCL's gerontology research team, specifically the LINKAGE project (Long-term Information and Knowledge on Ageing). LINKAGE followed the journeys of some 2000 over-70 year olds in Camden, from their first contact with the social care system over a period of two years.

Unclaimed is funded by the Wellcome Trust and supported in an advisory capacity by Centre for Ageing Better, Flourishing Lives, Age UK and Professor Molly Andrews from the University of East London and The Centre for Narrative Research.

Nina Wakeford – *We Will Replace All Men With Machines*
9-16 March 2019, Level G Studio

Nina Wakeford examines technological and scientific change, and the structures that drive this change, in a week-long residency in the Level G Studio. Drawing on the aesthetics and politics of 1970s and 80s feminism and feminist art, Wakeford questions who is in charge of this change, who it benefits, and what an alternative vision might look like. Who might inspire us to think differently about technological change? Do we need to revisit the past to find new solutions for the future?

The artist's residency will ask how we might place such visions and activities into the public spaces of the Barbican, and whether it's possible to recruit audiences to these alternative visions in 2019.

In the Level G Studio, Wakeford will collect a set of written and visual materials which will be used to provoke conversations amongst an invited set of participants, including Barbican Hosts. Visitors to Level G will be able to experience the unfolding of these discussions through a set of audio relays outside the Studio.

Later in the year, Wakeford's residency will culminate with a week spent in the Life Rewired Hub.

Nye Thompson – *INSULAE (Of the Island)*

Sat 23 Feb–Sun 5 May 2019

Part of [Barbican OpenFest: Art 50](#)

Flying low over digitally-rendered waves, **Nye Thompson's** video installation *INSULAE (Of the Island)* contemplates the impact of island geography on national identity in a perpetually looping virtual tour of the waters just off the British mainland. With the ocean as a metaphorical buffer between the UK and the rest of the world, we are taken on a lonely journey patrolling our borders.

Artist Nye Thompson explores the changing notion of what it is to be human in a digital age. Thompson uses technology to investigate the social and psychological impact of living in a world of evolving machines and meta-connectivity.

This work was selected from a shortlist of winners and finalists from The Lumen Prize for Art & Technology in collaboration with the Barbican Centre's Level G programme. The Lumen Prize is owned by Lumen Art Projects Ltd, a UK-based not-for-profit which celebrates the very best art created with technology globally through exhibitions, events and its annual competition. Last year, *American Beauty (a Trump L'oeil)*, a work by Lumen Finalist Rachel Ara was featured by as part of the Barbican's Level G programme.

Commissioned in Partnership with Lumen Art Projects. Projections by Christie.

Barbican OpenFest: Art 50 is a free day of photography, film, dance, theatre and music exploring British identity through the works of artists from around the UK, taking place on Saturday 23 February 2019.

Troika – *Borrowed Light*

5 Jun 2018–May 2019

Free

Borrowed Light is a suspended mechanised structure that moves a 20m-long scroll of photographic film, thereby resembling an artificial infinite loop of sunset and sunrise. The installation was formally inspired by moving panoramas and the potential these offered to blur the boundaries between experience and physical spheres, natural and man-made spaces.

Borrowed Light is a site-specific installation commissioned by the Barbican Art Gallery to activate the unique architectural features of the Lightwell at the centre of the Barbican's public spaces.

Music

[Pantha Du Prince – *Conference of Trees*](#)

Sat 19 Jan 2019, Barbican Hall

Conference of Trees is a new audio-visual project by Berlin-based techno composer-producer Hendrik Weber, aka **Pantha Du Prince**, exploring the communication of trees

and translating it into music with a live ensemble.

From second century Indian intellectual Patanjali to 19th century mathematician Riemann and contemporary cell biologist Baluska, countless researchers have written about the communication of trees. In addition to converting CO₂ into oxygen through photosynthesis, trees can communicate and share information with each other through a solid network of receivers and senders based on cell biology. In *Conference of Trees*, Hendrik Weber transforms this biochemical conversation into a musical performance: cell biological data of different trees is converted into sound and further into notation for acoustic instruments. Trees have been the topic of many musical compositions throughout history but in this project, Weber lets the trees speak for the first time. The live ensemble on stage uses instruments that have been handcrafted by the composer during his exploration of the different sound characteristics of wood. The fact that wood as a material for musical instruments is both alive and dead at the same time adds another fascinating aspect to the exploration.

With this project, the artist wishes to remind audiences of the importance of trees for our ecosystem, whilst also trying to encourage the listeners to take trees seriously as intelligent subjects, and to promote a better coexistence for humankind and nature.

[Trevor Paglen/ Kronos Quartet – *Sight Machine*](#)

11 Jul 2019, Barbican Hall

Barbican presents the UK premiere of *Sight Machine*, a project between American visual artist **Trevor Paglen** and San Francisco based string quartet **Kronos Quartet** that focuses attention on the growing ubiquity of artificial intelligence technology in our lives by analysing a shared human experience – a concert – with machine-vision systems in real time.

Many companies are currently developing technologies that can analyse emotions in real-time in order to better understand human behaviour. This technology makes use of self-learning deep neural networks, complex mathematical systems which can teach themselves to carry out tasks by analysing large quantities of data. In his work, Trevor Paglen examines whether it is possible to reduce human creativity and emotional expression to data and calculations.

Paglen's large-scale multimedia performance *Sight Machine* shows how machines and their algorithms perceive a live concert and urges audiences to consider the social, ethical, economic, and political consequences of such new ways of 'seeing'. On stage, the world-renowned string quartet **Kronos Quartet** performs works by composers **Laurie Anderson, George Crumb, John Oswald, Steve Reich, Terry Riley, Islam Chippy and Fodé Lassana Diabaté**. During the performance, the musicians are being monitored by an array of cameras that feed into a suite of computer vision algorithms used in applications from self-driving cars and guided missiles to facial recognition and biometric surveillance. The software has been modified so that it, in turn, produces images of the information that it 'sees', which are then projected onto a screen behind the performers in real time.

Sight Machine illustrates the discrepancy between what we experience as human beings and what machines 'see'.

Debuted for an invited audience in San Francisco in January 2017 as part of Trevor Paglen's artist residency at Stanford University's Cantor Arts Center, *Sight Machine* received its world premiere at the Holland Festival in June 2018.

London Symphony Orchestra/Sir Simon Rattle/Emily Howard

Sat 14 Sep 2019, Barbican Hall

Sir Simon Rattle opens the London Symphony Orchestra's 2019/20 season on 14 Sep 2019 with the world premiere of a new work by **Emily Howard**, commissioned by the Barbican. A graduate in mathematics and computer science from Oxford University, Howard holds a PhD in Composition from the University of Manchester, and her music is known for its particular connection to science. Diverse influences from geometry and magnetism to the human brain and neural networks have shaped a series of her orchestral music. The Barbican commission will complete a triptych of orchestral works, following *Torus (Concerto for Orchestra)*, which won the orchestral category of the 2017 British Composer Awards, and *sphere*, which was premiered by the Bamberg Symphoniker in the same year. Emily Howard is the Director of PRISM, the Centre for Practice & Research in Science & Music at the Royal Northern College of Music in Manchester, which brings together creative collaborations between the sciences and music including cutting-edge research involving AI-assisted composition.

[Max Cooper – Yearning for the Infinite](#)

Sat 28 Sep 2019, Barbican Hall

Yearning for the Infinite is a project by London-based electronica and techno producer **Max Cooper** about our human obsession with the unobtainable, and its embodiment in the modern data explosion. Cooper has long been fascinated by the concept of infinity in many areas of life such as religion and cult (Kabbalah and the divine infinite), mathematics (limits, irrational numbers and Cantorian set theory), visual arts (perspective and illusion in painting) and music (infinite harmonic series). All topics are tackled via an entirely new live visual performance and musical score, commissioned by the Barbican.

In the present day, the infinite is taking on a whole new form in the endless creation of data, where human beings are "drowning" in infinity in a more literal sense than ever before. Cooper, a scientist as well as a musician with a PhD in computational biology, wants to capture this overwhelming vastness in the Barbican Hall. The project is based on a multi-surface projection system, using generative artificial processes and data mapping techniques. His starting point is the emotional power and inherent imagery in the many different embodiments of the infinite, each capturing a different aspect of our thirst for growth.

[Beatie Wolfe – Orange Juice for the Ears: From Space Beams to Anti-Streams](#)

An evening of film, live performance and conversation with Beatie Wolfe

Tue 8 Oct 2019, Cinema 1

This special evening in the Barbican's Cinema 1 features the retro-future work of Anglo-American singer songwriter and technology innovator **Beatie Wolfe** in film, live performance and conversation, exploring what music can look like in the digital age and asking what has been lost due to technological advances, what can be reclaimed, and what remains to be updated and innovated?

Beatie Wolfe is at the forefront of pioneering new formats for music that reunite the digital and physical by reimagining the vinyl experience in retro-future ways – ranging from a theatre in the palm of your hand, an album as a wearable record "jacket" and a space beam from the Big Bang Horn. Wolfe's work, which beautifully blends the tangible and ephemeral and also explores the therapeutic benefits that music can achieve, is featured and presented in a short documentary by LA Indie Director **Ross Harris** that asks how we can use music to transform our daily lives.

The event title, *Orange Juice for the Ears*, is inspired by neurologist Oliver Sacks'

Musicophilia: Tales of Music and the Brain, in which he wrote: 'Music can lift us out of depression or move us to tears — it is a remedy, a tonic, orange juice for the ear.' After reading Sacks' book, Wolfe started her own ground-breaking research project *Power of Music & Dementia*.

Beatie Wolfe's raw, acoustic, indie rock music pulls from the brooding poeticism of Leonard Cohen, the tender and haunting melodies of Elliott Smith and occasionally veers into Americana and grunge and creates a powerful juxtaposition to her high tech album experiences, all of which are world first designs. But Wolfe says: "the tech should be invisible and simply facilitate the magic of presenting the album format in this new way, so in that respect I think of it as low tech."

'My intention with all my work is to remind people of the true power and magic of music and how it has to have a deeper experience to it in this digital age because music goes way beyond entertainment, it is something that is core to our humanity, identity and wellbeing.'

Theatre and Dance

[Charles Atlas/Rashaun Mitchell/Silas Riener – Tesseract](#)

Thu 28 Feb–Sat 2 Mar 2019, Barbican Theatre

Press night: Thu 28 Feb 2019, 7.45pm

An inventive exploration of the relationship between the human form and technology, presented in two distinct acts.

To open the show, an astonishing 3D film with vividly contrasting chapters in which movement and setting fuse seamlessly. Space is transformed in imagined and hybrid worlds through manipulating the size and shape of the dancers' bodies and the audiences' proximity to them.

For the second part, a live performance is captured by multiple cameras onstage; the footage mixed and projected onto a translucent screen, offering various perspectives of the crisp, intricate and innovative choreography.

Tesseract is an ambitious work by choreographic duo **Rashaun Mitchell** and **Silas Riener**, together with pioneering video artist **Charles Atlas** – all past collaborators or members of Merce Cunningham Dance Company. Inspired by science fiction and time travel, and experimental in form and technique, it is rich in psychedelic, potent, disorientating and hypnotic images.

[Ursula Martinez – A Family Outing – 20 Years On](#)

Wed 27–Sat 30 Mar 2019, The Pit

Press night: Wed 27 Mar 2019, 7.45pm

Twenty years after bringing her parents onstage in the sublime *A Family Outing*, **Ursula Martinez** attempts to recreate the show, without her dad, and with a mother who can no longer remember her lines.

Absorbed in wryly honest and frank conversation, a mother and daughter expose the banalities, hilarity, foibles and frustrations of their relationship. Contrasting past and present, they bicker, cajole and encourage each other through this endearingly ad hoc, entertaining and ultimately uplifting performance.

Since *A Family Outing* original premiered in 1998, Martinez has turned 50, her father Arthur has passed away and her mother Mila has been diagnosed with early stage dementia. Through a shrewd interplay with the first production, this bracingly funny new show blurs the lines between artifice and reality while grappling with identity and the march of time.

[Lynette Wallworth – Collisions](#)

Wed 10–Sat 20 Apr 2019, The Pit

Journalists are invited to review the screening on Thu 11 Apr 2019.

This immersive Emmy Award-winning documentary is a startling collision between cultures, encompassing 360-degree vision, CGI animation and enveloping sound.

Provided with VR headsets, audiences embark on a journey together to the ancient homeland of indigenous elder Nyarri Nyarri Morgan, as he recounts the moment his world was turned upside down. Amid the endless horizon of the remote Western Australian desert, this is a rare insight into the hidden history of Britain's nuclear testing.

Pioneer of interactive digital technologies, **Lynette Wallworth** combines masterful storytelling and virtual reality to share the profound truth of one man's first and fateful encounter with Western science. The short, powerful piece, seen at Sundance, Davos and screened at UN meetings, shows how events can reverberate through generations, and how to care for the planet from the perspective of one of its oldest peoples – the Martu tribe to which Morgan belongs.

[Fertility Fest 2019](#)

Tue 23 Apr–Sat 18 May 2019, Various Barbican venues

Fertility Fest, the only arts festival devoted entirely to the subjects of modern families and the science of making babies, arrives at the Barbican for the first time.

Fertility and infertility take centre stage in this programme of performances and panel discussions that brings together medical specialists, artists and audiences. Offering a multitude of views and voices, the festival draws on female and male experiences, looks at new models of family making, and seeks to break taboos around IVF.

Fertility Fest is founded by **Jessica Hepburn**, influential activist and author of *The Pursuit of Motherhood*, in partnership with theatre producer **Gabby Vautier**. A rare, open and collaborative platform, it aims to drive social change. This third edition features the world premiere of *Avalanche: A Love Story*, the theatre production based on Julia Leigh's memoir.

Alongside the show, there will be a unique programme of performances, events, screenings, talks and panel discussions, putting the science of making, or not making babies, under the creative spotlight. Highlights include the Modern Families Project, which will see six emerging young artists take over the Life Rewired Hub from 6–12 May, transforming it into an 'installation of ideas' for a new piece of digital campaigning artwork.

Please refer to the [full Fertility Fest media release](#) for complete event details.

[*Avalanche: A Love Story* by Julia Leigh](#)

Barbican and Fertility Fest

Sat 27 Apr–Sun 12 May 2019, Barbican Theatre

Press night: Wed 1 May, 7.45pm

When a woman rekindles an early love in her late 30s, her whole life changes. Deeply in love, she and her new husband decide they want to have a child together and, like countless other couples, they make a visit to the IVF clinic, full of optimism. So begins a long and costly journey of medical procedures, nightly injections, rituals and the oscillation between high hope and the depths of despair.

Avalanche lays bare the stark truth of her experience against the seductive promises made by the multi-billion-dollar IVF industry to those in the grip of a 'snow blind' yearning and desire to make a baby. Along the way, she navigates the science and statistics of IVF treatment and eventually comes to terms with the price to be paid, both literal and emotional, in the pursuit of this desire. The devastating toll on her body, her relationships and her career as an author/filmmaker, is portrayed with compelling honesty and moments of black humour. At the heart of this dramatisation is an exploration of who we are and how we love, and the potent power of the desire for family and future. Based on a true story, it is a courageous and ultimately wise account of a profoundly important and widespread experience.

This world premiere of *Avalanche: A Love Story* is produced by Barbican Theatre Productions and Fertility Fest and co-produced by Sydney Theatre Company.

ENDS

Notes to Editors

Press Information

For further information, images or to arrange interviews contact:

Brenna Baggs, Communications Manager

+44 20 7382 7237

brenna.baggs@barbican.org.uk

Public information

Box office: 0845 120 7511

www.barbican.org.uk

Barbican newsroom

All Barbican Centre press releases, news announcements and the Communications team's contact details are listed on our website at www.barbican.org.uk/news/home.

About the Barbican

A world-class arts and learning organisation, the [Barbican](http://www.barbican.org.uk) pushes the boundaries of all major art forms including dance, film, music, theatre and visual arts. Its creative learning programme further underpins everything it does. Over 1.1 million people attend events annually, hundreds of artists and performers are featured, and more than 300 [staff](#) work onsite. The architecturally renowned centre opened in 1982 and comprises the Barbican Hall, the Barbican Theatre, the Pit, Cinemas One, Two and Three, Barbican Art Gallery, a second gallery The Curve, foyers and public spaces, a library, Lakeside Terrace, [a glasshouse conservatory](#), conference facilities and three restaurants. The City of London Corporation is the founder and principal funder of the Barbican Centre.

The Barbican is home to Resident Orchestra, [London Symphony Orchestra](#); Associate Orchestra, [BBC Symphony Orchestra](#); Associate Ensembles the [Academy of Ancient Music](#) and [Britten Sinfonia](#), Associate Producer [Serious](#), and Artistic Partner [Create](#). Our Artistic Associates include [Boy Blue Entertainment](#), [Cheek by Jowl](#), Deborah Warner, [Drum Works](#) and [Michael Clark Company](#). The [Los Angeles Philharmonic](#) are the Barbican's International Orchestral Partner, the [Australian Chamber Orchestra](#) are

International Associate Ensemble at Milton Court and [Jazz at Lincoln Center Orchestra](#) are International Associate Ensemble.

Find us on [Facebook](#) | [Twitter](#) | [Instagram](#) | [YouTube](#) | [Spotify](#)

About Wellcome

Wellcome exists to improve health for everyone by helping great ideas to thrive. We're a global charitable foundation, both politically and financially independent. We support scientists and researchers, take on big problems, fuel imaginations and spark debate.