CODEX

playable & disruptive futurist eArt

JAN 22 to
APR 25, 2020

Jason Baerg
Tom Barker
Rob Elsworthy
Samantha Fickel
Dennis Kavelman
Nick Puckett
Six Trends Inc.
Jane Tingley,
    Cindy Poremba
    and Marius Kintel

Curated by
    Tom Barker

OCAD UNIVERSITY | **ONSITE GALLERY**

This publication accompanies the exhibition *CodeX: playable & disruptive futurist eArt*, presented at Onsite Gallery, OCAD University, Toronto.

Image (cover): Jane Tingley, Cindy Poremba and Marius Kintel, *anyWare*, 2018. Mixed media, 72" x 36" x 36".

CODEX

playable & disruptive futurist eArt

CodeX is an exhibition of playable and disruptive digital artworks that explore human-machine relationships through the multiple lenses of technology, innovation and design. The digital age is powering ahead, and many artists are exploring new creative themes and technology. Society is being restructured by technology, and the artworks in *CodeX* reflect on this trend. *CodeX* offers a spontaneous, carnival-like excitement, while prompting visitors to interact with the artworks—sometimes playfully and sometimes uncomfortably. All art is ultimately defined by its audience, but the *CodeX* artworks go a stage further: they are incomplete as creative pieces without a player or participant.

Futurism—the brief but influential Italian art movement of the early 20th century—sought beauty in technology and modernity, and abhorred nostalgia. The artists in the *CodeX* exhibition also use and celebrate technology, but unlike the Futurists, they are not judgemental. Interactions with the *CodeX* machines raise questions around the human condition, exploring our attitudes, differences and similarities.

Digital and technological art has evolved and diversified into a broad range of almost magical art forms. There have been many labels for these art forms such as video art, internet art, post-internet art, hacktivist art, cybernetic art, algorithmic art, and information visualization art. *CodeX* places the artworks under the collective term of "eArt", which embraces all these subcategories.

The *CodeX* artists and designers include Jason Baerg, Tom Barker (also the curator), Rob Elsworthy, Samantha Fickel, Dennis Kavelman, Nick Puckett, Jane Tingley with Cindy Poremba and Marius Kintel, and Six Trends Inc.

The exhibition offers the real-time energy of engaging and recent eArt projects. Visitors are encouraged to reflect on the meaning of their engagement with the works and how they offer thought-provoking interactions, self-awareness, content creation and dynamic representation. Many of the works are inevitably multidisciplinary or transdisciplinary.

The artworks are curated under three themes: Algorithms, Identity and The Nature of Reality.
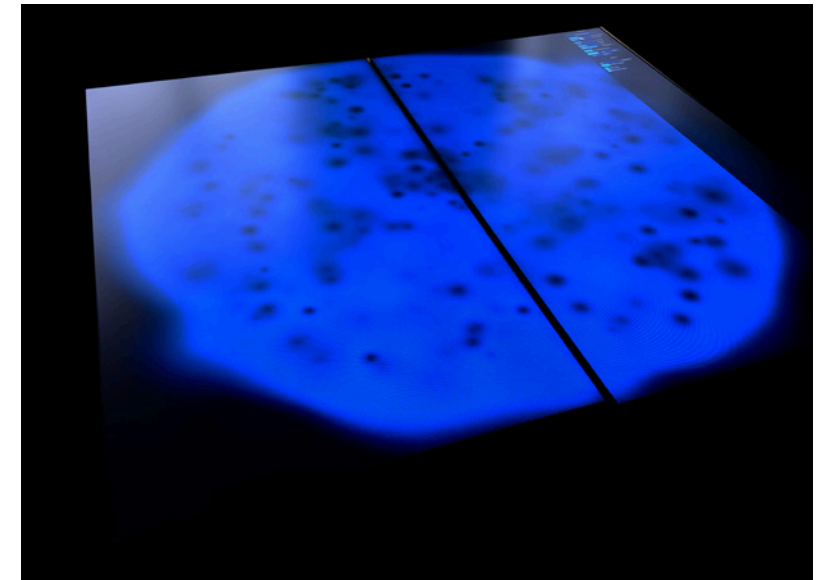
Image: Nick Puckett, *Pulse V2*, 2019. Interactive installation which visualizes the movement of visitors using lidar.

Algorithms

Digital behaviour is attributed to algorithms, and its meaning emerges from their subsequent effect upon or interaction with people. Physicists strive to decode the algorithms of the material universe, while spiritualists look to decode its meaning. Machines and technology are increasingly built using algorithms and employ algorithms both in use and in their learning. This in turn has created a pivotal moment for digital art, in which the works, with their algorithms, are released into the wild to interact with audiences and, importantly, to change.

Algorithms determine nature's erosion of a rock in a river, the movement of the planets, and how we think. What happens when they determine the behaviour of an artwork and its interactions with an audience?

Pulse V2 by **Nick Puckett** (2019) explores the gallery as a dynamic, shifting landscape. It uses a combination of Lidar (a 3D imaging technology) and a series of vibrating antennas to scan and visualize the exhibition space, sensing and interpreting the collected data. The visuals create a feedback loop with the viewers, so they can affect the real-time results displayed.

The *Please Keep Me* artificial intelligence (AI) artwork by **Six Trends Inc.** (2020) is a digital persona that detects visitors and talks to them, learning through spoken conversation just as a child learns from its parents. This artwork explores the responsibility that humans will have in training machine intelligence to be "good" and the destructive nature of a reset option, effectively inducing a death experience.

Image: Jane Tingley, Cindy Poremba and Marius Kintel, *anyWare*, 2018. Mixed media, 72" x 36" x 36".

The three identical *anyWare* sculptures by **Jane Tingley, Cindy Poremba and Marius Kintel** (2018) are connected to the internet, and physically mirror each other. The objects transition through various "art states" and encourage playful visitor interactions designed to inspire experimentation, exploration, and potential "conversations" with other people.
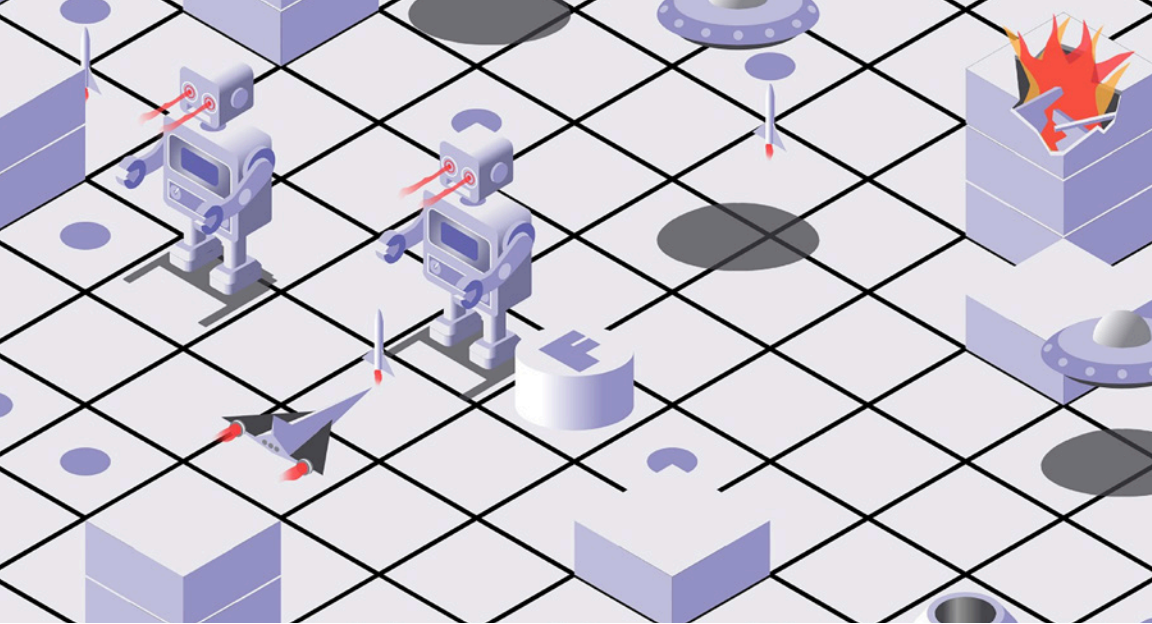
Image: Tom Barker, *The Last of You* (still), 2020, computer game.

Identity

Our cognitive self-representation is built from myriad external influences, ranging from the earliest reflections in water to today's online presence. Society and culture further contribute through globalization and the internet, international travel and multiple new forms of communication. For better or worse, these factors seem to be magnifying and morphing both our tribal dispositions and instinctive behaviour as pack animals.

The always-connected human is here to stay, but what is the impact on our reliable but rigid and compulsive reptilian brain? How does the maelstrom of information around us inform who we are and how we should be?

The Last of You by **Tom Barker** (2020) explores one question: are we still restrained by our own ethics and decent instincts to honour a commitment if we are simply cheating on a machine? The artwork adds to this context a computer
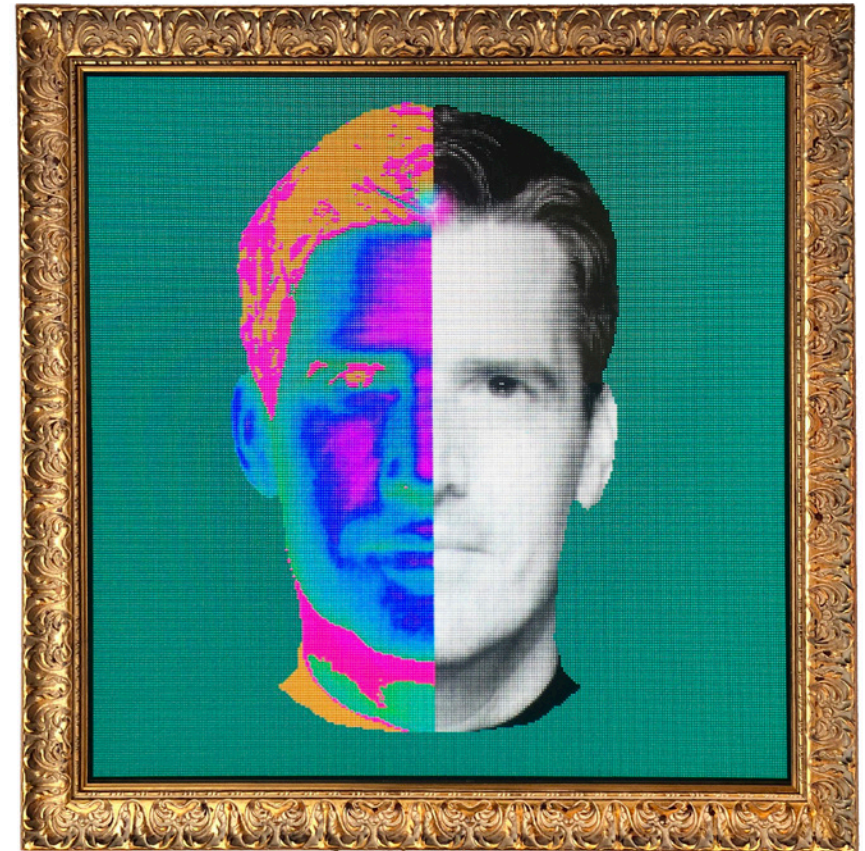
Image: Dennis Kavelman, *Your Days Are Numbered II*, 2020, interactive installation using a 3D digital video scanning system and web app.

game that seems to be behaving unfairly...will a player get carried away and break a commitment they have made?

Your Days are Numbered II by **Dennis Kavelman** (2020) explores the use of digital technology to encourage people to better understand and appreciate their time on earth. By representing mortality in a number of different ways, visitors are better able to reflect on their lives and the passage of time.

The Nature of Reality

Our notion of reality is being shifted by technologies such as virtual reality and augmented reality. The essence of an Internet of Things object differs from a traditional object because it can entirely change its purpose and manifestation – more so even than a living creature. Digital space and time have pause, rewind, pan and zoom controls. Digital constructs also challenge teleology. For example, social media has no end or goal, and some would argue no purpose.

How does this impact on our existence if existence is our ability to interact with reality? Is it time to reappraise the nature of being? Is materialism becoming immaterial?

Graviton: An Interdimensional VR Experience by **Rob Elsworthy** (2020) explores an imaginary world using virtual reality (VR), taking a trans human approach by providing the audience with new visual and spatial abilities. Participants cut through reality by making holes in space to reveal a seemingly Utopian world of colourful and unthreatening creatures. However, there is an underlying sense that this new world masks something problematic.

Jason Baerg's artwork, *Asaimîna ᐊᓴᐃᒼ ᐃᓇ All Over Again* (2020), is a generative new media projection piece that negotiates abstract spaces and places through a multiplicity of circular notions to contemplate direction. Sensing, intuiting, or knowing comes from understanding, and are dynamic concepts that describe the continuum of a sequence of embodied experiences.

Samantha Fickel's work, *Divisions* (2013), attempts to uncover the boundaries where the physical realm meets the

Image: Jason Baerg, *Asaimîna ᐊᓴᐃᒼ ᐃᓇ All Over Again*, 2020, generative new media projection.

digital. What happens when the human body becomes the interface between these parallel realities? The screen is an elusive space. It is at once absolutely flat and infinitely full of virtual space. *Divisions* is a sculptural installation that explores this divide between the physical and virtual worlds.

CodeX: playable & disruptive futurist eArt

Onsite Gallery

The first record of logic dates from 1067-1046 BCE, when Esagil-kin-apli, the chief scholar of the Babylonian King, and a doctor and a philosopher, wrote a diagnostic handbook for healthcare. The Greek philosopher Aristotle (384-322 BCE) developed *logos*, now known as logic, more formally. Logic was systematized by George Boole much later in 1847. Once we had logic, we could have computers; the modern computer still uses Boolean logic.

Computers have a history that predates even the Victorian machine age. Joseph Marie Jacquard invented the famous Jacquard loom in 1804. This loom used punched cards to program woven textile patterns, but it was based on even earlier designs from Basile Bouchon in 1725. The Analytical

Engine, the first general purpose mechanical computer, was designed by Charles Babbage in the UK, between 1837 and his death in 1871. Although only parts of the machine were built, Babbage effectively invented modern computer architecture. Babbage's collaborator Ada Lovelace wrote algorithms for the machine and is credited as being the first-ever computer programmer.

Purely mechanical general-purpose computers proved to be incredibly complicated to build, so during the 19th and early 20th centuries the focus was on mechanical devices with specific purposes. The first fully electronic digital computer was TRADIC, completed in 1954 in the USA by Bell Labs. Access to computers was very limited until the mid-1960s and the output from computers was in printed or plotted format. In 1965, artist Frieder Nake programmed "Hommage à Paul Klee" to draw line images on a plotter. Manfred Mohr used computer algorithms to create the first computer graphics exhibition titled *Une Esthétique Programée* in 1971.

Image: Samantha Fickel, *Divisions*, 2013. Video installation, variable dimensions.

The evolution of eArt leading up to *CodeX*

Digital art (or eArt) became feasible after the invention of electronic digital computing and its evolution has run in parallel with digital technology. Perhaps surprisingly, electronic digital technology itself has philosophical and mechanical origins. The evolution of digital technology and eArt is summarized below to help set the context of the exhibition. We'll begin over 3,000 years ago…

Starting with moving image technologies of the 1800s, new media art evolved with kinetic and light art, and then embraced the television set. Wolf Vostell was the first artist to use a TV in his work entitled, *The Black Room Cycle*, in 1958. Allan Kaprow coined the term "happening" in 1957 and this idea was embraced enthusiastically by the new media art scene. The seminal multimedia performance art presentations *9 Evenings: Theatre and Engineering* by artists and engineers in 1966 led to the formation of Experiments in Art and Technology (E.A.T.) a year later.

New media programmes began to launch at colleges and universities from the 1960s onwards. The Slade School of Fine Art at the University of London established the Experimental and Computing Department in the early 1970s, offering students unparalleled access to a computer system. The Slade programme produced alumni such as Paul Brown, who made computer-assisted drawings, and artist-engineer Darrell Viner, known for his sound-activated machines. Roy Ascott, one of the Fluxus protagonists, was briefly President of the Ontario College of Art (now called OCAD University) where he launched a programme in Photo-Electric Arts in 1972.

Affordable technologies in the 1980s and 1990s gave artists access to computer graphics and the internet. The explosion in uptake of today's internet resulted from the invention of the World Wide Web in 1989 by Sir Tim Berners-Lee. The widespread popularity of personal computers, games consoles and video games also created new commercial digital artforms and interactions. By the 1990s, computers increasingly became a tool used by many artists, often integrated into their work as photographers, painters or sculptors. For example, James Faure Walker blended computer-generated images with painterly techniques in his piece, *Dark Filament* (2017), now at the Victoria and Albert Museum.

The 21st century finds us in the most eclectic period for eArt, which has now diverged into numerous sub-categories, including video art, internet art, post-internet art, game art, hacktivist art, cybernetic art, algorithmic art, and information visualization art, to name a few. The technologies used by artists have also diversified and have moved on from pixels, screens and coding, to 3D graphics, robotics, artificial intelligence (AI), virtual reality (VR), augmented reality (AR), wearables, 3D printing, and the Internet of Things (IoT).

Some of the new wave of eArtists have an incredibly eclectic output. New York-based Kyle McDonald codes, creates VR and AR experiences, uses robots and makes installation spaces and digital games. Los Angeles artist Sterling Crispin takes surveillance as his subject and creates fake, distorted 3D printed faces from algorithms. Addie Wagenknecht, an American artist and researcher, created a chandelier made of security cameras, and uses drones in her work, as well as traditional paint. London-based Memo Atkin creates sound and light performance pieces using humans who operate under machine instructions that study the emergence of complex behaviour.

Where is eArt heading in the future? Futurologist Raymond Kurzweil predicts that machines will have human-level intelligence by 2029. If so, can we expect a golden age of art created by machines? Of course, intelligence does not necessarily come with consciousness, almost certainly a requirement for any kind of artist! Until then, *CodeX* literally represents the state of the art and perhaps the near future will bring more, better, faster versions.

Tom Barker,
Curator, *CodeX: playable & disruptive futurist eArt*

Rob Elsworthy, *Graviton: An Interdimensional VR Experience*, 2020.
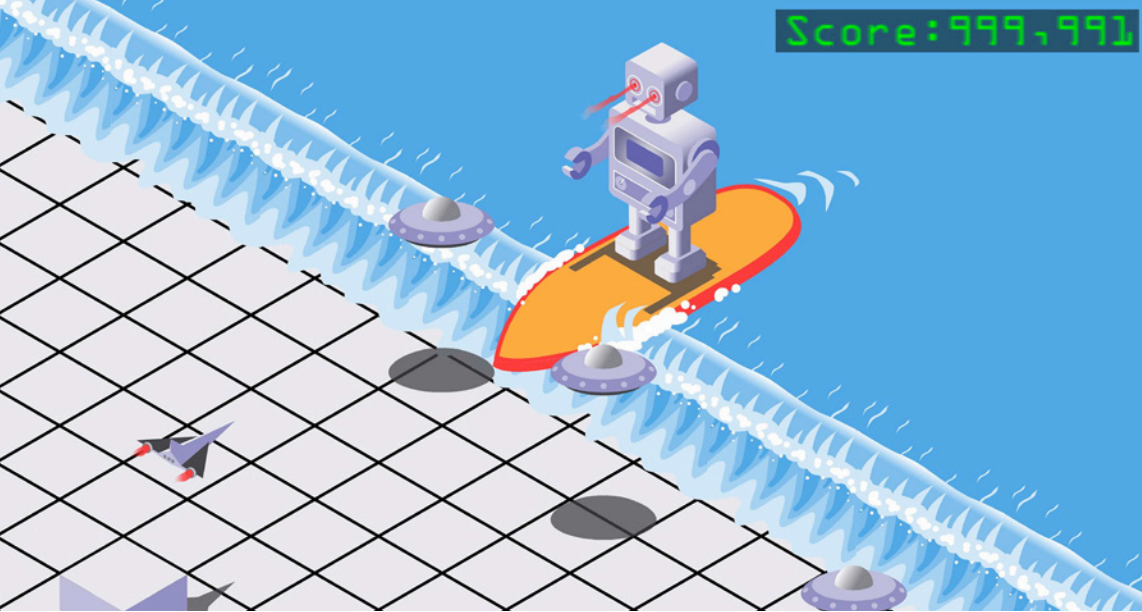Interactive installation using a VR headset.

Image: Tom Barker, *The Last of You* (still), 2020, computer game.

Biographies

Jason Baerg is an Indigenous curator, educator and visual artist. His curatorial experience includes developing and implementing the national Métis arts program for the Vancouver Olympics. Jason graduated from Concordia University with a Bachelor of Fine Arts degree and received a Master of Fine Arts degree from Rutgers University. Dedicated to community development, he founded and incorporated the Métis Artist Collective and has served as volunteer chair for such organizations as the Aboriginal Curatorial Collective and the National Indigenous Media Arts Coalition. Creatively, as a visual artist, he pushes new boundaries in digital interventions in drawing, painting and new media installation. Recent international solo exhibitions include the Luminato Festival in Toronto, the Royal Melbourne Institute of Technology in Australia and the Digital Dome at the Institute of the American Indian Arts in Santa Fe, New Mexico. Jason is currently an Assistant Professor of Art at OCAD University.

Tom Barker has worked internationally as a multidisciplinary creative in the fields of design, art and technology for many years. Tom's ground-breaking collaborations have included the capsule and boarding design for the London Eye with architects David Marks and Julia Barfield; creating the world's first Bluetooth headset for Emkay; and projects with the late architect Zaha Hadid for buildings, dance and opera stage sets. Tom contributed an interactive futuristic 3D walkthrough entitled *Masterplanners of the Universe: Brick Lane* for the Barbican Arts Centre's blockbuster global touring show *Game On* (2002-2016). His multimedia installation was featured in *Wink 2* at the ICA, London, in 2006. Tom collaborated with Langlands & Bell on the digital interactive artwork entitled *The House of Osama Bin Laden*, which won a BAFTA and was shortlisted for the Turner Prize in 2004. He is the named inventor of the patented SmartSlab interactive digital display system. He was the Founding Chair of the Digital Futures program at OCAD University from 2012 to 2015. An author of many book chapters and papers, Tom's book, *The Full Stack Web App Playbook*, was published by McGraw-Hill in 2019. Tom is currently the President and Chief Technology Officer of Six Trends, a Toronto-based creative digital agency.

Rob Elsworthy has worked as a Game Designer, Cinematic Animator, VFX Lead and a System Designer with Rockstar Games. His projects include games such as *Grand Theft Auto IV* and *V*, *Max Payne 3*, *Red Dead Redemption* and *The Warriors*. Rob has won numerous awards for these projects and is also a four-time MMVA winner as a Music Video Director.

Samantha Fickel is a Canadian artist who completed a Master of Fine Arts degree in Art and Technology at The School of the Art Institute of Chicago (2016) and holds a Bachelor of Fine Arts degree in Sculpture from OCAD University (2014). Using time-based, interactive, and immersive installations, she seeks to deconstruct familiar technologies in ways that invite unexpected sensory experiences. As one reviewer put it, her work observes that life is "equally vibrant on one side of a screen as another" (David Zarley, *NewCityArt*). Samantha's work has been shown in the flagship exhibition of Vector Festival Toronto (2017), and she recently held her first major solo exhibition at Stuart & Co. Gallery in Chicago (2018).

Dennis Kavelman creates interactive digital art using machines, augmented reality, mobile devices, electronics and computers that use interaction to explore mortality and the passage of time. Dennis' machine-based art is in the spirit of the mechanical computing that was initiated with the Jacquard loom in 1804 and Charles Babbage's unfinished Analytical Engine in the 19th century. Dennis' work also resonates with the themes of control and communication explored by the cyberneticists. An art collector and artist, Dennis has a background in business and technology and was formerly an executive at Blackberry/Research in Motion. He is currently a partner at iNovia Venture Capital. Dennis has exhibited his work in Toronto at the Museum of Contemporary Art (MOCA) in 2019, at The Spoke Club art gallery in 2018, Facebook's offices in the MaRS building in 2017, and the Design Exchange's EDIT show in 2017. His work was selected for exhibition at Governor's Island in New York City in 2018.

Nick Puckett is the Founding Director of Puckett Research+Design, a design practice focused on creating dynamic links between software, robotics, biological agents, chemical engineering, and material behaviour that generate new potentials for the design of intelligent environments. Nick is currently an Associate Professor, Co-Director of the ANThill Lab, and Chair of the Digital Futures undergraduate program at OCAD University. He has previously taught at The University of Kentucky, SCI-Arc, The Architectural Association, The University of Westminster, The University of Innsbruck, and The Royal College of Art.

Six Trends Inc. is a leading innovative and design-led digital business. They create digital solutions for their customers to grow their businesses. They offer digital strategy, marketing, and business support for both corporates and startups. They undertake full stack development of Websites, Web Apps and Apps. Their solutions are cross-platform, progressive and scalable. Digital technology continues to evolve at a rapid pace and Six Trends always make sure that their clients get the best possible solutions, providing flexibility and durability. For this reason, continuous learning to stay ahead is a vital part of their DNA at Six Trends Inc.

Jane Tingley is an artist, curator, and Assistant Professor in Hybrid Practice at the University of Waterloo in Ontario, Canada. She received the Kenneth Finkelstein Prize in Sculpture, and the first prize in the iNTERFACES – Interactive Art Competition in Porto, Portugal. She has participated in exhibitions and festivals in North and South America, the Middle East, Asia, and Europe including *translife* - International Triennial of Media Art at the National Art Museum of China, Beijing, *Despertar/Éveil/Alive* curated by Groupe Molior in São Paolo, and Technosensual at the MuseumsQuartier in Vienna.

Cindy Poremba is a digital media researcher, game maker and curator. An Assistant Professor of Digital Entertainment at OCAD University, she has published work in journals such as *Games and Culture*, *Eludamos and Loading*, as well as magazines and edited collections. Cindy also organizes non-traditional exhibitions as an independent curator, including *Joue le jeu/Play Along* at La Gaîté Lyrique, Paris, *XYZ: Alternative Voices in Game Design* at MODA, Atlanta, and "new arcade" events as a member of the *kokoromi* experimental game collective.

Marius Kintel is a professional software engineer who currently works at Thalmic Labs in Kitchener, Ontario. As an artist Marius works with non-traditional materials and repurposes things and technology in unusual ways. His projects include multiple creations in the computer art subculture known as the *demoscene*, building a company in Norway that develops Open Source 3D graphics software, and developing self-replicating machines in the REPRAP project. He is also the primary developer of openSCAD, a free software application for creating solid 3D CAD objects.

CodeX: playable & disruptive futurist eArt

Image: Nick Puckett, *Pulse V2*, 2019. Interactive installation which visualizes the movement of visitors using lidar.
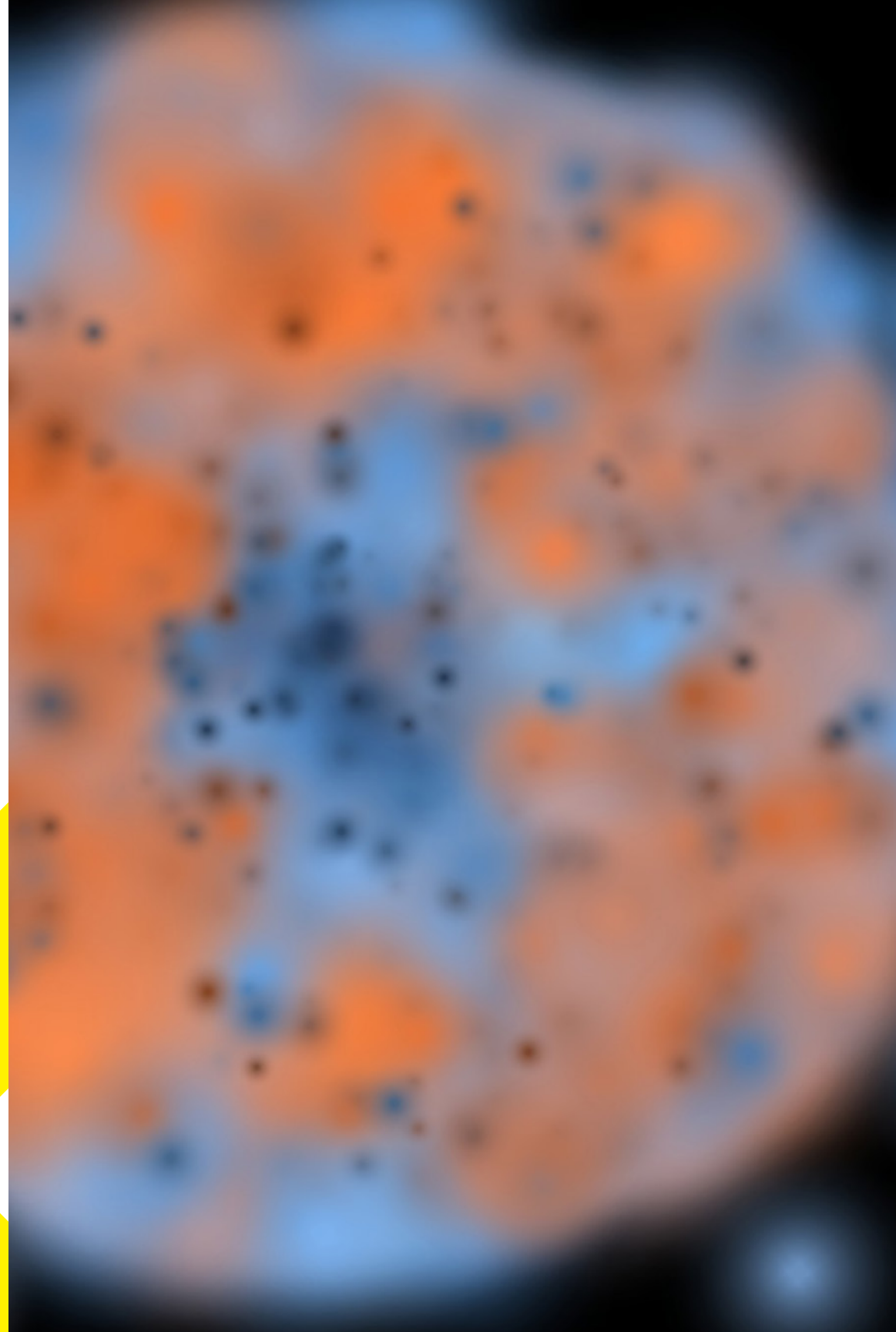
Free Public Events

Wednesday, January 29 at 6:30 p.m.
Curator's Exhibition Tour
Join Tom Barker for a tour of *CodeX: playable & disruptive futurist eArt*, as he shares his perspective on digital art and insight on the themes in the exhibition.

Wednesday, March 4 at 6:30 p.m.
Can Machines Be Flawed Enough to Be Human?
A panel discussion that will examine our growing dependence on glitchy AI learning for business and culture and how this affects our daily lives.
Panelists: Jimmy Ba, Leyla Imanirad and Dr. Alexis Morris
Moderator: Tom Barker

Wednesday, March 25 at 6:30 p.m.
Exhibition Tour with Cindy Poremba
Cindy Poremba is a digital media researcher, game maker and curator. An Assistant Professor of Digital Entertainment at OCAD University, she has published work in journals, magazines and edited collections. Cindy also organizes non-traditional exhibitions as an independent curator and "new arcade" events as a member of the *kokoromi* experimental game collective.

Wednesday, April 22 at 6:30 p.m.
Film Screening: David Cronenberg's *eXistenZ* (1999)
Set in the near-future, *eXistenZ* depicts a society in which game designers are worshipped as superstars and players can organically enter inside the games. At the centre of the story is Allegra Geller whose latest games system *eXistenZ* taps so deeply into its users' fears and desires that it blurs the boundaries between reality and escapism.

All events are free and at: Onsite Gallery, 199 Richmond St. West.
For more information, please visit our website: ocadu.ca/onsite

CodeX: playable & disruptive futurist eArt

Free Youth Workshops

Produced by Six Trends Inc.

Saturday, February 8 & Sunday, February 9 from 10 a.m. to 5 p.m.
Digitizer: Game Lab
Demystify the game making process and reveal the secrets behind some of the world's most popular games. Cover the art pipeline for making game worlds, game characters, and animation. Led by Rob Elsworthy.

Saturday, March 14 & Sunday, March 15 from 10 a.m. to 5 p.m.
Hello Sensor: Introducing IoT & Analytics
Build an IoT (Internet of things) device and get it to listen and measure the environment, connect it to the Cloud, analyze results. Starting with computer hardware and operating systems, you will discover why there are over 3 billion IoT devices and all the amazing possibilities offered. Led by Stephen Perelgut.

Saturday, April 4 & Sunday, April 5 from 10 a.m. to 5 p.m.
Building Computers 101
The workshop will focus on learning the essentials to building a desktop computer. Learning about basic hardware requirements, installing an operating system, and adding programs and applications to customize it using free and open source software. Led by Ryan Fukunaga.

Saturday, April 11 & Sunday, April 12 from 10 a.m. to 5 p.m.
Steampunk From Junk
Imagine turning a school desk into an arcade console, or giving an old bicycle a high-tech collision warning system... maybe upgrading a toaster so it never burns the toast! Bringing together digital tech with junk is fun and helps to deal with the city's garbage troubles. Led by Tom Barker.

All workshops will take place at:
Regent Park Focus Media Centre, 38 Regent St.

For free workshop registration,
go to eventbrite.ca and search for "codex".

Onsite Gallery

Upcoming Exhibitions

May 13 to October 3, 2020

Fable for Tomorrow: A Survey of Works by Wendy Coburn

Curated by Andrea Fatona and Caroline Seck Langill with video programming by Rebecca Garrett and b.h. Yael

Wendy Coburn had significant impact on the Canadian art community as an artist, educator and activist who has exhibited internationally. *Fable for Tomorrow* presents the first survey of Wendy Coburn's artwork. The exhibition provides an opportunity to bring together four decades of sculpture, installation, photography and video that reveals her ability to sense the pulse of a deep present while asking us to pay attention to other futures. Coburn's work explores representations of gender, sexualities, everyday objects, material culture, and human/animal relations.

October 21 to December 19, 2020

LIFE STUDIES: living media in the arts and sciences

Curated by Jennifer Willet

This exhibition investigates the ethics and aesthetics of biodisplay—the display of living and preserved biological organisms in a cultural, public or institutional setting. It contributes to public discourse surrounding advanced biotechnologies within the larger arc of human history and highlights new and historical bioethical questions pertaining to the display of living media in public venues.

Exhibition supported by:

ONTARIO ARTS COUNCIL
CONSEIL DES ARTS DE L'ONTARIO
an Ontario government agency
un organisme du gouvernement de l'Ontario

TORONTO ARTS COUNCIL | FUNDED BY THE CITY OF TORONTO

EQ Bank

NEXUS

Onsite Gallery construction project funded in part by:

Canada

TORONTO

ASPEN RIDGE HOMES

Gallery furniture by: **nienkämper**

Onsite logo by: **Dean Martin Design**

Onsite Gallery offers powerful, thought-provoking exhibitions of art, design and new media to stimulate conversations on critical issues facing Toronto and the world.

#ONSITEGALLERY

199 Richmond St. West
Toronto, ON, Canada
M5V 0H4

www.ocadu.ca/onsite
onsite@ocadu.ca
416-977-6000, Ext. 265

Wednesday to Friday
12 to 7 p.m.

Saturday
12 to 5 p.m.

f   www.facebook.com/
     OnsiteOCADU

     @onsite_at_ocadu

t   @ONSITEatOCADU