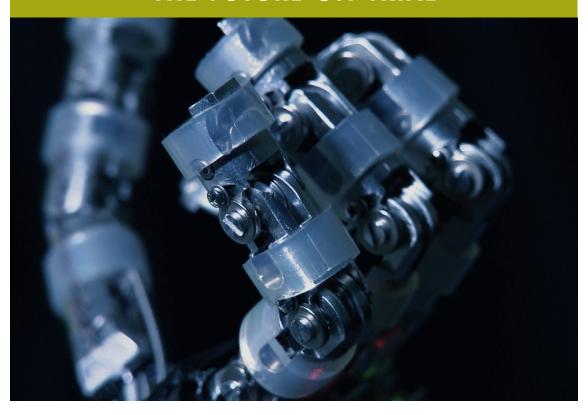


## **SCIENCE & TECHNOLOGY**

# SCIENCE ON THE EDGE: THE FUTURE ON TRIAL



## SCIENCE ON THE EDGE, A series to explore science 360 $^{\circ}$

A series questioning the future of science and its impact on our lives. Will the latest scientific and technological breakthroughs in X-ray, DNA sequencing or medical science help us meet the challenges of the 21st century and beyond?

Episodes: AI VS HUMAN BRAIN: THE FINAL SHOWDOWN, POKER BRAIN: INSIDE THE HEAD OF A POKER PLAYER, THE BRAIN FACTORY, FUKUSHIMA: ROBOTS IN HELL, INSIDE A VIRTUOSO'S BRAIN, INSIDE A TRADER'S BRAIN, DIGITAL MEMORY GATEKEEPERS, RESURRECTION SCIENCE, LIVING WITH ROBOTS, ON THE TRAIL OF ART, THE EXPERTS OF THE PAST, WATER WIZARDS, FACING THE MOUNTAIN.

ANNÉE YEAR: 2012-2017

### AI VS HUMAN BRAIN: THE FINAL SHOWDOWN

**Director:** Thibaut Martin & Guilain Depardieu



In May 2014, physicist Stephen Hawking and leading scientists sent warning notes about AI uncontrolled development which could seriously threaten humanity. Between fantasy and reality this film aims at clarifying what AI is really about today and how far it has been developed. should we take these warnings seriously?

## POKER BRAIN: INSIDE THE HEAD OF A POKER PLAYER

**Director:** Quentin Domart & Thierry Fessard



In poker, it is often impossible to decipher the players' emotions. But that's about to change. We're going to analyze some of world's best players using state-of-the-art scientific tests, exclusive computer imagery and expert commentary. We're bringing you the first poker game filmed specifically so that you can feel what the players feel - from the inside! How do they count cards, recognize their opponents' tells, and maintain self-control? What physical and mental tricks

do the players use to win? What happens in their bodies and their brains when they're bluffing? How do they cope with the circuit's never-ending stress?

## THE BRAIN FACTORY

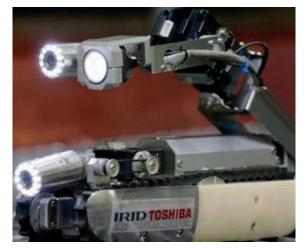
**Director:** Cécile Denjean (The Gut, our Second Brain - 2013)



A group of billionaires has joined forces with the greatest scientists in an effort to transfer the human brain to an avatar. Their goal is to transform Humans into digital beings and thereby free them from the curse of aging, and from death. Science or Science-fiction? Within the walls of laboratories, the creation of artificial humans has already begun.

## **FUKUSHIMA: ROBOTS IN HELL**

**Director:** Marie Linton & Aurélien Biette



They are called Packbot, Quince, Racoon or Maestro. These robots enter where humans cannot survive with one mission: decontaminate and dismantle the Fukushima nuclear power plant in Japan.

## **INSIDE A VIRTUOSO'S BRAIN**

**Director:** Marie Prudhomme



As Mozart, many virtuoso musicians start demonstrating great musical ability at a very young age. How can we explain such precocious capacities? Is the musical gift innate? What are the biological mechanisms involved in musical perception? Can music have an impact on neural activity and even make us more intelligent? Enter in the musician's mind and follow the lives of prodigies of different ages and enjoy an investigation on musicality and the latest scientific advances in the field.

## **INSIDE A TRADER'S BRAIN**

**Director:** Quentin Domart



After several rogue traders stories made the headlines these last years, revealing the human factor behind the global economy, neuroscientists have started to scrutinize traders' brain and stress management. What stimulates and motivates them? How can their brain cope with such a high level of stress and competition? This film investigates further into Neuroeconomics, showing how traders are being governed by unconscious psychological and biological processes which can trigger borderline behaviours and have disastrous financial consequences on the financial markets.

#### **DIGITAL MEMORY GATEKEEPERS**

**Director:** Quentin Domart



We have entered the Homo Numericus Age, producing millions of digital files in the course of our lives. Whether photos, videos, emails, tweets, diplomas, medical, financial or administrative files, or even our ID data...they all rely on digital technology, a vital and strategical tool which encompasses this massive collection of confidential and personal data and a big part of our memory. Today, stocking these data and securing this content over time is a major challenge for our State Security, our economy and our societies in general...and a coveted and lucrative mission. Behind the virtual dimension who are the real gatekeepers of our

memory? How reliable are they and how selective are we in what we stock online? Enter the digital space and the cloud computing network and find out more!

## RESURRECTION SCIENCE

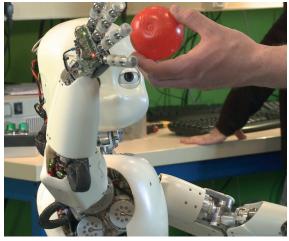
**Director:** Thibaut Martin



Imagine a living, breathing dinosaur, mammoth, or Neanderthal. This is the story of science's latest frontier. "Resurrection Science" is a global scientific investigation into DNA sequencing and bio-molecular cloning, to understand how scientists around the world are competing to be the first to rewrite the history of our planet and resurrect creatures from the past. Far from science fiction, three scientists have made it their mission to turn this dream into reality. From the labs of MIT to those of Kyoto, capabilities are here: it is no longer a matter of "if" but only a matter of "when".

#### LIVING WITH ROBOTS

**Director:** Elodie Fertil



Robots are everywhere. They build our cars, entertain our kids and clean our floors. And as they continue to creep into our lives with ever-greater capabilities and intelligence, they will fundamentally rewrite our relationship with machines. This film takes us to the world's most advanced androids that look and talk like us, the world's deadliest robots that kill for us, and the world's smartest robots that learn from us. From Korean robotic prison guards to American sex robots, follow the latest developments and peek into a nearby future where robots will be entrusted not only with chores but also with our feelings.

The robotic revolution is on the march; humanity will be forever changed.

## ON THE TRAIL OF ART

**Directors:** Eric Paternot & Robert Iseni



This exclusive-access documentary will bring truth and understanding to an art world filled with secrets and riddles. From the basement of the Louvre in Paris to the Opificio delle pietre dure in Florence, discover how science can restore original beauty and confound counterfeits. Thanks to modern forensics, investigators are cracking the mysteries buried deep inside our cultural treasures. UV rays, infrareds, thermoluminescence are only a few of the tools that can reveal when it was painted, how it was sculpted and who was behind it. This is the story of the world's best fine-art forensics teams and their quest to shed light onto the processes of creative geniuses in some of the world's most beautiful cities.

## THE EXPERTS OF THE PAST

**Director:** Dorothée Heissler



Topographer, wood specialist, archaeozoologist, palaeogeneticist... These complicated names stand for amazing investigators whose task it is to reconstruct the history of our ancestors by analysing the slightest clues buried in the soil.

Join these underground detectives in their thrilling scientific enquiry.

#### WATER WIZARDS

**Directors:** Jean-Paul Llamazares



"Water for Everyone". This is one of the XXIst Century major goals. Can it be achieved or is it just a dream? Can we increase the quantity of freshwater that is available on Earth? Can we improve its access and distribution?

This film takes you into the world of the new masters of blue gold.

## **FACING THE MOUNTAIN**

**Director:** Guillaume Gesret, Nicolas Gabriel, Marianne Cramer



Facing altitude, the cold, the lack of oxygen and loneliness. In high mountain areas, our body has to go to extremes. How to cope? Are we strong enough to withstand? Will new technology enable us to face such extremes? In Mount Blanc, at an altitude of 3800 meters, alpinist doctors try to find out.