



Michael Najjar



Maja Iamm

HOUSE OF PHOTOGRAPHY

**NOOR
DER
LICHT**

NUCLEUS | imagining science | Noorderlicht Photo Festival 2017

from Oct. 22nd till Nov. 26th | six locations in Groningen, Eelde and Assen

'NUCLEUS, imagining science' is the 24th edition of the Noorderlicht International Photo Festival. Noorderlicht has invited an inspiring group of photographers to present works that reflect on the scientific endeavour, at a time when our society is on the eve of immense, knowledge-driven changes. NUCLEUS: 111 photographers, 26 countries, more than 700 images and limitless imagination.

Curiosity

NUCLEUS is about science and the representation of it by independent photographers and artists. In response to social developments, more and more artists look towards science as subject matter and source of inspiration. Science and art form a fertile combination after all. Both disciplines work from an investigative urge, with curiosity, originality, creativity and an open mind as fundamental principles. Both are born out of curiosity, an urge to understand the world we live in.

Profound changes

Few still doubt that society will undergo many profound, knowledge-driven changes in the coming years, this is referred to as the fourth industrial revolution. Developments such as renewable energy, virtual reality and augmented reality, nanotechnology and robotics, interplanetary space travel, DNA manipulation, brain-computer interfacing, artificial intelligence and large-scale data analysis are all rapidly accelerating. Fueled by all these developments we see that public interest in science is growing.

Tribute to human ingenuity

In NUCLEUS, artists from all over the world tell their stories about science and the representation of it. Their work is stimulated by science's many manifestations and shares the artist's fascination with the viewer. Contemporary photography forms the heart, from which we branch out towards classic techniques as well as modern media. Sometimes the artists represent science by appropriating it as a factual subject, sometimes by taking its imaginative language as inspiration for their fictions. In full awareness of the responsibilities that it entails, they collectively pay tribute to human ingenuity.

More information

The Noorderlicht website www.noorderlicht.com offers information on the work and the artists, the venues and their opening hours. It is the first time a collaboration from Noorderlicht occurs with KINK in Assen and Museum De Buitenplaats in Eelde. The theme exhibitions are complemented by *off* exhibitions, a varied range of shows by partner organisations in the city, see the website for details.

Fascinating, adventurous

The 24th edition of the photo festival brings science together with people of flesh and blood. (...) The real question that curator Wim Melis poses in Nucleus is: what does science bring us? Progress? Indeed. Beauty? Also. A rich exhibition? Yes."

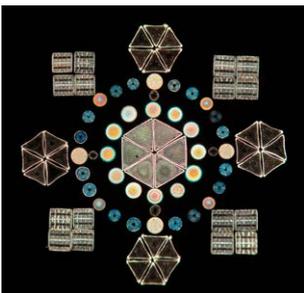
(De Volkskrant, national daily newspaper)

For press material: we offer an extensive online Press Kit in Dropbox. Please email us if you would like to access this, at publicity@noorderlicht.com. The series are all featured in the NUCLEUS catalogue, printed copies and pdf's are available on request.



Monica Alcazar-Duarte (Mexico/United Kingdom) presents **New Colonists**, about the planned one-way trip to Mars. The interactive installation reflects on a new phase in our exploration of space, which hopefully won't mean a flight away from earth but instead brings a new sense of global solidarity.

Evgenia Arbugaeva (Russia) shows us **Amani**, a former research station in Tanzania from the British colonial period. Once a highly regarded research station for malaria, now no longer in use. She captures its significance through the eyes of John, the loyal laboratory assistant.



Wayne Barrar (New Zealand) made recordings of microscope slides with the glass-like, silica remnants of microscopic organisms. **The Glass Archive** unearthes a geometric diversity and perfection unparalleled in nature and culture.

Stéphanie Borcard and **Nicolas Métraux** (Switzerland) delve into owl research, as part of their long project on Swiss science. **Evolutionary Biology** concerns questions such as: why is some barn owls red and others white? Why do owlets negotiate who gets the next prey their parents bring?



Karin Borghouts (Belgium) was struck by the beauty of bizarre objects she found in university collections. **Reliquiae** breathes life into these remnants of deceased animals, that were transformed into objects of study.

Alison Carey (United States) rescues old NASA photos from oblivion in **Collecting the Moon**. Photos taken during moonlandings, with all the imperfections that belong to the analogue era: incidental light leaks, glares on the lens, double exposures and the remnants of tape. It gives the moonscape images an earthly atmosphere.



Francesca Catastini (Italy) in **The Modern Spirit is Vivisective** looks at autopsies, the dissection of humans and animals, as a metaphor for the human quest for knowledge. In anatomical theatres, these took place for an educated as well as a paying audience.

Debashish Chakrabarty (Bangladesh) shows **Stardust**, a poetic reflection on our origins, living on a spec of dust, made from the universe. The iron in our blood, the calcium in our bones – all remnants of stars.





Edmund Clark (United Kingdom) shown us seemingly mundane landscapes, that are however **Sites of Special Scientific Interest**, for botanical, zoological or geographic reasons. Clark views taking a photograph as a mirror reflection of this, a new act of classification.

Ellie Davies (United Kingdom) in **Stars** joins photographs of ancient woods with images shot by the Hubble space telescope. By using images from one of the most advanced scientific instruments, she connects the woodlands to the mystery of the unfathomable universe.



Marcus DeSieno (United States) used a scanning electron microscope and the old technique of ferrotypes for **Parasites**, to capture parasitic organisms, referencing the scientific curiosity towards the invisible.

Annabel Elgar (United Kingdom) in **Cheating the Moon** investigates the 270 moon rocks from Apollo Missions, that were given to royalty and leaders all over the world. Over the years a practice of falsification, theft and extortion has arisen around the moon rocks and 180 of them are now missing.



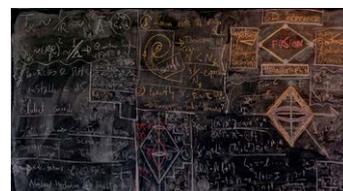
Anna Filipova pictured Ny-Ålesund for **Research at the End of the World**, the most northern civilised settlement in the world and the largest existing Arctic research location. The scientific installations are gradually becoming part of the landscape.

Todd R. Forsgren (United States) looks at birds caught in mist nets and captured the moment just before scientists took the birds out of the nets to be weighed, measured, tagged and then released again. Cruel looking but mostly harmless, **Ornithological Photographs** raises questions about its ethics.



Alberto Giuliani (Italy) looks at scientists investigating possible answers to the challenges that await us in the near future for **Surviving Humanity**, from cloned dogs to cryotech and climate change.

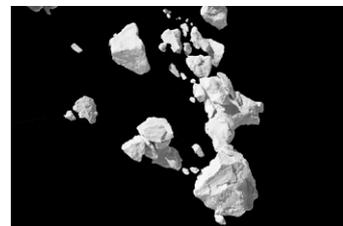
Alejandro Guijarro (Spain) visited the quantum mechanics departments of various universities, and photographed blackboards there for **Momentum**. The boards with precise formulas thus evolve into a new aesthetic.





Phil Hastings (United States) creates new life forms from pixels, *Morphology* is akin to genetic manipulation and refers to the historical act of collecting and cataloging the unknown, inspired by scientific research that took place at the end of the nineteenth, beginning of the twentieth century.

Lucy Helton (United States) in *Actions of Consequence* shows us unearthly landscapes devoid of all life. The black and white images depict a world that is both frightening and beautiful, and reflect concerns about our past and about the earth's uncertain future.



Abbey Hepner (United States) wonders what the future has in store for us as technology infiltrates our lives on more and more levels. *Optogenetic Cybernetic Translations* shows us how artificial intelligence interprets brain scans, in 3D lenticular prints that hover between the beautiful and the frightening.

Jos Jansen (Netherlands) presents *Playground*, a next chapter in Noorderlicht's collaboration with the State University of Groningen. Together they commissioned Jansen to capture the research group of Ben Feringa, chemist and recent Nobel prize winner for his work on molecular nanomachines.



Wanuri Kahiu (Kenya) screens *Pumzi* (Swahili for 'breath'), set in a post-apocalyptic East Africa, 35 years after WW III broke out over water. Asha escapes from her community, choked by the lack of water, in search of life in the supposedly dead outside world, symbolising an escape from oppression.

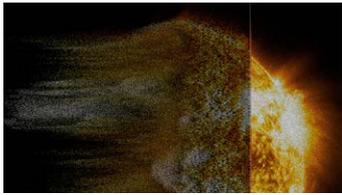
Jaakko Kahilaniemi (Finland) in *100 Hectares of Understanding* investigates his own plot of land. For a long time he was indifferent to it, but recent explorations in the woods and in the world of forestry made him want to connect to it.



Daniel Kariko (United States) composes images from electron and regular microscopes for *Suburban Symbiosis: Insectum Domesticus*, using them as tiny portrait studios for insects we find around our house, inspired by seventeenth century Dutch master painters.

Paul Kranzler (Austria) and **Andrew Phelps** (United States) photographed their *The Drake Equation* in Green Bank, where large radio telescopes require electromagnetic-free surroundings, thus attracting radiation-refugees to join the rural population.





Ryoichi Kurokawa (Japan) presents **Unfold.alt**, a sensual experience in image and sound, inspired by cosmology and astrophysics and using actual measurement data, bringing us eye to eye with the farthest reaches of the universe and the secrets of its origin.

Peeter Laurits (Estonia) explores in **Codex Naturalis** how huge computer networks are delving deeper and deeper into natural systems. It won't be long until these networks find a shared interface and start to communicate.



Luca Locatelli (Italy) shows us the labour of the 1000s of researchers in **CERN and the Artisans of the Universe**, adding a human touch to the often-seen hightech image of incomprehensible technology in sterile spaces.

Marie Lukasiewicz (France) presents a lighthearted look at Urban Farming in **Étude**: how healthy are these plants, that are grown in the polluted city air? Her semi-scientific treatises show unexpected consequences.



Marcus Lyon (United Kingdom) with **Optogenome** explores the current state of modern laboratories, a typology of landscapes without a horizon, which are constructed out of a myriad of perspectives.

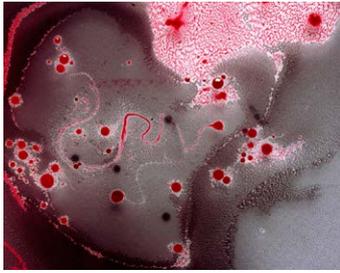
David Maisel (United States) shows how our hyper-modern world is driven by dominant technology. These **Sites of Technological Research and Production**, that can appear strange and even dystopian, explore the large experiment that is our society.



Anne Arden McDonald (United States) polishes or scrubs the photographic paper, uses techniques of evaporation, etc. The rings, bobbles and wipe marks that appear in her darkroom symbolise **Atom/Planet**, the macro and micro cosmos.

Osamu James Nakagawa and researcher **Michael Hamburger** (United states) collaborated to create a new medium that brings together photography and seismology. In **Seismophotography: Images of Natural Disaster** they examine feelings of awe, amazement and fear in relation to the tsunami that hit Japan in 2011.





Beatrice Pediconi (Italy) explores the spiritual qualities of water in *Alien*, by painting in it using oil paint, and photographing/filming the result, thus bringing together chemistry, physics, music, photography and video.

Agnieszka Rayss (Poland) went to various museums and anatomy, pathology and forensic institutes for her *Anatomy Lesson*. When does a body becomes a specimen? Does anatomy contain beauty? Are these objects actually science, art or both?



Kate Robertson (Australia) captures old knowledge in *The Medicinal Plants of Siwai, Bougainville*. In her lumen prints the leaves are not only exposed, the story in their veins also enters into a direct chemical reaction with the photographic paper.

Larissa Sansour (Palestine) explores the role of historical myth vs fact. The short film *In the Future, They Ate from the Finest Porcelain* shows a resistance group burying fine porcelain. This fake archeology is a historical intervention, with which a nation is in effect created.



Serinyà (Spain/Sweden) looks at old dioramas in *Noises from the Silent Land*. Glitches in the image emphasize the paradox of a landscape with dead, stuffed animals, composed to nourish our love for all things living.

David Thomas Smith (United Kingdom) pays homage to the *Arecibo* message, sent into space in 1974 as a terrestrial beacon, and reflects on the evolution of humanity by creating collages about important places in human history.



Daniel Stier (Germany) presents bizarre images that evoke more associations with medieval torture chambers than with the quest for knowledge. *Ways of Knowing* combines actual research images with semi-scientific experiments in his own studio.

Clare Strand (United Kingdom) in *The Betterment Room* responds to photographic studies to improve the performance of factory workers, done a century ago. Her project was shot on 4x5" Polaroid negatives at the time - we're showing the original polaroid prints that she kept.





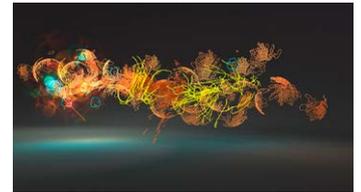
Andrea Stultiens (Netherlands) reinterprets photographs with drawings by medical illustrators, of patients with a particular type of cancer in *Staying Alive - Documenting the Uganda Cancer Institute*. This lymphoma was discovered there, half a century ago.

Vivan Sundaram (India) arranged pot shards from archeological excavations in the dark room, to create small sets using luminous fiber optics. *Terraoptics* evokes the image of a prehistoric landscape, intersected by burning rivers.



Maija Tammi (Finland) is fascinated by immortality and shows different views on it. *Post-* is a combination of three of her projects, featuring immortal cancer cell lines, immortal fresh-water polyps and an android.

Andy Thomas (Australia) in *Visual Sounds of the Amazon* shows how the sounds of birds in the heart of the Amazon rainforest stimulate his visual imagination. In his 3D animations they become evolved, abstract shapes in bright colours, floating, pulsating, flashing, turning.



Wanda Tuerlinckx (Belgium) travelled the world to capture the revolutionary developments in robotics. By using paper negatives in a nineteenth century calotype camera, Tuerlinckx gives the *Androids* the soft, knowing look of our great-grandfathers.

Penelope Umbrico (United States) was astonished to find that Flickr had no less than 1,146,034 identical, technically accomplished photographs of the moon, many of which paradoxically come with a copyright label. *Everyone's Photos Any License* plays on that concept in print and a dazzling video.



Peter Voigt (Germany) gathered *The Strangelove Collection*, with vintage photographs depicting nuclear research and the atom bomb. The childish enthusiasm and the scientific innocence with which his subject is displayed, is in stark contrast with its lethal danger.

Jakob Weber (Germany) shows in *Uncanny Valley* that old dreams of artificial humans - the Golem, Frankenstein - are now coming true with the humanoid robots being built in laboratories. Exoskeletons, prosthetics and virtual reality glasses are already expanding our bodies' capacities or repairing defects.





Hannes Wiedemann (Germany) in *Grinders* shows biohackers, working on the fusion of man and machine, functioning as guinea pigs for transhumanism: the belief that through science and technology, humanity can evolve beyond its current constraints.

Sanne De Wilde (Belgium) went to *The Island of the Colorblind*, an atoll where a unusually large part of the population can't see color. She pictured this popular scientific destination by various means, transforming photography into a metaphor for the limits of our visual faculty.



Liam Young (Australia) presents the world's first science fiction film shot with laser scanner technology, as used for navigation in driverless cars. Through the eyes of these robots, *Where the City Can't See* follows an underground community that has hacked the city through new ways of digital camouflaging.

Robin Alysha Clemens (Netherlands) unveils a countermovement to ever increasing control: *Owned By No One* shows a group of people that lead their lives under the radar, live in safe houses and only appear in public as anonymously as possible.

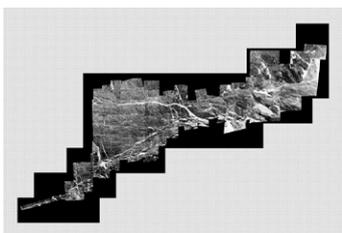


Michael Najjar (Germany) visited space ports and laboratories for *outer space*, and met with numerous scientists and astronauts for a series that blends documentary and fictional scenarios. Part of it is based on his own experiences, following an intensive training programme for the space flight with Virgin Galactic that he booked.

Fresh From Poland called on artists via social media to submit their visual image of UFOs. Are we alone or are we being watched? *#showmeyourufo* researches how the image of alien life and UFOs has formed in our consciousness over the past 75 years. Curated by Grażyna Siedlecka (Poland).



Robert Shults (United States) pictures the Texas Petawatt Laser in *The Superlative Light*, the most powerful laser in the world, where fundamental research is performed about among others stellar matter. Its peak power output is almost two thousand times greater than the whole of the United States' electrical grid.



Grégoire Eloy (France) accompanied a geological survey in *The Fault*, a fossilized scar caused by an earthquake over 250 million years ago. *A Black Matter* depicts research being carried out in astrophysical laboratories, into dark matter: the researchers, laboratories, instruments and their underground environment.



Vincent Fournier (France) creates new life in *Post Natural History*, questioning our relationship with nature and technology. He looks at empathy in the interaction between humans and robots in *The Man Machine*, and investigates the space industry settings in his longrunning *Space Project* as if they were large film sets.



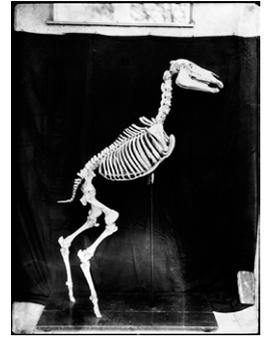
Jay Gould (United States) shows *Extreme Materials*, made in a lab that creates materials for extreme conditions, such as outer space or nuclear experiments. *Experimental Storytelling* are little pieces of lab fiction and *Uncertain Passages* responds to the concept of alternate realities that has taken root in our world view.





David Fathi (France) shows a new installation of **Wolfgang**, about the famous quantum scientist Pauli, who won the Nobel Prize in 1945. He had the reputation of making every experiment fail in his presence. Fathi used CERN's archive photographs, some of which are edited, to compile a scientific ghost story.

Michal Sita (Poland) works with the photos of **Wieslaw Rakowski** (1903-1948), who was curator of the natural history museum in Poznan. **Zoological Archive** is created from rediscovered glassplates from almost a century ago that carry no descriptions anymore, turning them into surreal imagery.



Caleb Charland (United States) is fascinated by the simplicity of the fruit battery. He creates energy from nature in **Back to Light**, showing us that the possibilities for alternative and sustainable energy sources are endless. His **Biographs** show exposed photographic film, covered in nutrients and subsequently eaten by bacteria.



Tjibbe Hooghiemstra (Netherlands) used his camera to draw illusions of reality, in **Imagining the Cosmos**. His photographs evoke an experience of space, with a melancholic undertone.

The duo **Kahn & Selesnick** (United States & United Kingdom) elaborately stage a collapsed civilization in **Mars: Adrift on the Hourglass Sea**. NASA photographs of the Martian landscape are combined with their own desert images, featuring actors in desperately impractical circumstances, simultaneously futuristic and archaic.



Ulrike Schmitz (Germany) shows us how Neanderthals can be brought back to life in **Missing Link**. In 2013 the DNA of the male Neanderthal was decoded, since then scientists have been attempting to artificially reproduce this genome in a human stem cell. The work is a surreal reflection on our changing place in evolutionary history.



Annemarie van Buuren (Netherlands) shows the anachronistic character of the **Zoo**, with an antique, wooden plate camera from 1880. The raw reality of these animals' lives becomes visible: behind bars of dated, nineteenth century institutions, reduced to fairground attractions and cut off from the wilderness where they belong.

Angeline van Gent (Netherlands) researches and rearranges everyday objects from the surrounding outdoor space into **Future Fossils**. Without context she sends them to random places around the world. **Kaleidoscopefilm** joins the cogwheels of a watch to the illusion of the device, creating a new, organic order that is presented as a video.



Jeroen Hofman (Netherlands) in **Forensics** maps out the broad spectrum of science and technology used in the process of establishing the truth in criminal cases – from cold cases, blood spatter analysis and offender profiles to pathological-anatomical research and DNA traces.

Jos Jansen (Netherlands) looks at seed cultivation. Darwin's process of natural selection has long been replaced by high-tech plant breeding. **Seeds** focuses on the consequences of resistant food crops as a way of feeding the rapidly increasing world population.



Anja de Jong (Netherlands) looks at water management in The Netherlands. **Monuments of Climate Change** shows landscapes and locations where for centuries humans have either embraced water as a friend or fought it as an enemy. As a country largely below sea level, these interventions are crucial.

Marcus Peters' (Netherlands) work in **Universum MMN** is an intimate exploration of the unreal state he found himself in at the beginning of last year. Within the space of six months, all the strength flowed out of his body and he increasingly lost control over his body, due to the rare neuromuscular disease of multifocal motor neuropathy.



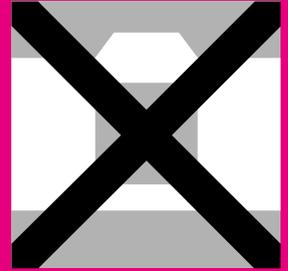
Henk Wildschut (Netherlands) shows **Phosphate**, one of the three most important ingredients in fertiliser and a primary component of animal feed. Wildschut photographed phosphate mines in Morocco together with photographs of the fruits of phosphate-use in the Netherlands, thus showing us its global dependencies.

Xiaoxiao Xu (Netherlands) shows amateur airplane builders in China in **Aeronautics in the Backyard**, looking for ways to fly. Many of these flying machines are incredibly dangerous and barely function, other designs work so well that they are acknowledged by the professional market.



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NUCLEUS EXHIBITION VENUES

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