

Ton-Pendel(a)utom@t

An audiovisual and robotic installation
(4-channel electroacoustic music, abstract animated video
and a device of six suspended, sonic, robotic and interactive pendular objects)

Clara Maïda

(15'00 in quadraphonic surround, played in loop + 108 sound sequences distributed to the pendular objects)

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and at the STUDIO FÜR ELEKTROAKUSTISCHE MUSIK of the AKADEMIE DER KÜNSTE (Berlin)

Conception of the project, music composition, realisation of the animated video,

2D design, 3D co-design and painting of the pendular objects: Clara MAÏDA

Conception and realisation of the robotic system, 3D co-design of the pendular objects: Matthias KUBISCH (Berlin)

Ton-Pendel(a)utom@t is an audiovisual and robotic installation that is part of the series *(a)utom@ton*. It combines an audiovisual work, *Pendel(a)utom@t*, for 4-channel electroacoustic music and an abstract animated video, and a device of six suspended, sonic, robotic and interactive pendular objects.

The series includes three parts: the work *(a)utom@ton* (music and video, 10'00), the audiovisual work *Pendel(a)utom@t* (music and video, 15'00), and the six *Ton-Pendel(a)utomat* of the suspended robotic device, whose swinging motion and production of sound sequences vary according to the actions of the audience.

The title of the work refers to the Greek word "automaton" which names a being-machine that acts on its own account and moves spontaneously.

Both signs *(a)* and *@* inserted in the spelling of the title emphasize the distinction between what drives a human being and a robot.

(a) alludes to the *little a* object conceptualised by psychoanalyst Jacques Lacan, the elusive and unidentifiable object of desire which can take very various shapes for each individual.

@ evokes the Wi-Fi connected robotic objects.

The robotic device of the audiovisual installation suggests an artificial micro-network. The moving objects, whose shape evokes a neuron, are hanged from the ceiling by one cable and connected together by a micro-network of elastic threads. They are equipped with embedded motion and distance sensors, mini-MP3 players and mini-loudspeakers. A dual form of interactivity is at work. On the one hand, the objects have been programmed so that the speed and amplitude of their swinging motion, as well as the various sonic sequences they produce, vary according to the audience's gestures. On the other hand, the oscillation of each object triggers the neighbouring object's activity. The combination of all the oscillations and sound sequences ultimately creates a kind of pendular complex whose activity constantly varies from one point to the next and whose sounds merge with the quadraphonic soundtrack.

The soundtrack of the installation uses sequences from the work *(a)utom@ton*, with its sonic figures and timbres both reminiscent of mechanisms in motion, with sometimes a repetitive quality, and hoarse or strident sonorities akin to a scream or a death rattle. However, specific computer processing techniques (granulation, reverb, various types of filters) eliminate any rhythmic quality or dynamic accentuation from the mix, in order to achieve an highly elastic temporality.

The animated video explores the hybridisation and metamorphic pathways of a visual material composed of images of neurons, brain connections, robotic circuits, an Arduino board, and mechanical cogwheels, as well as fragments of the programming code for the suspended objects.

Projected at the background of the installation and also reflected on the objects painted with a mirror-finish silver chrome colour, the animated image is thus diffracted into six coloured and moving micro-surfaces of reflection.

At the intersection of a mechanical system that appears to be alive, organic, deforming under the pressure of forces, and a ramified organism whose connective and proliferating potentiality is constrained by a rigid and limited framework, the work questions the notion of automatism, whether machinic or psychic.

Clara Maïda, November 2025