

數沙者

**THE
SAND
RECKONER**

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The Sand Reckoner

The title of the work is taken from Archimedes' work "The Sand Reckoner," which metaphorically quantifies how many grains of sand can fill the universe, naming the largest numbers. "Sand reckoning" implies humanity's exploration of the infinite universe. Meanwhile, earthworms also engage in "sand reckoning," as they spend their lives ingesting soil, continuously grinding the sand particles within their guts, and excreting them. This book also first mentioned the possibility of the sun being at the center of the universe, and Archimedes was the first to use mirrors to concentrate sunlight to destroy Roman ships at sea, a technique known as "death ray."

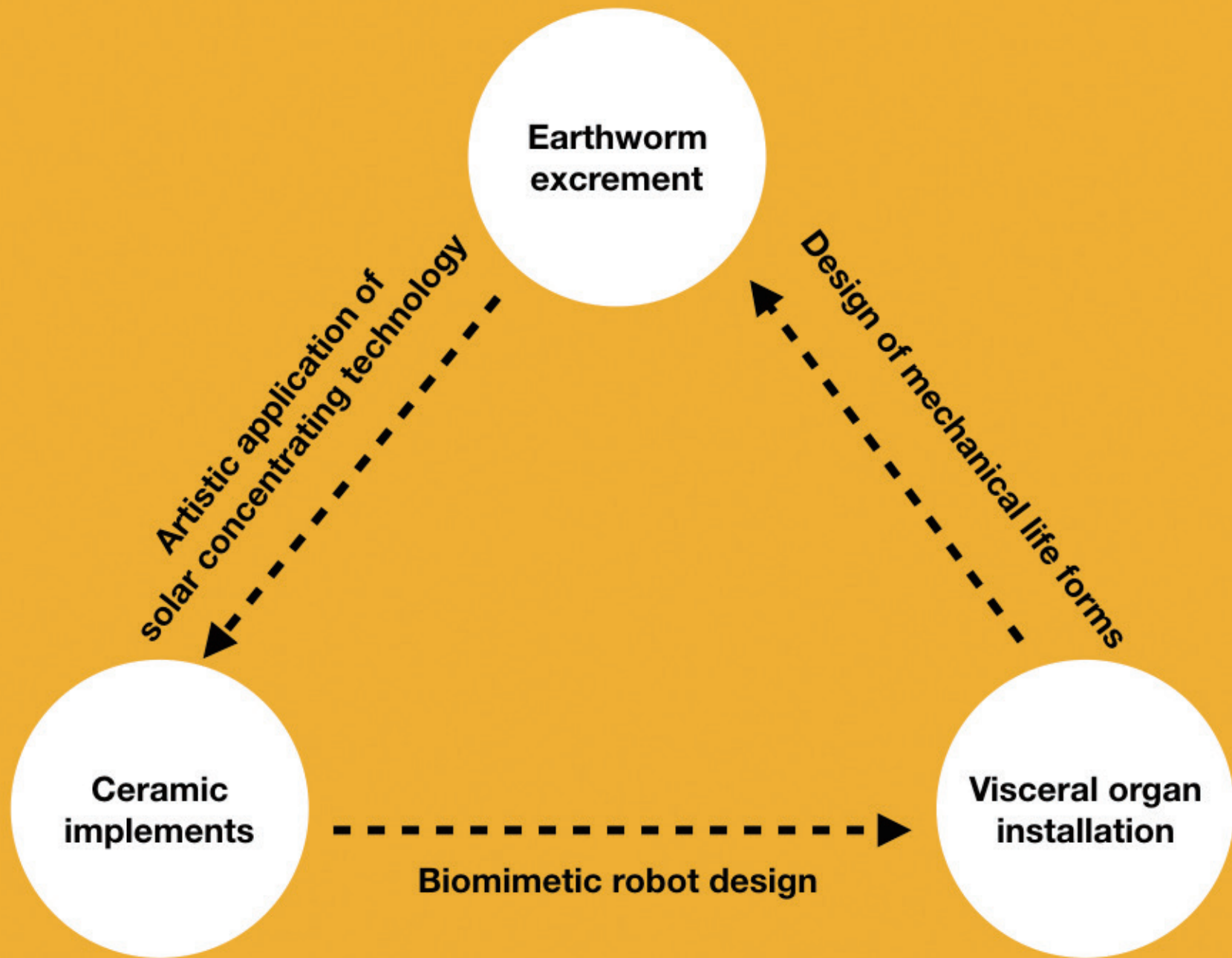
About the work

Using humble biological material from Earth—earthworm excrement—and the Chinese Academy of Sciences' solar concentration technology (solar thermal high-temperature ceramic kiln), transforming it into golden artifacts to mimic the visceral organs of the earthworm, the "sand reckoners." Combining this with the simulation of earthworm digestion through mechanical life forms, the "movement" in the artwork is both physical and mathematical, representing both the movement of the earthworm and the movement of the sun-artifacts, machinery, motion, the sun in the video, formulas, etc., they all work together to form a complete work, exploring the mysterious essence of the universe.

Size: 2400×2000×2400 mm

Medium: Earthworm excrement, solar concentrator burning ceramics, metals, mirrors, hoses, circuit boards, motors, and mud

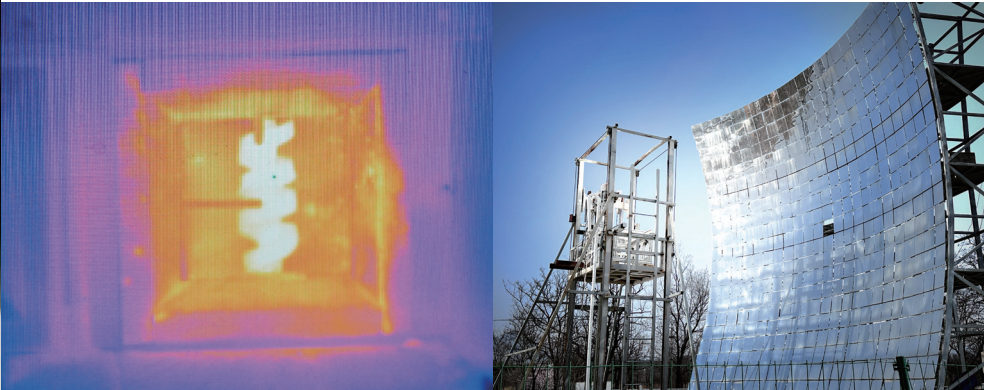


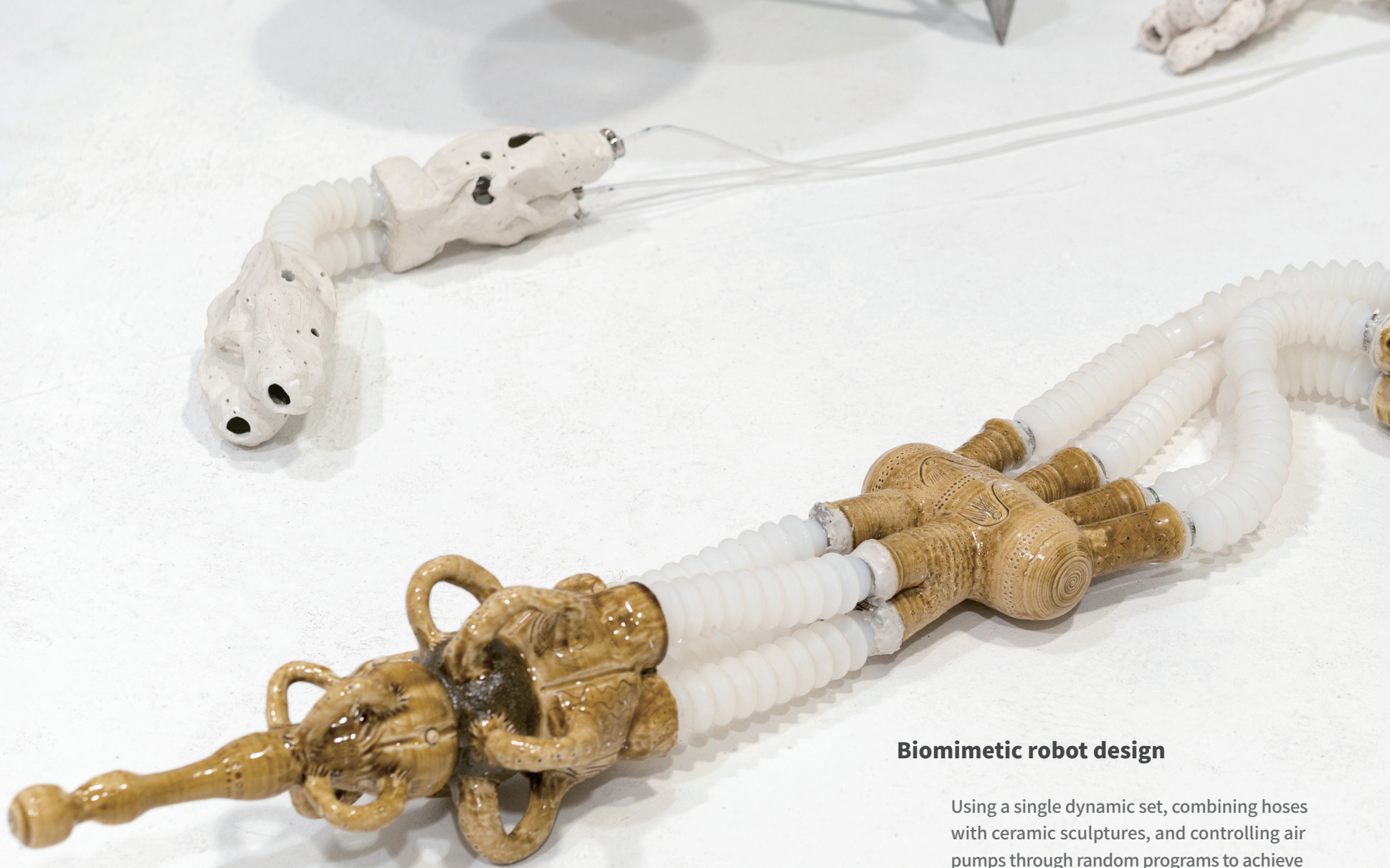




Artistic applications of solar concentrating technology

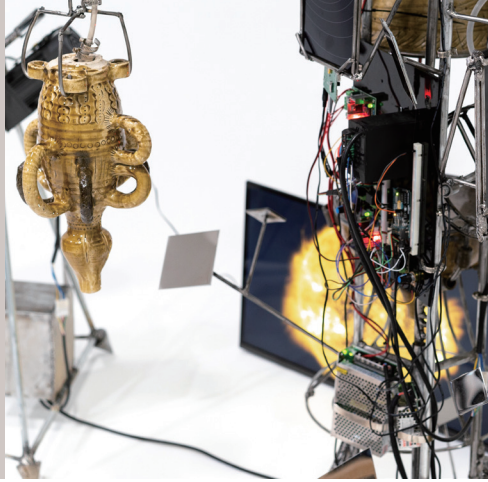
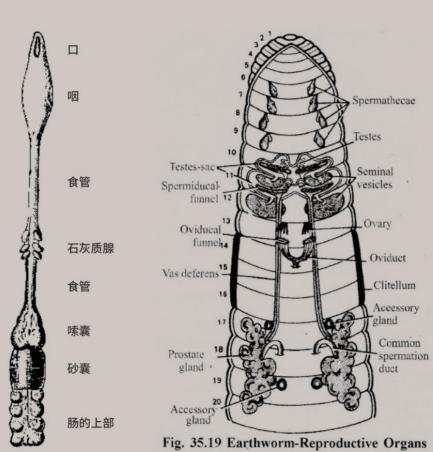
Using earthworm excrement and dust as ceramic materials, successfully employing the Chinese Academy of Sciences' solar concentrator device to fire golden ceramics, simulating the visceral organs of earthworms using the texture of ancient primitive celadon and the modeling language of Archimedean spirals. Contemplating the philosophical implications of using solar concentration technology. Showcasing the process of earthworm "sand reckoning," revealing the hidden connection between earthworms and the sun—a "cosmic symphony" collaboration between cosmic forces and humble creatures. Using earthworm excrement as ceramic material, firing it into golden ceramics using the Chinese Academy of Sciences' solar concentrator device (a marvel of new technology), completes a sacred purification.





Biomimetic robot design

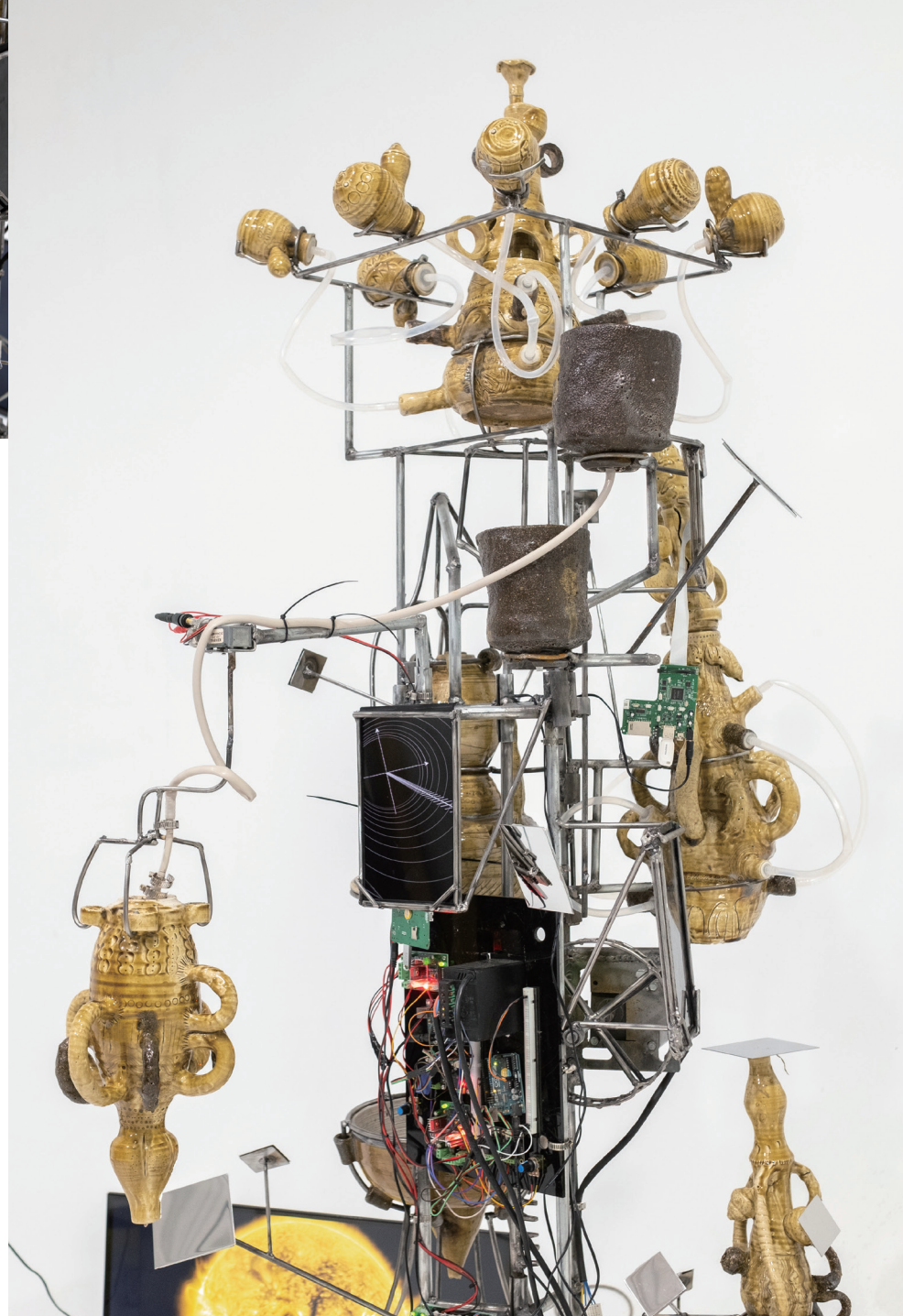
Using a single dynamic set, combining hoses with ceramic sculptures, and controlling air pumps through random programs to achieve wriggling effects, showcasing the life form of mechanical earthworms, where their movement is the process of "sand reckoning."

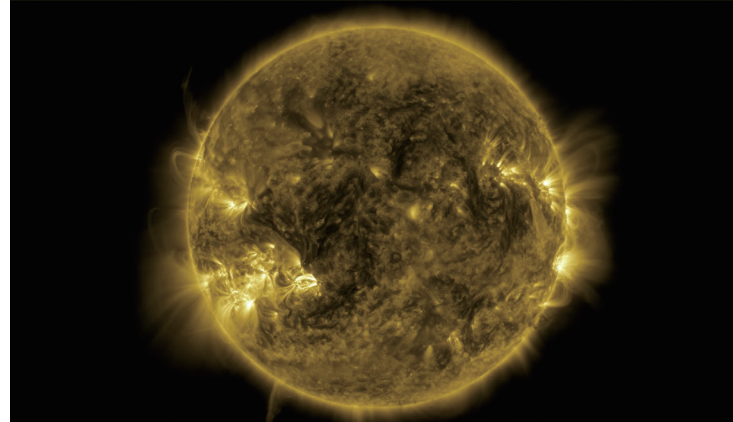


Design of mechanical life forms

Using programming to control motors, combined with ceramic materials and metal structures, mimicking the functions of earthworms—feeding, grinding, and excreting—presenting the image of soft earthworms with the power to crush and bury human relics within the soil.

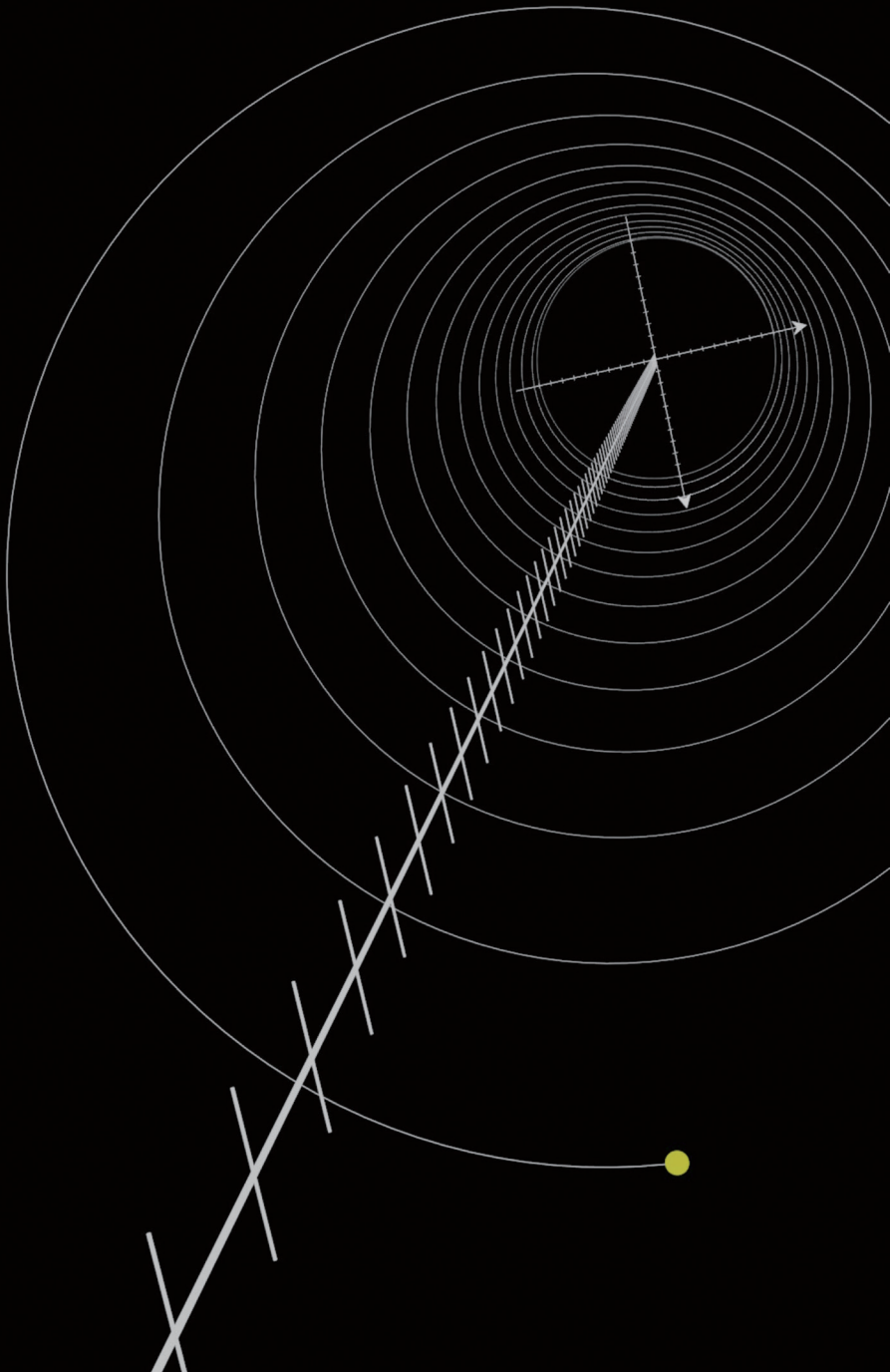
Combining mechanical life forms to simulate the digestion movements of earthworms, handcrafting metal mechanical structures—inaccurate, error-prone, rough characteristics—pursuing the "awkward" relationship between humans and technology. The "movement" in the artwork is both physical and mathematical, representing both the movement of earthworms and the movement of the sun—the artifacts, machinery, motion, the sun in the video, formulas, etc., they all work together to form a complete work, exploring the mysterious essence of the universe.





By using robotics to showcase the "sand reckoning" process, revealing the hidden connection between earthworms and the sun—a "cosmic symphony"—the artwork demonstrates the "technological charm" of robotic art.





In the universe's expanse,
That primal, sacred force,
Humble yet profound,
In the artwork finds its source.

Singular in its might,
Yet myriad in its form.
Solar technology's dance,
Crafts ceramics, civilization's norm.

Ancient meets the new,
Beyond linear confines.
Through the creation of "robots,"
A fresh relationship defines.

Cosmic energies, ancient and modern tech,
Mathematics, biology,
Matter and energy intertwine,
In a dance of mystery and biology.

Here, all discovers anew,
Their hidden bonds and kin.
Awkward yet transcendent,
Beyond knowledge's thin rim.

Back to the primal we tread,
The future lies therein.
From the one, infinite subtlety,
In methods, a cosmic hymn.

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