

Further information:
kunsthalle-giessen.de | giessen.de
uni-giessen.de/de/fbz/planetarythinking

The **Planetary Times Summer Workshop** is a public two-day event. To participate in the working session on Day 2 (10:00 – 18:00), please register via panel@planet.uni-giessen.de until May 21st, as the number of participants is restricted to 25 people. For more details and registration, please see the inside program and our [website](#). Please note that the entire program takes place in English.



Scan here to learn more about
and register for the workshop:



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+49 (0) 641 306 10 40
kunsthalle@giessen.de
kunsthalle-giessen.de

Opening hours
Tue–Sun: 10 am – 6 pm

Free entry

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In cooperation with
**planetary
thinking**

Design: Connor Cook, Harald Schätzlein | ultraviolett.de



The **Planetary Times Summer Workshop** is initiated by Californian media artist Connor Cook and the synthetic biologist Darren Zhu as the result of a fellowship on “**Planetary Times**” in the **Planetary Scholars & Artists in Residence Program (2022-2025)**. The international fellowship program is funded by the Hessian Ministry of Higher Education, Research and the Arts. The event is a collaboration between the **Kunsthalle Giessen** and the **Panel on Planetary Thinking** of the **Justus Liebig University**.

BIOREACTORS AND BIOSPHERES

AN AUDIOVISUAL EXPLORATION OF EVOLUTION AS PLANET-BUILDING

Planetary Times Summer Workshop at Kunsthalle Giessen

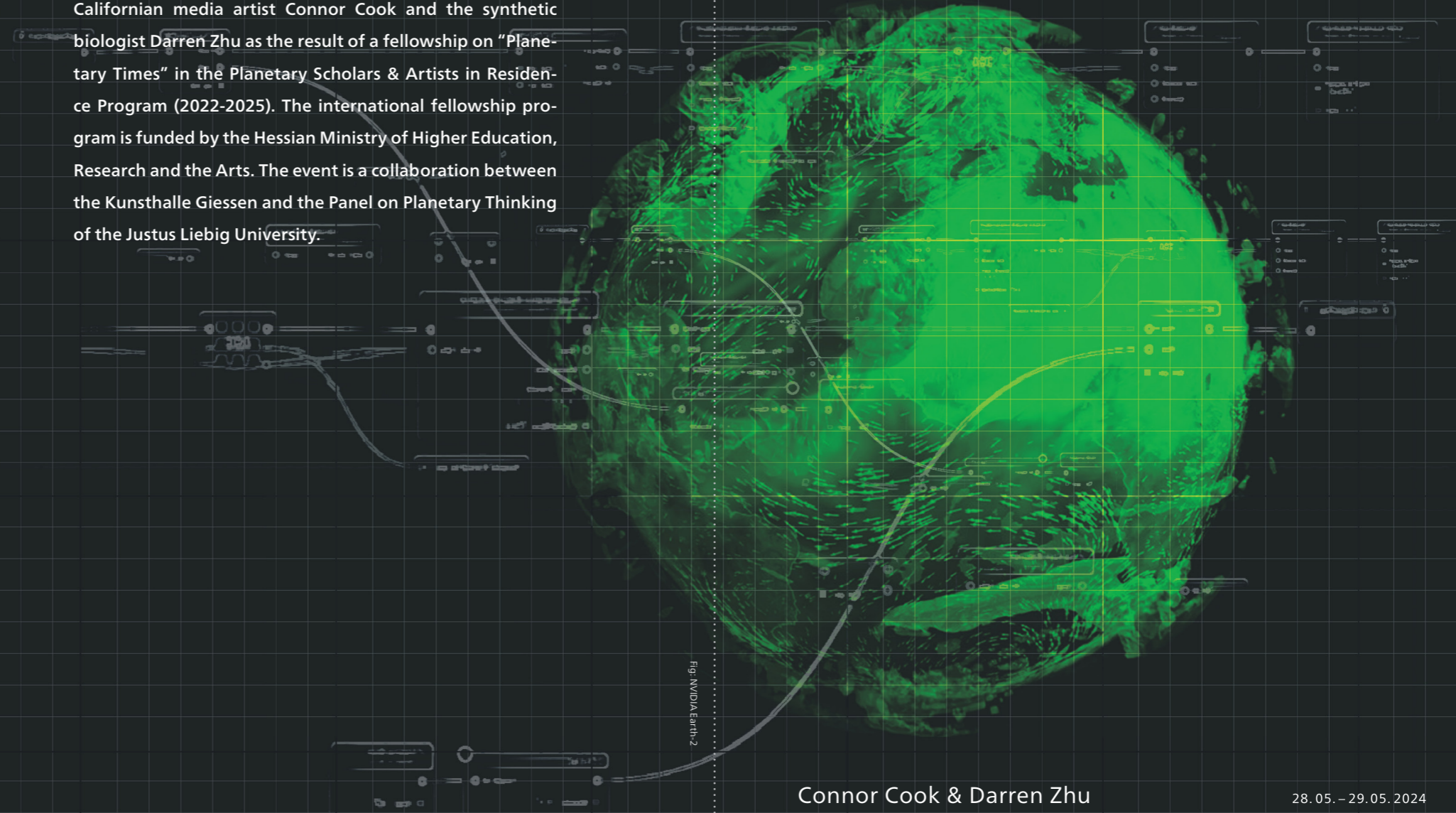


Fig. NMDA Earth-2

Connor Cook & Darren Zhu

28.05. – 29.05.2024

Kunsthalle Giessen
in collaboration with the
Panel on Planetary Thinking

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KUNSTHALLE
GIESSEN

DAY 1
15:00 - 18:00

15:00 - 16:30

TUES 28 MAY

**The Informatic Evolution of the Planet:
Introduction and Roundtable**

- Lightning introductions by Dr. Jochen Blom (computational biologist), Christina Lu (AI researcher), and Dr. Cécile Malaspina (philosopher)
- Roundtable discussion moderated by Darren Zhu (synthetic biologist) and Connor Cook (media artist and critic)

16:30 - 16:45

Break

16:45 - 18:00

Film screening and discussion

- “Xenoplex: The Informatic Evolution of Planetary Computation” [Zhu and Cook 2023]
- Preparatory remarks to the workshop
- Closing discussion & finger food reception

DAY 2
10:00 - 19:00

10:00 - 13:30

WED 29 MAY

Register for the workshop via panel@planet.uni-giessen.de

Morning session

- Workshop Kickoff: Introduction into the state of research on the topic and into the conceptual framework underlying the workshop
- Introduction to the Pioreactor and Unreal Engine project setup
- Learning how to design audiovisual worlds

13:30 - 14:30

Lunch Break (food provided for participants)

14:30 - 17:30

Audiovisual Worldbuilding

- Intensive development session with 1-1 support by the artist

17:30 - 18:00

Break & Setup for Evening Event

18:00 - 19:30

Experiencing and Engaging with the Bios-Technosphere

- Time to view the workshop outcomes
- Audiovisual performance by the artist
- Artist’s talk
- Cocktail- and fingerfood reception

From the origin of life to the emergence of complex species, the evolution of life on earth has been driven by a corresponding evolution in the way that information is stored, transmitted, and processed. The recent emergence of computation builds upon this evolutionary lineage, weaving together biological and technological domains through informatic feedback loops.

In the first part of this two-day workshop, we engage with the theory of an “Informatic Evolution of the Planet” through a transdisciplinary roundtable discussion. In an intensive workshop session on the second day, we aim to replicate this planetary dynamic on a micro scale, using a Raspberry Pi-enabled bioreactor (Pioreactor) to create immersive audiovisual worlds. The Pioreactor can cultivate, monitor, and control cultures of algae through real-time two-way communication with a computer. By algorithmically adjusting and monitoring the balance of light, nutrients, carbon dioxide, and algal growth, the Pioreactor acts as a simplified planetary model, illustrating the intricate interplay of biological matter, energy, and information within the Earth system. Workshop participants will act as mediators, using the real-time data produced by algae as input to create live audiovisual worlds using the game design software Unreal Engine.

Connor Cook is a media artist and researcher from California, currently based in Amsterdam. His work unravels the recursive relationships between technical systems and their broader ecological and cultural contexts through a practice of “computational performance.” Through audiovisual performances, he translates the complex dynamics of these interactions into collective, affective experiences that double as forms of critique. He holds an MA in Geo-Design from the Design Academy Eindhoven and a BA in the History of Art and Architecture from Harvard University.

Darren Zhu is a synthetic biologist and metascientist. He has worked with a range of biotech startups including fungal natural products company Hexagon Bio, genome engineering company Enevolv, and diagnostic biosensor company Synbiosys, and research organizations including the Berggruen Institute, Ethereum Foundation, and Gates Foundation. He holds a BA in Molecular, Cellular, and Developmental Biology from Yale University.