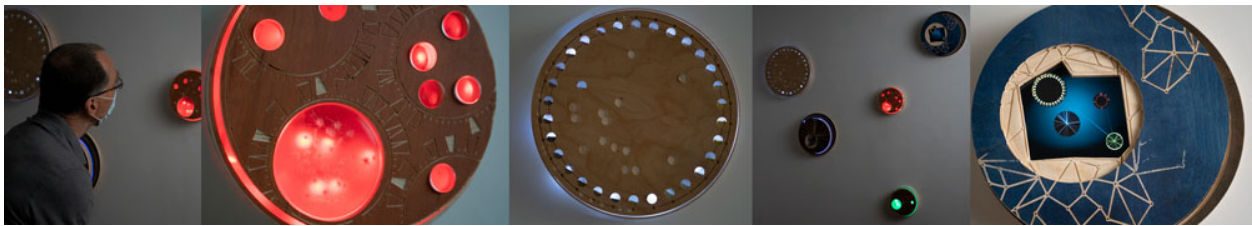


We are excited to share that [Allochronic Cycles](#), by Cesar & Lois, with contributions by CSUSM AMD students, is on the longlist for the 2020 [Lumen Prize](#) for Artificial Intelligence.

CSUSM Art, Media, and Design students who engaged in independent studies with Lucy HG Solomon last Spring contributed to project's research. These students, as part of the DaTA Lab (Digital and Transdisciplinary Art Laboratory), met with Cesar & Lois (Lucy HG Solomon and Cesar Baio) and took on different arms of research for the project. Jinxui Han and Zhiwei Li engaged researched and visualize lifecycles that became the basis for the artwork's rotating disks' timing. Victoria Rios focused on growing and photographing the *Arabidopsis* plant. Seedlings from that growth cycle are embedded in the artwork's *Arabidopsis* disk.

"Allochronic Cycles" is based on the research of plant biologist Joanne Chory at the Salk Institute and was developed in part in a residency at Coalesce Center for Biological Arts. The artwork is a wall-scaled installation consisting of carved wooden disks with encapsulated dried specimens embedded in glass. The system operates with custom electronics and laser-activated disks interacting with and interrupted by a machine learning algorithm (A.I.) based on Time Series Analysis of carbon output.



Human beings are on an accelerated evolutionary timescale that seems unrelated to the rest of the living world—as if we existed in different geological eras: in *allochronic cycles*. In response to Dr. Joanne Chory's research at the Salk Institute, Cesar & Lois and the team of student artists studied timescales embedded in the different levels and layers of nature. The resulting kinetic artwork juxtaposes the ecological times of different lifeforms with an Artificial Intelligence that calculates human influence on the carbon cycle. The A.I.'s interruptions of the rotating time cycles invite reflection on humanity's role in the global climate crisis. The project's development coincides with the global advance of COVID-19, which is the basis for one of the rotating disk's time cycles. This artwork explores layers of time, integrating the timescales of the accelerated lives of viruses as well as the growth of lichens and plants and the age-defying progress of the cosmos.

*"Plants adapt incredibly slowly and as they adapt, they become a new species. Climate change is the result of a lack of synchronization, and humanity is in another speed."*

—Dr. Joanne Chory, in discussion with Cesar & Lois at Salk Institute

**Cesar & Lois acknowledges:**

Joanne Chory (Plant Molecular and Cellular Biology Laboratory, Salk Institute): laboratory research into *Arabidopsis*  
Camila Cunha (LGE, UNICAMP, Brazil) and Solon Morse (Coalesce Center for Biological Arts, University at Buffalo, NY): research consultants

CSUSM DaTA Lab students Jinxui Han, Zhiwei Li (research and visualization of time cycles) and Victoria Rios (growth study and timelapse photography of *Arabidopsis*)

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