

4D Mung Bean Sprout

Erica Seccombe, PhD Candidate
Australian National University,
School of Art

A selection of still images illustrating the dynamic process of a mung bean sprouting over a period of 9 hours. These four separate images represent distinct moments in this process, while the main image shows each snapshot superimposed. These datasets are captured using X-ray computed Tomography (XCT), and then visualized in Drishti in 4D as volumetric timelapse animations. These selected frames show various early stages of the internal and external growth of the mung bean; beginning with water absorption at the base, the lengthening sprout and the expanding interior as the cotyledon; to the first leaf beginning to form. This inquiry to capture the germination of seeds in 4D is the basis of my PhD project entitled "Grow: Visualizing nature at nanoscale", and is being conducted as interdisciplinary, practice-led research at the School of Art, and facilitated through the Department of Applied Mathematics and VIZLAB at the Australian National University. Supported by Professor Tim Senden and Dr Ajay Limaye.

