

The Earth, Our Home: Art, Technology, and Critical Action

ACM SIGGRAPH Digital Arts Community Exhibition

ARTWORKS

ARTISTS / SCIENTISTS

CURATORIAL STATEMENT

CURATORS AND JURORS

ACKNOWLEDGMENTS



Deep Rooted Vision

Eleanor Gates-Stuart and Sergio Moroni

[Australia]

Deep rooted vision, profound and ingrained, the splendour of human or artificial intelligence having the capacity to master and enrich innovative scientific solutions whilst unravelling problematic complexities. In creating these artworks: *'Measure of Visibility'* and *'Connectedness'*, a mapping of intelligence systems disguised as human, this research strikes a visual analogy to the science and the system matrix of crop roots.

The survival of many crops on earth requires a robust and sustainable advantage against many of the elements that challenge their ecosystem, particularly given the harsh conditions of recent droughts and the potential of disastrous bushfires. The study of plants roots and their tenacity to endure short to long seasonal growing periods is fundamental to the productivity of a successful yield and our future food systems.

'Measure of Visibility' and *'Connectedness'* are focused on damage control, artworks that document the research process requiring the planting of various seed batches grown via a specific technical cast and irrigation system. They represent a disastrous situation when biology takes its own control (fungus gnats) and destruction of the root matrix. Simple experiments with seeds, are in fact, a means to expand knowledge of leading science and technology research whilst communicating this knowledge through art.

'Measure of Visibility' and *'Connectedness'* are a direct result of a lengthy arts-science research project with factors of identity, humanity, intelligent life systems and balance of nature, embedded in the theme relating to *The Earth, Our Home: Art, Technology, and Critical Action*. These artworks showcase an ecosystem in place, intervention and displacement, remnants of critical thinking, and artefacts of life.

Deep rooted vision, in this instance, critical action pleads termination as the eco balance is threatened, aesthetic judgement sways with scientific scrutiny as the disruption of timeline prevails. The artworks, not only reflect creative intervention, in fact, they are a result of direct scientific investigation in both creative and technological requirements using raw and manufactured materials, a new system of connectedness, lifecycle ecosystem and a natural timeline exploded. This is a moment in time, a *'Measure of Visibility'* and *'Connectedness'* to humanity at large.

Primary Project Website: <https://eleanorgatestuart.com/portfolio-2/faceofscience/>

Measure of Visibility

- **Medium:** Digital Image – Artefacts (Soil Cast and Gnats)
- **Year Produced:** 2021

Connectedness

- **Medium:** Digital Image – Artefacts (Canola Roots)
- **Year Produced:** 2021



Measure of Visibility



Connectedness

Eleanor Gates-Stuart

Charles Sturt University, School of Social Work and the Arts

Eleanor Gates-Stuart is an Adjunct Professor at Charles Sturt University (CSU) following her substantive role as Professor of Creative Industries and Professor of Arts. She is a Co-Founder of the Extended Reality Collaborative (XRC) specialising in interdisciplinary and applied research at CSU. She holds a PhD in Science Communication, Australian National Centre for the Public Awareness of Science, Australian National University, supported by the Commonwealth Scientific and Industrial Research Organisation (CSIRO). She is a National Academies Keck Futures Initiative (NAKFI) alumni, a program of the National Academies of Sciences, Engineering and Medicine with scientists and artists in the US.

Eleanor's research focus is primarily on scientific exploration and technology, both in the advancement of innovation and in communicating her artistic practice in new and innovative ways, questioning and engaging audience in art, science and technology. Her international research in Science and Art is diverse and collaborative. Eleanor collaborates with scientist, Dr. Sergio Moroni, investigating crop roots, particularly Canola and Wheat exploring various root matrix systems for her experiments.

Eleanor Gates-Stuart website: <https://eleanorgatestuart.com/>

Sergio Moroni

Charles Sturt University, School of Agricultural & Wine Sciences

Dr. J. Sergio Moroni is a Lecturer in Crop Science, School of Agricultural & Wine Sciences, CSU.

Sergio Moroni's website: <https://science-health.csu.edu.au/schools/ag-environmental-vet/staff/profiles/agriculture/sergio-moroni>

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