Science fiction author Ursula Le Guin has deciphered the language of ants, animator Joseph Bennett created a world where computers have biological interfaces (fig. 1), artist Philippe Parreno built a garden for a planet with two suns (fig. 2), artist Luigi Serafini wrote an entire encyclopaedia in an unknown language about life in another world (fig. 3), I've imagined designed fictional organisms to prop up a dying biodiversity on Earth (fig. 4), and architectural thinker Rachel Armstrong wants to save a sinking Venice by colonising its foundations with protocells (fig. 5). As writers, filmmakers, artists, and designers, we use diverse methods, but we share an interest in creating fictional worlds to explore real ideas about ecosystems, and our relationships with them.

In this session, we will focus on fictional worlds that investigate the engineering of living matter and ecosystems in particular, consider the varying motivations behind these works, and their implications and potential for the real worlds we inhabit or could inhabit.

One reason to build worlds is to remind us that other ways of being are possible. In Staying with the Trouble, Donna Haraway (2016) calls for “speculative fabulation” to deal with the impending chaos of the Anthropocene and the Capitalocene. She ends her book with a future-situated science fiction story of her own, The Children of Compost, hoping to remind us of the usefulness of fiction to open up the possibility of alternatives. How else might we imagine our interactions with biology and ecosystems?

Haraway’s approach echoes that of designers Anthony Dunne and Fiona Raby (2013, p.6), who “believe that by speculating more, at all levels of society, and exploring alternative scenarios, reality will become more malleable and, although the future cannot be predicted, we can help set in place today factors that will increase the probability of more desirable futures happening”. They advocate for “speculative design”, a new role for design: “facilitating alternative visions rather than defining them” (p.9). Their view of design as a means for finding problems, not solving them, can be useful as we delve into troublesome areas. I will demonstrate by drawing on my own critical practice interacting with synthetic biologists how this kind of work can usefully cause trouble, not just find or “stay with it”. By disturbing the present can we change our futures? What future do we want?

The final seminar sessions, Engineering the Biosphere and Weaponizing Nature, will introduce ever more ambitious, speculative proposals for intervening in existing ecosystems. However, it is scientists and engineers who are busy imagining these visions, not just makers of fiction. Where are the boundaries between speculative science and fiction? To address this messy space of useful fictions, we will consider the paper Designing Autonomy: Opportunities for New Wildness in the Anthropocene, which proposes algorithmic curators of wildness. Is it useful to think about this proposal as fiction? Have any other potential fictions emerged from the week so far, how they might be built, and why would we make them?
Figure 1. A biological computer: animation still from director Joseph Bennett’s *Scavengers* (2017).

Figure 2. Still from Philippe Parreno’s film *Continuously Habitable Zones* (aka C.H.Z.), 2011, showing the film set – a real garden – designed with landscape architect Bas Smets.

Figure 3. Illustrations from Luigi Serafini’s fictional encyclopaedia *Codex Seraphinianus* (1983).
Figure 4. Rendering of “Mobile Biorediation Device” by Alexandra Daisy Ginsberg from *Designing for the Sixth Extinction* (2013-15).

Figure 5. *Future Venice* by Rachel Armstrong and Neil Spiller (2010-). Rendering by Christian Kerrigan.
**Reading**

**Required**


**Recommended**


