Ars Electronica and the SETI Institute
Residency Program - European ARTificial Intelligence Lab

SETI Artist-in-Residence (AIR) Curatorial Statement

The SETI Institute is an international leader in the movement to integrate the arts and sciences. SETI AIR facilitates an exchange of ideas between artists and scientists so that these disciplines may inspire each other to catalyze new modes of comprehension. Our Artists in Residence program expands upon the SETI Institute's mission to explore, understand, and explain the origin, nature, and prevalence of life in the universe. SETI AIR artists bring fresh eyes and bright minds to difficult concepts, becoming creative ambassadors for the SETI Institute.

SETI AIR Artist selection encourages those individuals employing new media and technology and/or those whose work exhibits a direct relationship to the contemporary scientific endeavors of SETI Institute researchers. SETI Institute science is front edge; our artists are similarly minded. Mid-career artists working in the following fields, though not limited to these, will be considered equally: robotics, rocketry, electronic music, theater and dance, bio-arts, digital and data-arts, computational arts, climate-based works, film and photography, philosophy, poetry, kinetic or land-based sculpture, geophysical and geological based works, planetary or astronomical based works, and drawing.

The research that takes place at the SETI Institute should be meaningfully reflected in the artworks that result from the residency. Special emphasis will be placed on projects that consider artificial intelligence, ponder the beginnings of life, and critically reflect on our anthropocentric world view.

SETI Institute's Expertise

The Carl Sagan Center for Research at the SETI Institute is home to more than 80 scientists working across nearly all branches of science to address questions around the development of life, where else in the Universe it exists and how we might find it. Our research is focused on six core divisions:

Astronomy and Astrophysics: How are stars and planets formed?

Paul Estrada (Chair), Uma Gorti (Vice-Chair)

How commonplace is life? In particular, are worlds where biology can gain a foothold very common or distressingly rare? One way to answer these questions is to better understand the process of star and planet formation, and such studies are fundamental to much of the SETI Institute's astronomy and astrophysics research. Using theoretical models, telescopic observations, and lab experiments, Institute scientists study how disks of collapsing gas and dust change over time and become solar systems. Understanding the mechanisms that produced our Sun and its retinue of orbiting worlds gives insight into the possibilities for life in other planetary systems.

Astrobiology: The study and search for life beyond Earth

Janice Bishop (Chair), Thomas Stucky (Vice-Chair)

Astrobiology – the study and search for life beyond Earth – is the umbrella discipline for the work of the SETI Institute. Astrobiology encompasses a wide range of study areas, including astronomy, geology, biology, and sociology. It is succinctly encapsulated by the so-called Drake Equation. The latter, devised more than five decades ago by astronomer Frank Drake, is an scheme for estimating the number of communicating societies elsewhere in the Milky Way galaxy. It is often opined that the next two decades will witness the first discovery of extraterrestrial life, either microbial biology or signals from intelligence. The SETI Institute is uniquely positioned to be the first to make this discovery.

Climate and Biogeoscience: Can Earth's climate tell us about life elsewhere?

Kimberley Warren-Rhodes (Chair), Dale Andersen (Vice-Chair)

Climate change is a vexing and longterm problem. Some of the important mechanisms and consequences of climate change can be gleaned from study of the atmospheres of other, nearby planets. Climate change is a challenge many are trying to address, but SETI Institute researchers, whose gaze is fixed on other worlds, can provide “laboratories” to study how these processes play out on other worlds and learn from them to improve our future on Earth.

Planetary Exploration: Space travel to broaden our view of the universe

Virginia Gulick (Chair), Lori Fenton (Vice-Chair)

The twentieth century witnessed a major change in how we learn about space. Until then, we studied the other bodies of the cosmos remotely, with our telescopes. In the past half-century, we have sent exploratory spacecraft to the vicinities of all the planets, including Pluto. These efforts have revolutionized our understanding of the how the solar system was formed, what it’s made of, and which of these worlds might be suitable for life.

Exoplanets: Planets orbiting stars other than our own may be habitable worlds

Douglas Cadwell (Chair), Meng Jin (Vice-Chair)

Until 1995, planets around other ordinary stars were no more than a conjecture. But in that year, two Swiss astronomers measured the slight wobble of the star 51 Pegasi, and opened up what is today one of the most energetic research disciplines in astrobiology: the hunt for, and quest to characterize, extrasolar planets (exoplanets). Given its interest in life beyond Earth, it’s hardly surprising that the SETI Institute is part of this effort. Some of the newly discovered exoplanets have become priority targets for the Institute’s SETI experiments. The fact that there are likely to be tens of billions of habitable worlds in our own galaxy serves as an encouraging impetus for such experiments.

SETI: Listening for signals

Andrew Siemion (Chair), Margaret Turnbull (Vice-Chair)

Are we alone in the universe? Are there advanced civilizations that we can detect and what would be the societal impact if we do? How can we better the odds of making contact? These questions are both fundamental and universal. the SETI Institute uses a specially designed instrument for its SETI efforts – the Allen Telescope Array (ATA) located in the Cascade Mountains of California. The ATA is embarking upon a two-year survey of tens of thousands of red dwarf stars, which have many characteristics that make them prime locales in the search for intelligent life. The Institute also uses the ATA to examine newly-discovered exoplanets that are found in their star's habitable zone.