

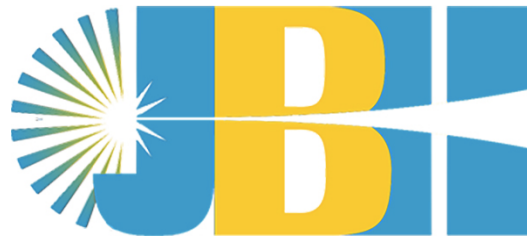
# Journal of Big History

Connecting Cosmos, Earth, Life,  
and Humanity

2020

Volume IV, Number 2

*Big History and the Search for Intelligent Life*



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Journal of Big History

A publication of the International Big History Association

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ISSN 2475-3610

# From the Editor

When mathematician and astronomer Claudio Maccone approached the IBHA about putting together a conference, “Life in the Universe: Big History, SETI, and the Future of Humankind,” which was held at the Consiglio Nazionale delle Ricerche in Milan, Italy, on July 15-16, 2019, it proved to be an excellent opportunity to expand IBHA connections—both at home and abroad (i.e., both internationally *and interplanarily*).

Dr. Maccone, a mathematician, space scientist, and astronomer, is the author of four books and nearly 100 academic papers and is Chair of the SETI (Search for Extraterrestrial Intelligence) Committee of the International Academy of Astronautics (IAA), an international independent non-governmental organization that was founded in 1960 and recognized by the United Nations in 1996, with members from more than eighty countries. The IAA conducts thirty-plus conferences per year and publishes cosmic studies dealing with a wide variety of topics including space exploration, space debris, space satellites, space traffic management, natural disasters, and climate change. It also encourages international scientific cooperation in these areas and others such as space life sciences, space technologies, and space policy, an important part of its mission being international cultural and education programs such as the one we chronicle here.

The Milan meeting, which was co-sponsored by the IBHA, the INAF (Istituto Nazionale di Astrofisica), and the IASF-MI (Istituto di Astrofisica Spaziale e Fisica Cosmica di Milano), one of the sixteen research structures of the INAF, brought together scientists, social scientists, humanists, and educators from North America, South America,

Europe, Asia, and Australia. Maccone’s co-organizer was Dr. Nicoló Antonietti, a specialist in telecommunication engineering and member of both the INAF and the SETI Committee of the IAA. Interested in data processing for astrophysical sites recorded by radio telescopes, Antonietti kindly agreed to serve as guest editor for this edition, which emerged from papers presented in Milan that be viewed here: <https://bighistory.org/2019-life-in-the-universe-conference-information/14967-2/>.

SETI research is older, more diverse, and more widespread than those familiar with only the acronym might imagine. Nikola Tesla was interested in the problem, as were Guglielmo Marconi and Lord Kelvin. The National Science Foundation helped fund Ohio State University’s Radio Observatory in the late ‘50s and early ‘60s. Known as “Big Ear,” it continued to monitor the skies until 1998 when the land was sold and the telescope dismantled in order to make way for a new golf course. NASA also funded projects from the late ‘70s to the late ‘80s. The research is tantalizing, but frustrating. A link on the Harvard SETI Project’s web page, “Have we found aliens?,” takes you to a black screen containing but three small words in the upper left-hand corner, “No, not yet.”

Yet the work continues, and let’s not forget that deep time, evolution, and the general theory of relativity were also just hypotheses before trustworthy, empirical evidence was found. According to our guest editor, while there is as always a need for money and infrastructure, there is an increased interest in SETI research in Italy, especially in Sardinia, and in Russia and Ukraine. University of California’s Berkeley SETI Research Center is currently the leader in the field.

Antonietti’s observation of increased interest is borne out by Berkeley’s having been given \$100 million by Russian philanthropist Yuri Milner in 2015 for the development of The Breakthrough Listen Initiative, which was endorsed by a number of notable scientists, including Stephen Hawking, who said at the time, “In an infinite Universe, there must be other life. There is no bigger question. It is time to commit to finding the answer.”

The contributions to this edition range from the technical to the philosophical to the anthropological to the pedagogical. In the lead article, IBHA President Lowell Gustafson reflects upon the history of humanity’s relationship with time and the cosmos—and upon the ways in which SETI research “challenges and extends” big history. In some ways, he muses, the study of exoplanets, astrobiology, and exo-intelligence is bigger than big history, which makes the process for us no longer an origin story, but a coming of age story. From the space science side, Antonietti is appreciative of the opportunity the conference and this volume has created for interconnections between our fields, SETI looking for signals, and big history trying to understand what drives us to look for signals in the first place, and the implications that these have for our place in the universe.



David R. Blanks, Editor



Nicoló Antonietti, Guest Editor

## Journal of Big History

PUBLISHED BY

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