

Origins

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Volume IX Issue 2



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Thank you for your membership in the IBHA. Your membership dues all go towards the administration of the association, but do not by themselves cover our costs. The only paid position is a part time administrative assistant. Other costs are for our website, for example. [Please consider a tax deductible \(in the US\) gift](#) to our 501(C)3 and please consider remembering the IBHA in your will.





My Big History Experience in Amsterdam

by Benjamin Baumann

Last year, I had the honor and privileged to study Big History for my master's degree at the University of Amsterdam. It was an experience that changed my life forever, as well as how I see life now. This is how I became involved with Big History, what my experiences were, what I learned, and what I have taken from these experiences.

My journey towards the study of Big History started as a boy in the heart of America, the state of Kansas, where I remember countless nights just staring at the stars in the night sky, trying to make sense of what I was seeing and my place in this mysterious universe. I distinctly remember having conversations regarding the stars and the universe

with my father on the drives home from hockey practice. I would often bombard him with questions about the universe and philosophical ideas regarding our place within it. To my disappointment, these conversations never answered the questions to my complete satisfaction. Beyond existential issues that still challenge scientists and theologians, in these discussions I wrestled with mysteries of time, distance and process. The question of what happened before I came to exists always stuck with me and kept me fascinated with the universe.

As an undergraduate I was fascinated by science, but could not find inspiration in

laboratory work. So, I turned my attention to history, where I felt at home analyzing the progression of thought from ancient to modern thinkers regarding the unfolding patterns that led to this moment. However, my undergraduate study of history, though wonderful and incredibly impactful, was not giving me the full historical picture. Deep excursions into fascinating but disconnected topics did not fully address the developmental patterns I was seeking. It is one thing to know about civilizations and the history of various beliefs regarding the creation of the universe, but that did not tell me how these civilizations came about and why. In the field of history, there is a gap in overarching conceptualization. Students for example may learn all about the Roman Empire and how the Romans lived and even what they did, but not how the Romans came to exist and where they fit in the stream of human development. These big picture questions are often overlooked because they do not fit comfortably within any of the subfields in which scholars tend to specialize. After all, Big History requires unusual breadth of knowledge, as well as vivid imagination. Scholars are extremely cautious about ranging beyond familiar terrain. Therefore, when I learned of the field of Big History after a colleague of my father mentioned it, I knew I had found what I was looking for. I had always imagined the idea of a history telling the story of our universe from the big bang to the present and Big History was doing just that.

Therefore, after discovering this field, I set out a journey to get involved with it. I started by sending out emails to Big Historians and the response was overwhelming. I was shocked by how welcoming and engaging everyone in the Big History community was to my questions. Somewhere down the line my name was passed on to the University of Amsterdam and my Big History journey would set off from there. Big Historians Esther Quaedackers and Dr. Fred Spier offered me the possibility of studying Big History by combining it with the field of Ancient Studies for a master's degree, which was an offer I could not refuse. Then, by August 2017, I was in Amsterdam on a one-year journey across the world, studying Big History and from what I have been told, becoming the first ever student to do so for a master's degree in that field.

While there, I received tremendous support and instruction in the field of Big History from Esther and Fred, as well as Dr. Jan Willem van Henten from Ancient studies. All were monumental in their contributions to my academic growth. I could not have asked for a better group to work with, they truly were a dream team. At the University of Amsterdam, I split my time between ancient history courses focused around the history of astronomy in the Greco-Roman world and Big History courses. These Big History courses included an introductory survey course, where guest lecturers came in each class to lecture students about a different phase of Big History from the Big Bang to the present and future. These lecturers included astronomers, biologists, historians and more. All helping tell the story of our universe through the lens of Big History.

Another course focused on what's called a Little Big History Project, where I would choose a topic and draw connections to each phase of Big History as determined by me. My most important course, however, was my master's thesis. Using the Big History methodology, I examined the relationship between the colonial Americans and the ancient Greek world, regarding cosmography. More specifically I examined how these people understood the universe and their place within it.

I was intrigued by the way the ancient Greeks greatly influenced the cosmographic ideas of the colonial Americas. It was incredibly rewarding research and it taught me a lot about how to be a big historian, by asking big questions and finding useful connections across timelines. Ultimately, my research attracted kind praise by big historians and ancient historians at the University of Amsterdam.

When my year in Amsterdam was over, it was bitter sweet. I learned so much in that year, but I was also excited for my next phase of life. My dream of studying Big History had come true and justified my choice. Ironically, many of those childhood questions that got me interested in the topic in the first place, remain unanswered, but my appreciation for them and my fascination with our universe has only grown. Big History has taught me so much regarding the origins of our universe, the rise of life, the history of humanity, and as Esther kindly pointed out one particular lecture, all the potential ways humanity could be doomed. This is always lovely to remember on a bright sunny day, but more positive alternative futures beckon as well. Big History's overarching theme is telling a story from the Big Bang Theory to the present. This progression informs speculation about what the future may hold, based on the main guiding principle in Big History that energy flows through matter in certain goldilocks conditions creating complexity, and when complexity increases, based on the 2nd law of thermodynamics, chaos increases as well. This is Big History at its core, but for me Big History means more. Big History for me, is embracing this mysterious existence we call life, by daring to seek answers to questions that people have never been able to answer and by compiling what we do know into a humbling and incredible story, which makes us all feel lucky to be a part of this increasingly complex and chaotic universe.



International Symposium on

Life in the Universe 2019

Big History, SETI and the Future of Humankind

CALL FOR PAPERS

Claudio.Maccone@gmail.com

Kursaal Congress Center,
Republic of San Marino (Italy)
July 15-18, 2019

Viale (Blvd) John F. Kennedy, 17
47890 San Marino
Republic of San Marino (RSM)



It is a pleasure to invite you to the first San Marino Symposium on LIFE IN THE UNIVERSE: Big History, SETI and the Future of Humankind.

The Symposium is organized jointly by the Republic of San Marino (RSM), the University of San Marino and the International Big History Association (IBHA) and will take place in the Republic of San Marino on July 15th-18th, 2019. San Marino, known as the Most Serene Republic of San Marino, is an enclaved microstate surrounded by Italy, situated on the Italian Peninsula on the northeastern side of the Apennine Mountains. It was named a World Heritage Site by UNESCO in 2008.

Big History seeks to understand the integrated history of the Cosmos, Earth, Life, and Humanity, using the best available empirical evidence and scholarly methods. The International Big History Association seeks to promote the unified and interdisciplinary study and teaching of the history of Cosmos, Earth, Life, and Humanity.

Almost a century ago, scientists gave us a new history of the cosmos by showing that our own galaxy, the Milky Way, was but one of an extraordinary number of other galaxies. In recent decades, scientists have located thousands of potentially habitable planets in just our own galaxy. Scientists at SETI are also looking for evidence that there is (intelligent) life beyond Earth. What does it mean to the big history account when the lines from the Big Bang go not only to the Milky Way, Earth, life on Earth, and humanity, but in many other directions as well? That is part of what big historians and SETI scientists will be considering in July in the beautiful setting of Republic of San Marino (roughly between Florence and Ancona, Italy). We look for your help in figuring out how SETI's ongoing scientific investigations are engaging big history.

SETI, the Search for Extra-Terrestrial Intelligence, is the scientific search for radio signals or other signs of life reaching the Earth from other Civilizations possibly existing in the Milky Way (our own galaxy) or elsewhere in other galaxies. It started in 1960 with Project Ozma conducted by Frank D. Drake at the United States National Radio Astronomy Observatory (NRAO) in West Virginia, and continued with interruptions up to now not only in the United States, but in an increasing number of technologically advanced countries like Russia, France, Italy, UK, Argentina, South Africa, Australia and, most recently, China. No sign of any Extra-Terrestrial (ET) Civilization was found up to now, but the searched space around the Earth is ridiculously SMALL (say up to 1,000 light years in a Milky Way measuring 100,000 light years in diameter), and so “we found nothing because we didn't reach far enough.”

The theme of this “Life in the Universe” Symposium will be all facets of finding ET Life in the universe.

Topics of Interest, listed hereafter in the order they will be covered on July 15th, 16th, 17th, respectively:

- Big History Educational approaches for different ages and sector
- Local Histories from a Universal point of view
- Planetary sciences: the geologic conditions for life and civilization in planetary systems
- Astrobiology: life on other planets
- SETI, both Radio and Optical
- Sociological, Ecological and Economic Implications on Humankind after the First Contact with Aliens

Guide for authors

The deadline to submit abstracts is Sunday, March 31st, 2019.

To submit your abstract, please send your abstract to Claudio.Maccone@gmail.com. The abstract must stay within ONE A4 PAGE, single spacing. It must contain:

- a) Abstract title.
- b) Author's name and surname.
- c) Author's current affiliation, if any.
- d) Author's e-mail.
- e) It must be typed in Times New Roman font 12.0, single spacing.
- f) All abstracts must be written with Word, and NOT with Latex, so that they may be printed in the Book of Abstracts to be distributed at the Congress opening.

Important Dates

Deadline for abstract submission: Sunday, March 31st, 2019. Notification of acceptance: Tuesday, April 30th, 2019.

Organizing committees:

SOC (Scientific Organizing Committee)

Claudio Maccone (Chair) - Italy
 Nicolo' Antonietti – Italy
 Adalberto Codetta – Italy
 Adam Frank – USA
 Mike Garrett – UK
 Leonid Grinin – Russia
 Lowell Gustafson – USA
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 Lucy Laffitte – USA
 Andrew Siemion – USA
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LOC (Local Organizing Committee)

Francesco Brigante (Chair)
 – Republic of San Marino (RSM)
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 Isabella Bizzocchi - RSM
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 Corrado Petrocelli - RSM
 Stefano Raggi – RSM
 Matteo Ronchi – RSM
 Gabriella Telesca – RSM

For all general enquiries, please contact

Prof. Claudio Maccone at Claudio.Maccone@gmail.com

We look forward to meeting with you at the **Life in the Universe Symposium: Big History, SETI and the Future of Humankind** in the Republic of San Marino (Italy), July (14)-15-16-17-(18), 2019.

Sincerely, *Claudio Maccone*
Symposium Organizer

Day-By-Day CALENDAR

1) SATURDAY, July 13th: American Participants fly in the evening and overnight to a European “big hub” of their choice, where they land in the following morning.

2) SUNDAY, July 14th: in the morning they transfer plane at their European hub and fly to Bologna international airport “Guglielmo Marconi” (code: BLQ). On arrival at Bologna BLQ airport they will be met by shuttle buses taking them to the Republic of San Marino (RSM) and to the hotel of their choice in the Republic. Then a rest.

Participants arriving from Russia may fly directly from Moscow to the Rimini Miramare airport, code RMI/LIPR.

Participants arriving from other European towns might wish to choose their final destination: either Bologna (BLQ) or Rimini (RMI/LIPR).

In the afternoon on the same day of Sunday, July 14th, a WELCOME DINNER (cost included in the Registration Fee) will be held 7 pm – 9 pm at Ristorante La Fratta, Via Salita alla Rocca, 14, website <http://www.ristorantelafratta.com/>.

3) MONDAY, July 15th, at 8:30: Registration at Kursaal in San Marino, the Symposium Venue: Viale J.

F. Kennedy, 17, 47890 San Marino.

SYMPOSIUM STARTS AT 9:30. First Day: BIG HISTORY

Coffee break (15 minutes) at 11:00. BUFFET LUNCH at Kursaal, 13:00-14:00.

SYMPOSIUM continues at 14:00. Coffee break (15 minutes) at 16:00.

Just after the coffee break, there will be an optional VISIT on foot to the three Medieval Towers at sunset. You have two choices:

1) If you are “young and strong,” just walk up from the Kursaal to the Montale Tower (and BEWARE NOT TO FALL DOWN !!! You will DIE if you fall off the trail into the ABYSS on your right !!!). Then keep walking to La Cesta Tower and finally to La Guaita Tower. La Cesta is the highest out of the three San Marino Towers: it includes a small Museum with medieval

armors, and offers a fantastic panoramic view of Rimini and the Adriatic Sea coastline, even Istria (in Croatia) might be possibly seen if the sky is clear.

2) But...if you aged and don't like to walk (like myself (Claudio)) we'll organize a shuttle bus transportation to save you the walking, and that will take you from the Kursaal to La Guaita directly, and later back to your hotels by about 18:00.

Not over this first engaging day yet.

Take some rest at your hotel and then join the GALA DINNER at 20:00 at Titano Hotel in central San Marino, actually at La Terrazza Restaurant, see the movie <https://www.ristorantelatterazza.sm/en/>. This panoramic view is on the opposite side to the previous one, i.e. on the hills to the West of San Marino. The dinner cost is already included in the Registration Fee. We'll take you back to your hotel by our shuttle bus at the end (about 22:00).

4) TUESDAY, July 16th, at 8:30: Registration at Kursaal in San Marino, the Symposium Venue: Viale J.

F. Kennedy, 17, 47890 San Marino.

SYMPOSIUM STARTS again AT 9:30. Second Day: SETI

Coffee break (15 minutes) at 11:30. BUFFET LUNCH at Kursaal, 13:00-14:30. SYMPOSIUM STARTS again AT 14:30.

Coffee break (15 minutes) at 16:30.

Documentary Movie shown about the “Big History Project” conducted at the San Marino high school classes in 2018-19.

SYMPOSIUM ENDS again AT 17:00. Shuttle bus to hotels.

EVENING: At 19:00 DINNER at “Il Boschetto” Restaurant, <http://www.ilboschettosanmarino.it/#map>. The dinner cost is already included in the Registration Fee. Panoramic view on the Adriatic Sea at sunset and night. Musical entertainment: both “liscio” (waltzes, mazurkas, tangos) for the seniors, and modern stuff for the youngsters 😊.

5) WEDNESDAY, July 17th, at 8:30: Registration at Kursaal in San Marino, the Symposium Venue: Viale J. F. Kennedy, 17, 47890 San Marino.

SYMPOSIUM STARTS again AT 9:30. Morning of Third Day: CONCLUSIONS.

Coffee break (15 minutes) at 11:00.

At 12:30 GROUP PHOTO of all Participants taken on the entrance steps to the Kursaal.

At 13:00 OPTIONAL BUS EXCURSION to the Medicina Radio Telescopes (Medicina is a small town in the countryside east of Bologna, and it is about an hour bus drive from San Marino). The cost of this excursion to Medicina is NOT included in the Symposium Registration Fee and will be about 80 euros. Lunch at the “Voli e Saporì” restaurant nearby the radio telescopes, ending at about 14:30. The visit to the radio telescopes and SETI facilities, with explanation of SETI activities in Italy (1980s-present): website : <http://www.centrovisite.ira.inaf.it/index-en.html> Visit will end about 17:00.

Then bus travel to Sant'Arcangelo di Romagna and dinner at Antica Cantina la Sangiovesa,

website <http://www.sangiovesa.it/> in between 19:00 and 21:00.

Return to San Marino by bus at about 22:00.

But the excursion will NOT be effectuated unless the number of Participants is higher than 20.

6) THURSDAY, July 18th, at 9:00: OPTIONAL BUS EXCURSION to Gubbio (about 1 ½ hour drive) to visit the site where Nobel Laureate Luis Alvarez and son Walter discovered in the late 1970s the K/T (Kretaceous/Tertiary) layer proving the asteroid impact that killed dinosaurs and other Species about 65 million year ago. The cost of this excursion to Gubbio is NOT included in the Symposium Registration Fee and will be about 100 euros. But the excursion will NOT be effectuated unless the number of Participants is higher than 20.

IMPORTANT: we'll take you from San Marino to the Rimini train station in the morning with this bus, even if you are not coming to Gubbio. Thus, you will be able to catch any train from Rimini to Bologna or to Milan on Thursday, July 18th. And fly to your destination from either Bologna (BLQ) or Milan (either Linate (LIN) or Malpensa (MXP)) in the following day, Friday, July 19th.

For Russians and Eastern Europeans: we will also make a stop at the Rimini "Federico Fellini" airport (RMI) from which you can fly directly to Moscow and to some Eastern European Countries.

Then the excursion to Gubbio continues with the visit to the K/T layer made famous by Walter Alvarez. At about 1 pm lunch at the panoramic restaurant close to the church of Sant'Ubaldo: <http://www.lacia.it/>.

IMPORTANT: In the afternoon, on the way back, we'll make a stop at the train Station of Fabriano in order to enable Participants to catch their train to Roma Termini station (about three hours away) if they wish to fly away from Rome airport (FCO) in the following day. We'll also make a SECOND STOP at Rimini train station to enable all Participants to catch their trains for short destinations within Italy.

Thus, the night of Thursday, July 18th, will NOT be spent in San Marino any longer.



HOTEL ACCOMMODATION

Please keep in mind that the town of San Marino is built on the western SLOPES of Mount Titano (at 739 m (2,425 ft) above sea level), while the eastern slopes are "just vertical" and so "dangerous" if you walk "carefree" in between the three medieval towers on its top: beware! Please wear comfortable shoes all the times in town, and be prepared to climb up and down on foot throughout the city.

To see with your own eyes, please watch the movie <https://www.youtube.com/watch?v=eSqoEhWd9cM>. The Symposium venue (Kursaal) is at the southern tip of Mount Titano, and the nearest hotels to it are at least a few hundred meters away. Now about some hotels in San Marino, with TENTATIVE costs:

- 1) The suggested hotel for Symposium Participants is the 4-stars Hotel IDesign (four stars), web site: <https://www.hotelsanmarinoidesign.com/en/>. Early booking is strongly advised. It is 30 minutes walking distance from the Kursaal (with climbing up), but a free shuttle bus service will be organized just for the Participants. Cost per day: 65 Euros Single Room, 85 Euros Double Room for 2 people only.
- 2) The smartest hotel in San Marino is possibly Grand Hotel San Marino (GHSM), web site <https://www.grandhotel.sm/en/> (four stars). In the summer it may be expensive, but it is at walking distance (about 400 meters) from the Kursaal and you won't have to climb either up or down: just walk along via Antonio Onofri on your left when you leave the Hotel. Again, early booking is strongly advised. Cost per day: 95 Euros Single Room, 115 Euros Double Room for 2 people only.
- 3) If you don't mind walking about 1 km (but no hard climbing is requested) from Hotel Titano to the Kursaal, then you are just at the town center (web site: <https://www.hoteltitano.com/en/>). La Terrazza Restaurant offers an unforgettable view, and we will have our Gala Dinner there on Monday July 15th at 20:00.
- 4) Less expensive hotels are located around Piazza della Stazione (the former train station in San Marino, dismissed after the bombardments of World War Two). From Piazza della Stazione you have to climb a little bit to reach the Kursaal, but it's feasible... if you are not a senior like myself (Claudio 😊). The cost of three-stars hotels is 60 Euros Single Room, 80 Euros Double Room for 2 people only.
- 5) In conclusion, please carefully select your accommodation well in advance. Thanks.

REGISTRATION FEE

- 1) Participants paying their Registration Fee BEFORE MONDAY, APRIL 1st, 2019:
 - US\$295.00 per Participant aged in between 30 and 65.
 - US\$115.00 per Accompanying Person.
 - US\$80.00 per Student (i.e. people aged up to 29 inclusive).
 - No-cost registration for Seniors (i.e. people aged 65 inclusive or higher).
- 2) AFTER MONDAY, APRIL 1ST, 2019, inclusive: US\$345.00 per Participant aged in between 30 and 65. US\$175.00 per Accompanying Person.



Above: Founding members of IBHA nearby Coldigioco, Italy, in August 2010. Standing at the center with his dark hat is Walter Alvarez, with wife Milly on the left, and co-authors of the “Big History” book, Cynthia Stokes Brown and Craig Benjamin, on the right. In the front row, wearing his red shirt, is Alessandro Montanari, who had been a Ph. D. student with Walter Alvarez at Berkeley and supported him ever since the 1980s to studying the K/T boundary and the Chicxulub crater as the site where the 15-km asteroid fell that killed all dinosaurs 65 million years ago.

US\$115.00 per Student (i.e. people aged up to 29 inclusive).
No-cost registration for seniors (i.e. people aged 65 inclusive or higher).

The url for registration will be at <https://bighistory.org/> soon.

The San Marino Scale for SETI (2005) and the IBHA foundation (2010)

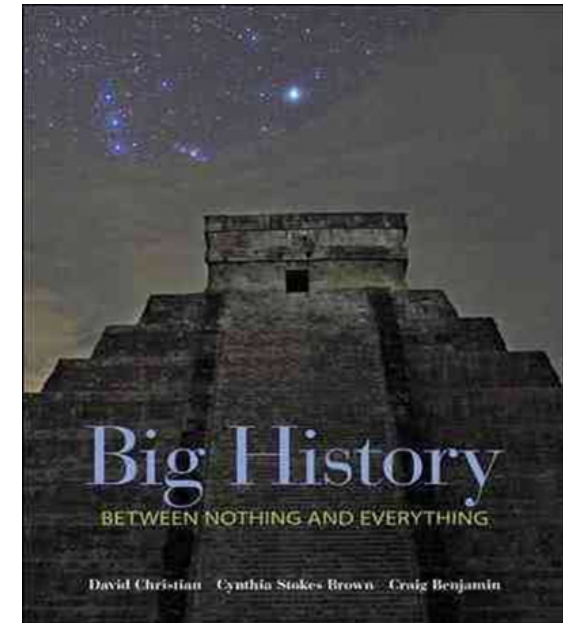
Few people are aware that this Symposium Organizer already organized several more SETI Symposiums in San Marino in the past. This is because:

- 1) Those SETI Symposiums were attended only by a limited number of high-level SETI scientists (physicists, mathematicians, astronomers) and not by astrobiologists, not to mention social scientists.
- 2) IBHA, the International Big History Association, was founded at Coldigioco, a venue in Italy actually not too far from San Marino, on August 20th, 2010.

- 3) Nevertheless, as early as 2005 had the SETI professional scientists gathered in San Marino and devised the SAN MARINO SCALE for SETI <http://www.setileague.org/iaaseti/smiscale.htm> Please read that website.
- 4) We are now in 2019 and it's high time for the two communities of SETI Professionals and Big Historians to meet. Please do attend the San Marino Symposium on July 15th through 18th, 2019.

Right: front cover of the “Big History” 2014 book by David Christian, Cynthia Stokes Brown and Craig Benjamin. It is intended for both high-school students and newcomers to Big History. Big History is a popular-level description of “Everything in the Universe” since the Big Bang (13.799 billion years ago) and Humankind as we know it nowadays. The cover shows a temple built by the pre-Colombian Mayas at Chichen Itza in the Yucatan. This and other Meso-American structures demonstrate how their careful observations of the skies influenced their architecture and cultures. The pace of technological evolution has increased exponentially in recent times, and new knowledge of the skies is revolutionizing our own culture. As artificial intelligence continues to advance, humans will continue to undergo significant transitions. We hope that humans will not end our own existence before we have the chance to discover life elsewhere in our universe.

Please also see: <https://www.amazon.com/Cosmos-Culture-Cultural-Evolution-Context/dp/1780393695> and <https://www.amazon.com/Big-Bang-Galactic-Civilization-Anthology/dp/9386552248>.



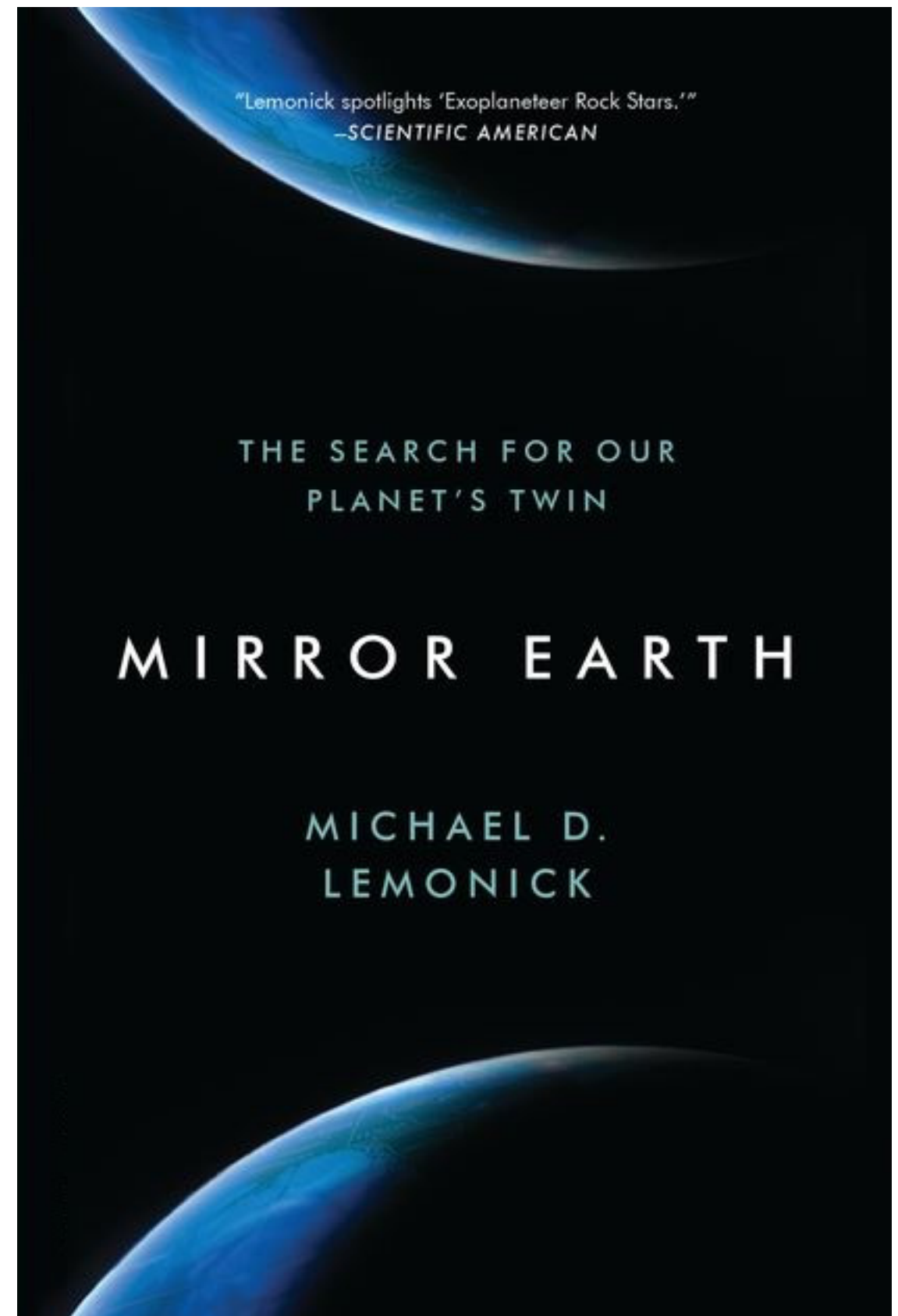
Right: Italy's largest radio telescope, the Sardinia radio telescope (SRT): websites <http://www.srt.inaf.it/> and https://en.wikipedia.org/wiki/Sardinia_Radio_Telescope. It is a 64-meter dish with an active surface and 60% antenna efficiency. The continuous frequency coverage between 0.3 GHz and 115 GHz makes this machine ideal for radio SETI and the detection of pre-biotic molecules in space. We are currently implementing the KLT (https://en.wikipedia.org/wiki/Karhunen-Loève_theorem) with U. C. Berkeley.



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David Christian

CO-FOUNDER OF THE BIG HISTORY PROJECT

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David Christian is a distinguished professor in history at Macquarie University in Australia and the co-founder, with Bill Gates, of The Big History Project, which has built a free online syllabus on the history of the universe and is taught in schools all over the world. He is also co-creator of Macquarie University Big History School, which provides online courses in big history for primary and high school students. He received his Ph.D. from the University of Oxford. He has delivered keynotes at conferences around the world including at the Davos World Economic Forum, and his TED Talk on the history of the Universe has been viewed over 7 million times.

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And what happens next...

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'My favourite course of all time' BILL GATES



APPLIED BIG HISTORY

A GUIDE FOR ENTREPRENEURS, INVESTORS,
AND OTHER LIVING THINGS

WILLIAM GRASSIE

Applied Big History: A Guide for Entrepreneurs, Investors, and Other Living Things by William Grassie is now available on Amazon Books. <https://amzn.to/2QLHIGS>

Applied Big History is a guidebook to doing good and well in a fast-changing world. With the help of numerous experts, author William Grassie builds a lattice work of diverse disciplines—physics, chemistry, geology, cell biology, energetics, informatics, evolution, anthropology, psychology, economics, and more. Grassie explores the significance of chaos and complexity, and the dynamics of discovery and innovation, in evolution and economics. He does so with a practical eye to how these new sciences can help better understand and better practice economics, business, and finance in the face of uncertainties. *Applied Big History* weaves many specializations together in a useful framework that you can use every day in your work and in your life.

The book includes a foreword by Mitch Julis, co-founder of Canyon Partners, a hedge fund with \$25 billion under management. Julis writes:

Applied Big History does macro and micro. It zooms elegantly in and out, between the two throughout this engaging book by applying the general principles of acquired scientific and historical knowledge available to us today. As a result, we learn that value and wealth represent not just the flow and accumulation of money, but also stand for the fundamentals of energy, matter, and ingenuity that flow in and out of the economy and the financial system.... Grassie's exposition is careful, concise, informative, and engaging in telling and applying this origin story to the investment world.

Who should read this book? Pretty much everybody. Big History is our common story—an origins story that transcends ethnic, political, religious, and linguistics differences. It provides a framework for understanding, debating, and solving the great challenges of our time. It provides an ennobling perspective on our lives, generating wonder, awe, amazement, and gratitude. The applied part of Big History impacts how we conceive every career and industry, every academic discipline and vocation, every problem and opportunity. Grassie's book is unique in the field for exploring Big History as to its relevance to decision-making in business and finance.

William Grassie received his doctorate in religion from Temple University and his bachelor degree in political science from Middlebury College. Grassie's books include *The New Sciences of Religion: Exploring Spirituality from the Outside In and Bottom Up*; *Politics by Other Means: Science and Religion in the Twenty-First Century*; and *Transhumanism and Its Critics* (edited).

Applied Big History is available in paperback for \$12.99 and Kindle for \$4.99. <https://amzn.to/2QLHIGSkx>.

For more information, interviews, and speaking engagements, contact xgrassie [at] metanexus [dot] net

Changing the World: Community, Engagement and Big History

Fifth International IBHA Conference, Summer 2020

Symbiosis International University

Pune, Maharashtra, India



The IBHA's fifth international conference will be held in the summer of 2020 at Symbiosis International University, India's largest private institution of higher learning: <<https://www.siu.edu.in/>>.

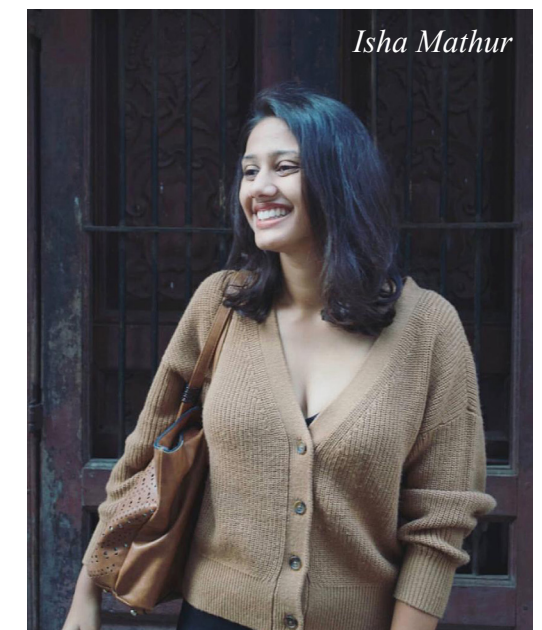
The conference will be co-sponsored with the Symbiosis School for Liberal Arts, <<https://www.ssla.edu.in/>>, one of the many innovative institutes in the Symbiosis federation. SSLA was the first university liberal arts school in India and is home to the India Association for Big History <<https://www.ssla.edu.in/researchcell>>.

The conference title and theme is: Changing the World: Community, Engagement and Big History. The IBHA has held conferences on meaning, teaching and research, so we now address community and change - how is big history useful in its applications. This was a member request from the 2018 IBHA conference.

Appropriately, the university motto is वसुधैव कुटुम्बकम् (Vasudhaiva Kutumbakam - The World is One Family), which comes from the Maha Upanishad. In the latest *Big History Journal* (III 1) is an article by SSLA graduate, Isha Mathur, that is an example of how big history is an activist model for improving our world.

We look forward to seeing you at the 2020 IBHA conference in Maharashtra!

Warm wishes, - Barry
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JOURNALS • ARTICLES

CO-EVOLUTION IN BIG HISTORY: A TRANSDISCIPLINARY AND BIOMIMETIC APPROACH TO THE SUSTAINABLE DEVELOPMENT GOALS

Author: [Javier Collado-Ruano](#)

Journal: [Social Evolution & History. Volume 17, Number 2 / September 2018](#)

DOI: <https://doi.org/10.30884/seh/2018.02.02>

The objective of this paper is to study the co-evolutionary processes that life has developed over billions of years in the context of 'Big History'. The main intention is to identify their operational principles and strategies in order to apply them to solve complex problems as the 'Sustainable Development Goals' (SDGs) proposed by the United Nations for the year 2030. The most important observations show us that all forms of life are developing sustainable and regenerative strategies in nature since life's first appearance about 3.8 billion years ago. As a result of the discussion, those co-evolutionary operational principles of ecosystem cooperation must be bio-mimetically copied, emulated, and improved to reduce ecological footprint and to achieve the SDGs. In conclusion, biomimicry finds in Big History a perfect theoretical model to understand how humanity must co-evolve in harmony with nature.

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New Article by IBHA Board Member, Javier Collado-Ruano

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