

Macquarie's Big History Institute offers a different perspective

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US astrobiologist David Grinspoon will address the forum. Picture: Jane Dempster

As Paris delegates wrangle over an agreement on global warming, a forum on the other side of the planet will study the problem over an entirely different timescale.

A three-day conference starting today at Macquarie University will thrash out Earth's latest existential crisis by looking at it from a variety of disciplinary angles — including quantum physics, economics and planetary science — and taking a big history perspective.

The gathering, staged by Macquarie's Big History Institute, will consider the Anthropocene — an increasingly popular term for the human-dominated geological epoch — and its struggles with climate change, health and population.

"We teach history of the universe," says the institute's director, David Christian. "You might think humans simply vanish on that scale. In one sense they do — we're a recent species on an obscure planet around a very average star.

"But this story helps you understand how the universe got more and more complex, and what (makes) us humans behave as no species has acted in four billion years. This is a very odd moment, and you cannot really appreciate how odd until you pan right back and place today's world in this much larger context of a science-based universal history."

US astrobiologist David Grinspoon, who addresses the conference on Friday, suspects alien civilisations have faced similar moments. But we'll never know unless they came out the other side.

If they didn't, their signature in the cosmic record will have been too fleeting for us to notice. "If we become aware of their presence, they will have been doing this thing we're attempting to do — living with planet-changing technology — much longer than we have," he says.

Success will have made them virtually immortal, harnessing their technological capabilities to survive meteor strikes or control the climate to their advantage. "If (alien civilisations) achieved a mature relationship with technology, they should be out there."

Christian says big history can help humans achieve the same goal, or survive climate change at any rate. "It's very hard to get an overview of large complex problems that cut across disciplines," he says.

"But all the big problems of the Anthropocene are exactly like that. You have to understand some economics, some chemistry, some geology to begin to get your brain around them. I don't think you can understand it just within history or even just within ecology. You need to see how all these disciplines link together."