Portrait

Veerabhadran Ramanathan, one of the inspirations behind "Laudato si", awarded by the Academy of Sciences

Par **Nicolas Senèze**

Modified on September 9, 2025 at 2:34 p.m. Reading time: 3 min.

Indian scientist Veerabhadran Ramanathan (shown here in 2014, in California) received the Grand Medal of the Pontifical Academy of Sciences on Tuesday, September 9. Since his encyclical Laudato si', he has been warning about the profound inequalities caused by climate change. / Erik Jepsen / UC San Diego

A pioneer in climate research and the destruction of the ozone layer, the Indian scientist also participated in the drafting of Pope Francis's encyclical *Laudato si'* in 2015. The Academy of Sciences awarded him its Grand Medal, its highest distinction, on Tuesday, September 9.

Veerabhadran Ramanathan will always remember his appointment to the Pontifical Academy of Sciences in 2004. *"I was in the Maldives trying to measure the effects of the brown cloud of pollution over Asia and the Indian Ocean,"* the Indian scientist says from San Diego, where he teaches at the University of California. " *I was quite desperate: our results were worse than we had expected. On top of that, we had just crashed one of our drones with all its measuring equipment..."*

The discovery of an email from Mgr Marcelo Sánchez Sorondo, then Chancellor of the Pontifical Academy of Sciences (PAS), gave him some comfort. *"He announced my appointment and my installation the following month in Rome*. s *I was still in my shirt: I barely had time to buy a suit before meeting John Paul II!"*

More than twenty years later, the emotion is still palpable in the voice of the octogenarian, who has nevertheless been covered in honors. *"You have to realize what it meant for the little boy from southern India who, with his mother tongue Tamil, didn't even understand the English of his middle school teachers, to find himself thus honored by the spiritual leader of 1.3 billion Catholics and today considered a saint!"*

It was also because he misunderstood his teachers that he *"lost the habit of listening"* to *"discover things for* (himself) *"*, he confides. He thus forged a solid scientific mind which allowed him to obtain an engineering degree in India, then a doctorate on the atmosphere of Mars and Venus at Stony Brook University (New York).

At the Vatican, “great academic freedom”

This work allowed him to join NASA in 1974, where he participated in the study of the environmental impact of spacecraft. He thus discovered the effect on the atmosphere of chlorofluorocarbons (CFCs), gases used in particular for refrigeration which were gradually banned by the Montreal Protocol in 1987.

In 1980, along with the American Roland Madden, he was also one of the first to predict that climate change was perceptible behind the "noise" of meteorological variations. This was demonstrated by the IPCC (Intergovernmental Panel on Climate Change) in 2001.

A member of other prestigious circles such as the National Academy of Sciences (United States) and the Royal Swedish Academy (which awards the Nobel Prizes in Physics and

Chemistry), the scientist, although not Catholic, retains a particular affection for the Pontifical Academy, of which he is now a member of the council.

"I discovered great academic freedom there. Five years after my arrival, I was already organizing my first conference, encouraged by Benedict XVI ," says the Indian scientist, struck by the interdisciplinary work, particularly with his colleagues from the Pontifical Academy of Social Sciences (PASS).

Effects of climate change on the most vulnerable

In 2013, on the sidelines of a meeting, he had dinner with his compatriot Partha Dasgupta, professor of economics at Cambridge: their passionate exchanges led them to propose a conference on the theme "Sustainable humanity, sustainable nature: our responsibility", which would take place the following year at the Vatican. The opportunity to alert the newly elected Pope Francis. The starting point above all for the now very well-known encyclical *Laudato si'* , published in 2015 and of which Veerabhadran Ramanathan would be one of the proofreaders.

Also read

Ten years of "Laudato si'": when the Vatican forms an alliance with science

This work made him aware of the profound inequalities that climate change imposes on the most vulnerable: *"80% of emissions are caused by 1 billion people, while the poorest 3 billion are on the front line of the effects of climate change. Yet, we devote 95% of resources to reducing emissions and only 5% to adapting to change* ," summarizes this promoter of "resilience."

It was this personal *"journey"* that he shared on Tuesday afternoon under the dome of the Quai de Conti, when he was awarded the Grand Medal of the Academy of Sciences, the highest distinction of the institution founded in 1666 in the wake of other prestigious academies such as the Lincei (ancestor of the PASS), or the Royal Society of London.

The Academy of Sciences has broken with climate skepticism

This is also a way for the Academy to distance itself from the climate-sceptic reputation that has long clung to it, notably under the influence of former minister Claude Allègre . In 2015, scientists at the Quai de Conti were arguing over an opinion to give in view of COP21 in Paris: due to a lack of agreement with a powerful climate-sceptic minority, the text was not published.

Also read

Academy of Sciences, two centuries of great quarrels

Ten years later, this same Academy, renewed by the arrival of eminent climatologists such as Sandrine Bony (in 2023) or Valérie Masson-Delmotte (in June 2025), therefore rewards Veerabhadran Ramanathan as a precursor of climate studies.

> The realization of “my” responsibility was a cathartic moment.
>
> When, with the Pontifical Academies, we began working on the symposium on human responsibility in the climate, French Archbishop Roland Minnerath, who accompanied us, suggested adding “our responsibility” to the title. For me, it was a cathartic moment: until then, I had been content to measure and observe the effects of climate change, but I had never considered it “my” responsibility. Since then, I have seen how this joint work between scientists, religious leaders, and governments has helped to highlight the human dimension of climate change and its effects on populations.