

Club of Amsterdam

the future of **Space Travel**

January 2013



Supporter

India House Amsterdam

Videos

by Winston Nanlohy

the future of **Space Travel** - **Gerard 't Hooft**, Nobel Laureate from Utrecht University

<https://youtu.be/ZQ-YUYmbcA0>

the future of **Space Travel** - **Bas Lansdorp**, Mars One

<https://youtu.be/hRf7k55je5Y>

the future of **Space Travel** - **Michel van Pelt**, Netherlands Space Society

<https://youtu.be/4t1EOa9WeAc>

Speakers and topics:

► **Gerard 't Hooft**, Nobel Laureate from Utrecht University
Moving to Outer Space: Science and Science Fiction

Many Science Fiction ideas about space travel will be impossible forever, based as they are more on fiction than on science. What would more realistic scenarios look like? What does it take to colonize the Solar System? Will we ever be able to escape to other stars? Will the colonists be humans of flesh and blood or advanced robots?

► **Bas Lansdorp**, Co-Founder & General Director, Mars One
Humans on Mars in 2023

Mars One is a non for profit organization whose intent is to establish a colony on Mars through the integration of existing, readily available technologies from industry leaders world-wide. Unique in its approach, Mars One intends to fund this decade-long endeavour through an interactive, reality TV style of the human mission to Mars.

► **Michel van Pelt**, spaceflight engineer, author, Netherlands Space Society
Future Robotic Science and Exploration

Over the last half century satellites and space probes have vastly increased our knowledge of the solar system and the Universe. The Hubble Space Telescope, the Curiosity Mars rover and many less famous spacecraft are continuously broadening our horizon. As technological capabilities and scientific requirements evolve, new types of space telescopes, landers, rovers and planetary satellites emerge. This presentation will offer a short overview of what's in store.

19:00 - 20:00

Introduction by our Moderator

► **Job Romijn**, bedenker, brainstormer, problem solver, artist. Club of Amsterdam Round Table.

Part I:

► **Gerard 't Hooft**, Nobel Laureate from Utrecht University
Moving to Outer Space: Science and Science Fiction

► **Bas Lansdorp**, Co-Founder & General Director, Mars One
Humans on Mars in 2023

► **Michel van Pelt**, spaceflight engineer, author, Netherlands Space Society
Future Robotic Science and Exploration

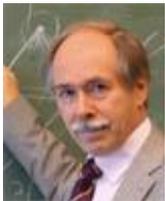
20:00 - 20:30

Coffee break with drinks and snacks.

20:30 - 21:15

Part II:

Open discussion



Gerard 't Hooft

Nobel Laureate from Utrecht University

Gerard 't Hooft (1946) was born and raised in The Hague, the Netherlands, then studied theoretical physics at the University of Utrecht.

He wrote his PhD thesis under the supervision of Martinus Veltman, on the renormalization of Yang-Mills theories. After a few years at CERN, Geneva and in the USA, he was appointed professor of Theoretical Physics at Utrecht University in 1976.

He shared the Nobel Prize in Physics with Veltman in 1999, on work that dates back to his thesis: "For elucidating the quantum structure of electroweak interactions in physics".

He is retired now, but continues some of his work as "University Professor" at Utrecht University.



Bas Lansdorp

Co-Founder & General Director, Mars One

Bas has never been one to let bold ventures intimidate him. A born entrepreneur, he sees potential and opportunity where others shy away. Gifted with an articulate vision and genuine enthusiasm, he moves people with his passion for science and the human mission to Mars.

Bas received his Master of Science in Mechanical Engineering from Twente University in 2003. For five years Bas worked at Delft University of Technology and in 2008 founded Ampyx Power in order to develop a new, viable method of generating wind energy. Bas sold his majority interest in Ampyx in 2011 in order to launch Mars One, Bas' dream for many years.

In 2011 and early 2012, Bas and Arno laid the groundwork for Mars One through the development of relationships with global aerospace companies, industry experts and researchers who are now moving to support the Mars One initiative.

"This endeavor is an incredible challenge, overwhelming at times and a bit scary. But we press on. I believe the human exploration and habitation of Mars is imperative, the next giant leap for humankind."

www.mars-one.com



Michel van Pelt

Spaceflight engineer, author, Netherlands Space Society

Michel van Pelt (1972) lives in the Netherlands, where he works as an engineer at ESTEC, the technical centre of the European Space Agency (ESA). He has authored several space books, of which "Rocketing into the Future" is the most recent. He is an editor and writer for the Dutch space magazine "Ruimtevaart" and writes about Mars exploration for the Dutch space and astronomy magazine "Astruim". Articles of van Pelt have also appeared in Mars Exploration Magazine. In addition he gives lectures on interplanetary exploration, Mars missions, space tourism, rocketplanes and space engineering.

As an ESA engineer, he prepares cost estimates and analyses proposals for new space missions, satellites and launch vehicles. He also regularly works on the design of new space missions in ESA's Concurrent Design Facility, acting as team leader, system engineer or cost engineer.

Books by Michel van Pelt:

[Space Tethers and Space Elevators](#)

[Space Tourism: Adventures in Earth Orbit and Beyond](#)

[Rocketing Into the Future: The History and Technology of Rocket Planes](#)



Job Romijn

bedenker, brainstormer, problem solver, artist
Club of Amsterdam Round Table

Job Romijn is an innovative mind with an eye for improvement. Not caring too much about a career or money he leads an interestingly unconventional life. He helps others with ideas and observations. Job Romijn is an unconventional innovator with a steep learning curve. This leads him to interesting observations and results in loads of ideas. He uses his abilities in brainstorming, testing and improving, with a current focus on websites.

Job Romijn is Job Romijn.

Job Romijn is quite a nice guy, albeit with some issues. Instead of solving his issues, he tries to use them and adapts his life accordingly.

His current business is testing the user experience and usability of websites.

He is a generalist with a broad education: a masters degree in high voltage engineering, conceptual art and applied creativity.

After brain activity he finds relaxation underwater in freediving.

www.bedenker.com

Impressions

by John Grüter, Digital Knowledge





