



## Laudatio for Marine Cotte

**Delivered by jury chairperson Henriëtte de Swart during the awards ceremony for the 2018 Descartes-Huygens Prize, Amsterdam**

5 February 2019

Ladies and gentlemen,

Marine Cotte unravels ancient secrets.

Working with a team of international researchers, for example, she discovered the oldest oil paintings in the world in Afghanistan, on the walls of caves that lay behind the colossal Buddha statues destroyed by the Taliban in 2001.

She also worked to solve the riddle of Vincent van Gogh's *Flowers In A Blue Vase*. Some of the yellow flowers in the painting had turned grey. How did that happen? It turned out that a layer of varnish added later had reacted with the artist's original oil paint.

And why is it that the white sheet in Rembrandt's *The Anatomy Lesson of Dr Nicolaes Tulp* seems to glow with light? What recipe did the Old Master use to create the pigment?

These are some of the fascinating questions that Marine explores.

Art research may not be the first thing to spring to mind for someone who obtained her PhD in chemistry at Pierre and Marie Curie University in 2004. After her postdoctoral training, she accepted an appointment as a researcher at the French National Centre for Scientific Research, assigned to the Centre of Research and Restoration of the French Museums. Since then, Marine has gained international renown as a leading international expert on developing and deploying the very latest technologies – such as high-intensity X-rays – to study art and archaeological objects.

Marine is currently the head of a research group at the European Synchrotron Radiation Facility or ESRF in Grenoble. She publishes much of her work in prestigious journals and is covered regularly in the media.

Her research is also of huge significance to society:

- It extends our historical knowledge of artistic techniques and materials.
- It helps to date and authenticate works of art and archaeological finds.
- No less important is that Marine's work helps to improve the techniques used to restore and conserve historic works of art, so that we can better preserve important objects of cultural heritage for longer periods of time.

Marine,

The jury is deeply impressed by your work.

We are impressed by its innovative, interdisciplinary nature. In combining technology, art and archaeology in your research, you are pushing back the boundaries in all three fields. The techniques that



your work has broad, interdisciplinary relevance in their own right, for example in medicine, the life sciences and environmental science, but also in chemistry, the earth sciences and industry.

The jury is further impressed by the way in which you do your work. You are an inventive and energetic pioneer in your field. You actively seek to collaborate with researchers in Europe and beyond. For example, you are one of the drivers behind a Franco-Dutch partnership focusing on high-tech art and archaeological research. Your efforts in this area have made a positive contribution to scientific cooperation between our two countries, which is one of the aims of the Descartes-Huygens Prize.

Part of this prize is the opportunity to spend at least three months in the Netherlands as a guest researcher. You may spread that time out over a longer period.

You will therefore be working in the Netherlands at regular intervals in the period ahead, with researchers at Delft and Eindhoven universities of technology and the Rijksmuseum in Amsterdam. We are looking forward to your presence here.

The timing could not be better, because 'your' ESRF has been shut down for eighteen months to undergo a far-reaching renovation. That gives you the opportunity to work in the Netherlands on the development of the Smart\*Light, a table-top version of the ESRF.

In the future, this new, compact, mobile high-intensity X-ray source will be used in art research, but also to identify metal fatigue in ships, or to predict arteriosclerosis.

In addition, you will be working on various Franco-Dutch art research projects, including one focusing on Rembrandt's works.

Marine,

You have studied minute specimens taken from cave murals in Afghanistan.

You have studied Van Gogh's yellow flowers.

And you have studied Rembrandt's artistic techniques.

There are still so many secrets for you to unravel. The jury hopes that the Descartes-Huygens Prize will encourage you and your fellow researchers to continue your pioneering work at the interface of technology, art and archaeology.

We hope that your work will cause more people to realise how important cutting-edge technology is for the study and preservation of our cultural heritage.

And we hope that Franco-Dutch scientific cooperation will prosper as a result.

Thanks to your energy and dedication, I'm sure it will.

Ladies and gentlemen,

It will come as no surprise that the jury has voted unanimously to advise the Academy to award the 2018 Descartes-Huygens Prize to Dr Marine Cotte!