

Oration for Dr Douglas Terrier,

To be Delivered on Friday 20 July 2018 11am by Prof Loizos

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Vice-Chancellor

This morning, I am delighted to introduce our honorary graduand, the Chief Technologist of NASA, DR DOUGLAS TERRIER.

In his current role, Douglas Terrier is the agency's principal advisor and advocate of technology policy and programs, shaping the agency's space technology strategy. He directs the work of the agency's strategic integration and innovation teams, and is responsible for research and development planning, policies and programs throughout the agency and its government, industry and university partners. He reports directly to the NASA Administrator who, in turn, reports directly to the White House. Dr Terrier's career has been spent in the aerospace industry, starting with his PhD in Aerospace, Aeronautical and Astronautical Engineering from the University of Texas, that was inspired, it is said, by watching as a small boy the television coverage (black and white, on a 12" screen!) of the Apollo moon landing in 1969. For 23 years, before joining NASA, he worked in the commercial aerospace sector with Lockheed Martin, General Dynamics and General Electric Aircraft Engines. For Lockheed Martin, he led international business development in the Asia/Pacific region, supporting

successful major campaigns, including work on classified programs. At NASA, he has had several leadership roles: he was Associate Director of Engineering, where he led teams responsible for the design and development of spacecraft for NASA's human space exploration programme; he was the Deputy Director of the Johnson Space Center's Strategic Partnership Office and, immediately prior to his present role, was the Johnson Space Center's Chief Technologist.

Douglas Terrier is one of a rare breed of individuals who combine scientific distinction with senior management and strategic leadership expertise in both the commercial and state sectors. Dr Terrier is a distinguished scientist who holds patents for his work on aerospace propulsion and has published several technical papers. He has earned the Lockheed Martin 'Outstanding Technical Achievement' Award on four occasions, and several NASA Awards, including the NASA Leadership Medal. He contributes to NASA's policy at the very highest level at a time when the Agency turns towards human deep space exploration, such as a manned journey to Mars.

I first met Dr Terrier during a research visit at the Johnson Space Center in 2015. Since then, I have been fortunate to have the opportunity to work with him on ongoing research and publications about the strategy and organisation change challenges faced by the agency. Dr Terrier has shared some of these challenges during his lectures at the Warwick Business School campus at the Shard in London last year, and also two days ago.

One recent output of our work together is an article in the Harvard Business Review entitled The Reinvention of NASA. This article plots the evolution of the different business models, technology strategies and values of NASA from the 1960s to the present, exemplifying what we termed “strategic agility”. Since the article entered the public domain, it has served as a useful template for initiating and informing strategic conversations at the highest levels of the agency.

What has amazed me during our interactions and research projects is Dr Terrier’s insight, courage and candour, in terms of challenging established beliefs and traditional ways of thinking in the agency. This helps to push the agency forward towards a new, outward-facing, network-oriented business model that both enhances, and also harnesses the innovative capacity of the broader commercial space sector. This network model and the agency’s ongoing evolution can ensure that it will continue to lead the world in human space exploration, create breakthrough technologies, and benefit the whole of humanity.

To put the significance of Dr Terrier’s work in context, perhaps I should end by quoting the words of the late Professor Stephen Hawking: ‘I believe that the long-term future of the human race must be space ... it represents an important life insurance for our future survival.’

Vice-Chancellor: in the name of the Senate, I present to you for admission to the degree of Doctor of Science, *honoris causa*, DOUGLAS TERRIER.