



The Royal Academy
of Engineering

The ERA
Foundation

The 2012 International Lecture and Dinner

Engineering and technological challenges in robotic space and Earth exploration

Dr Charles Elachi
Director, NASA Jet Propulsion Laboratory

Monday 5 March 2012
6.00pm for 6.30pm

Venue:
The Royal Society of Medicine
1 Wimpole Street
London W1G 0AE



The 2012 International Lecture and Dinner

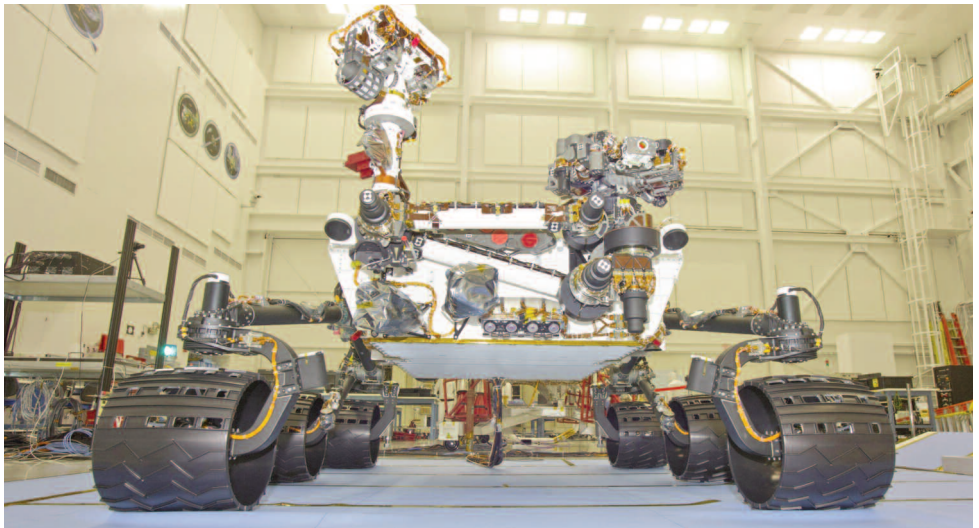
Engineering and technological challenges in robotic space and Earth exploration

For more than 50 years, the NASA Jet Propulsion Laboratory has been at the forefront of space exploration. In 1958, it built and operated the first US satellite, Explorer 1, and over the following decades sent robotic spacecraft first to the moon, and then to all of the solar system's planets. It currently has 23 spacecraft and 10 instruments conducting active missions, including its new flagship Mars rover mission, Mars Science Laboratory, and the most distant human-made objects, Voyagers 1 and 2.

The technologies developed for space exploration have also proved invaluable in remote-sensing studies of Earth, its atmosphere, oceans, climate and geology, as well as in space-based astronomy. Over the past 30 years, the Jet Propulsion Laboratory has designed and launched many instruments and spacecraft to search for exoplanets and examine space objects, including the Spitzer Space Telescope, the first to directly capture light from planets orbiting other stars.

Dr Charles Elachi, Director of the Jet Propulsion Laboratory, will speak about its past, present and future activities.

This lecture is made possible by the kind support of the ERA Foundation.



Programme:

6.00pm Registration

6.30pm Welcome

6.35pm Presentation by Dr Charles Elachi

7.30pm Q & A

8.00pm Drinks reception

8.30pm Dinner (optional, £50 each)

Dress: Business attire

To reserve a dinner place please complete the attached form. Please note the dinner price is inclusive of VAT.

NB: We regret that a refund will not be possible for cancellations received after 27 February 2012 unless the place can be reallocated.

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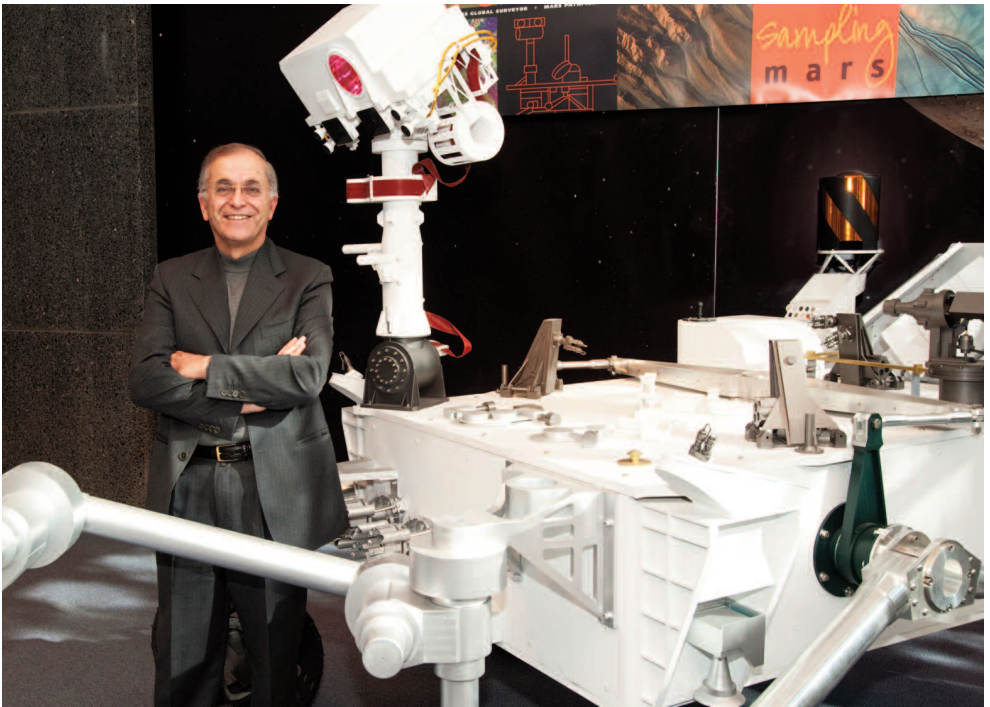
Dr Charles Elachi

Charles Elachi has been the Director of the Jet Propulsion Laboratory since May 2001. Prior to becoming Director, Dr Elachi was the Jet Propulsion Laboratory's Director for Space and Earth Science Programs (beginning in 1982) where he was responsible for the development of numerous flight missions and instruments for Earth observation, planetary exploration and astrophysics.

He has been a principal investigator on a number of NASA-sponsored studies and flight projects including the Shuttle Imaging Radar series (Science Team Leader), the Magellan Imaging Radar (Team Member), and the Cassini Titan Radar (Team Leader). He is the author of over 230 publications in the fields of active microwave remote sensing and electromagnetic theory, and he holds several patents in those fields.

Dr Elachi received his BSc in physics from University of Grenoble, France; the Dipl Ing in engineering from the Polytechnic Institute, Grenoble, and both a MSc and PhD degree in electrical sciences from the California Institute of Technology. He also has a MSc degree in geology from the University of California, Los Angeles, and a MBA from the University of Southern California.

Over his career Dr Elachi has received numerous awards, including the National Academy of Engineering Arthur M. Bueche Award, the Chevalier de la Légion d'Honneur, France, and the Lebanon Order of Cedars. In 1989, Dr Elachi was elected to the US National Academy of Engineering.



Engineering and Technological Challenges in Robotic Space and Earth Exploration

Registration Form

I wish to reserve **ticket(s) for the lecture (no charge)**

I wish to reserve **ticket(s) for the dinner at £50.00 each**

Title First name RAEng Fellow

Surname Honours

Position

Organisation

Address

Postcode

Telephone Email

Dietary requirements

I would like to bring a guest

Title First name

Surname Honours

Position

Organisation Email

Dietary requirements

I enclose a cheque* payable to The Royal Academy of Engineering or please debit my credit card* for the sum of (*delete as appropriate)

Card holder's name:

Account number:

Security number: (last 3 digits on back of card)

Please note we only accept **Visa** and **Mastercard**

Signature Card expiry date /

Please return to: Selina Chan, Events and Awards Assistant
 The Royal Academy of Engineering, 3 Carlton House Terrace, London SW1Y 5DG
 Tel: 020 7766 0682 Fax: 020 7930 2054 Email: events@raeng.org.uk
 VAT Registration Number: 503 4089 74 Registered Charity Number: 293074

The Royal Academy of Engineering

As the UK's national academy for engineering, we bring together the most successful and talented engineers from across the engineering sectors for a shared purpose: to advance and promote excellence in engineering. We provide analysis and policy support to promote the UK's role as a great place from which to do business. We take a lead on engineering education and we invest in the UK's world class research base to underpin innovation. We work to improve public awareness and understanding of engineering. We are a national academy with a global outlook and use our international partnerships to ensure that the UK benefits from international networks, expertise and investment.

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Drive faster and more balanced economic growth

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Promote engineering at the heart of society

The **strategic challenge** is to improve public understanding of engineering, increase awareness of how engineering impacts on lives and increase public recognition for our most talented engineers.



The Royal Academy of Engineering promotes excellence in the science, art and practice of engineering.

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