



# Engineering Integrity Society Fatigue 2020

Downing College, Cambridge, UK  
29 June - 1 July 2020



Sponsored by: 



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# Fatigue 2020

As engineering modelling and simulation tools become ever more powerful and sophisticated there still remains the challenge of correlating the virtual world with both idealised laboratory testing and the wide, and potentially unexpected, range of service conditions experienced by machines and structures. These challenges are compounded by the advent of new materials, new ways of manufacturing components, new applications and new test and measurement techniques.

At Fatigue 2020 we will seek to explore not only the latest developments in engineering modelling and simulation, advances in test and measurement techniques, innovations in manufacturing, and developments in materials science, but also the complex interrelations between all these topics that give rise to improvements in fatigue performance, durability and structural integrity.



## Venue

The conference will take place at Downing College, University of Cambridge. Cambridge is one of the most important and picturesque cities in East Anglia. It is the county town of Cambridgeshire and the seat of one of the oldest universities in the British Isles.

Downing College was founded in 1800 through a bequest made by Sir George Downing. The College's beautiful neo-classical buildings are set in spacious and peaceful gardens in the centre of Cambridge.

## Exhibition

There will be an accompanying exhibition of material testing systems, durability software tools and engineering services where delegates will have the opportunity to discuss the latest developments in the field of fatigue and durability.

## Accommodation

En-suite accommodation is available at Downing College subject to availability. Please select the accommodation option on the booking form. Prices include bed and breakfast.

## Travelling Information

The nearest airports are Stansted and Luton. Cambridge is easily reached by train. Downing College is located about ¾ mile from the railway station and is served by regular buses and taxis.

## Liability

EIS as organiser is not liable for any changes in the programme due to circumstances beyond their control. The organisers are not liable for any losses, accidents or injuries to persons or damage to property of any kind. Participants must arrange their own insurance if considered necessary.

## Visa

Visa applications must be applied for in your country of origin.

## Registration

The booking form available at [www.fatigue2020.com](http://www.fatigue2020.com) should be completed and emailed to the conference secretariat, Sara Atkin: [info@e-i-s.org.uk](mailto:info@e-i-s.org.uk)

## Provisional Programme

With over 65 presenters from across the globe the conference will offer a full programme across the three days. The full provisional programme including list of speakers can be found at: [www.fatigue2020.com](http://www.fatigue2020.com)

## Keynote Lectures

**Very-high-cycle fatigue of additive manufactured materials** - Professor Youshi Hong, Chinese Academy of Sciences

**Fatigue-crack propagation in high-entropy alloys at ambient to cryogenic temperatures** – Professor Robert Ritchie, University of California

**50 years of Fatigue Research: Progress and Perspectives** – Professor Roderick Smith, Imperial College

**Overview of fatigue design in aerospace electrification** - Mukesh Patel, Safran

## Conference Dinner Address

Dame Julia King, The Baroness Brown of Cambridge DBE FREng FRS.

## Registration Fees

	3 Day	2 Day	1 Day
<b>Presenting Authors</b>	<b>£465+VAT</b>	-	-
<b>EIS Members</b>	<b>£515+VAT</b>	<b>£390+VAT</b>	<b>£215+VAT</b>
<b>Non Members</b>	<b>£620+VAT</b>	<b>£500+VAT</b>	<b>£260+VAT</b>
<b>Students &amp; Retired Members</b>	<b>£330+VAT</b>	-	-

Please find all the latest information relating to the conference and details of how to book your place on the Fatigue 2020 website.

[www.fatigue2020.com](http://www.fatigue2020.com)

We look forward to welcoming you to Cambridge.

## Provisional Programme

### Monday 29 June

Keynote: Mukesh Patel - Safran

Session 1: Additive Manufactured Materials

Session 2: Manufacturing

Session 3: Experimental Methods

Session 4: Additive Manufactured Materials II

Session 5: Modelling

### Tuesday 30 June

Keynote: Professor Youshi Hong - Chinese Academy of Sciences

Session 6: Materials

Session 7: Experimental Methods

Session 8: Thermomechanical Fatigue

Keynote: Professor Roderick Smith - Imperial College

Session 9: Welds - hosted by TWI

Session 10: Assessment

Session 11: Environmental Fatigue

Session 12: Crack Propagation I

### Wednesday 1 July

Keynote: Professor Robert Ritchie - University of California

Session 13: Crack Propagation

Session 14: Random Loading

Session 15: Composites

Session 16: Experimental Methods

Session 17: High Temperature

Session 18: Modelling II





### Convenor

John Yates (UK)

### International Scientific Committee

André Galtier (France)

Andrea Carpinteri (Italy)

Martin Bache (UK)

Christophe Pinna (UK)

Filippo Berto (Norway)

Francesco Iacoviello (Italy)

Hossein Farrahi (Iran)

Youshi Hong (China)

Jie Tong (UK)

Johan Moverare (Sweden)

Luca Susmel (UK)

Liviu Marsavina - (Romania)

Marc Geers (The Netherlands)

Matteo Luca Facchinetti (France)

Muhsin J Jweeg (Iraq)

Alfredo Navarro (Spain)

Phil Irving (UK)

Robert Akid (UK)

Michael Sangid (USA)

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Yee Han Tai (UK)



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