



The Engineering Integrity Society

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



**FIRST ANNOUNCEMENT
AND CALL FOR PAPERS**

www.fatigue2020.com

FOREWORD

The Fatigue 2020 conference will bring the international fatigue and durability community together to share knowledge and understand the challenges in using sophisticated engineering simulation and modelling tools to complement sound test programmes and develop reliable and cost effective products for modern usage.

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.

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.

The 3 day conference builds on the long established philosophy of the Engineering Integrity Society to provide a forum for practising engineers and researchers to exchange ideas and experiences in all aspects of structural integrity. Contributions will be welcome from all disciplines, industries and research organisations. As well as giving practitioners an opportunity to keep up-to-date in the latest developments in durability of materials and structural analysis techniques, the conference will provide an excellent forum for researchers to promote their work and enhance its transfer to, and impact on, industrial applications.

LOCATION

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.

KEYNOTE SPEAKERS

We are pleased to welcome Professor Youshi Hong (Institute of Mechanics, Chinese Academy of Sciences) and Dr Tommaso Ghidini (European Space Agency) who will be keynote speakers at the conference.

CALL FOR PAPERS

As with previous conferences we shall be preparing a special issue of selected papers for a prestigious international journal. We also have other exciting opportunities including working with the Italian Group of Fracture to publish a large number of papers in *Frattura ed Integrità Strutturale*.

A selection of conference papers, including those of the Peter Watson Prize winners, will be published in Engineering Integrity, the Journal of the EIS.

We are particularly interested in papers that address the questions:

- Durability of advanced materials;
- Novel manufacturing techniques for improved component durability; Integrity of recycled and reprocessed materials;
- Joining technologies: bolts, welds, adhesives, joining dissimilar materials, correlation of testing and in-service durability;
- Surface engineering and durability;
- Innovations in 3D imaging for structural integrity;

PETER WATSON PRIZE

The Peter Watson Prize will be awarded to the best presentation given by a young engineer

Entrants should meet at least one of the following criteria:

- A person working in industry below the age of 28 on submission (potential entrants please provide date of birth with abstract)
- A post-doctoral worker with a maximum of 3 years' experience since completing a PhD/EngD
- Any currently registered undergraduate or postgraduate student

SUBMISSION OF PAPERS

You are kindly requested to submit an abstract (one A4 page maximum, only in pdf format, size lower than 1MB) to the Conference Secretariat.

The abstract should contain:

- Title of the paper
- Authors (full address of the company, email, personal titles of the corresponding author and co-authors)
- Statement of contents and main points

The abstract should clearly emphasise the main scientific, technical, economic or practical aspects of the paper.

KEY DATES

Deadline for receipt of abstract - ongoing

Notification of abstract acceptance - from 12 April 2019

Full papers to be received - 30 September 2019

PROCEEDINGS AND EXHIBITION

All accepted papers will be included in the conference proceedings. The proceedings containing the full texts will be distributed to delegates at the registration desk.

An exhibition of material testing equipment and other fatigue related services is planned. Interested companies should contact the Conference Secretariat.

HOTEL ACCOMMODATION

Rooms have been reserved in Halls of Residence at Downing College. These are en-suite and of a high standard. The number of rooms available is limited and early reservation, through the Conference Secretariat, is recommended.

INTERNATIONAL SCIENTIFIC COMMITTEE

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