

12th International Conference on Advances in Experimental Mechanics

29th to 31st August 2017 • University of Sheffield, UK



The 12th in a series of conferences organised by the British Society for Strain Measurement showcasing novel and innovative research in Experimental Mechanics.



The conference is chaired by Dr Rachel Tomlinson from the University of Sheffield, which is celebrating the centenary of the Department of Mechanical Engineering in 2017. The conference will bring together internationally leading researchers across a wide range of disciplines in both academia and industry to exchange ideas and discuss new research.



www.bssm.org/conf2017

Conference Highlights

- Young Stress Analyst Competition
- BSSM Measurements lecturer and keynotes
- EMex, an interactive exhibition of state of the art instrumentation



Enjoy the architecture and landscape of the modern city of Sheffield alongside its industrial and Victorian heritage. Sheffield is celebrated as the greenest city in Europe, with many parks, and the university accommodation is just 5 minutes walk from the Botanical Gardens and 3 miles from the beautiful Peak District National Park, with its picturesque villages and glorious scenery.

The Conference Dinner will be at Sheffield's Kelham Island Industrial Museum which houses the River Don Engine, the most powerful working steam engine in Europe, interactive galleries following the growth of the steel city and also one of the last few remaining Bessemer Converters in the world.

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Abstract Submission

Two-page extended abstracts should be submitted on-line at www.bssm.org/conf2017

Key dates

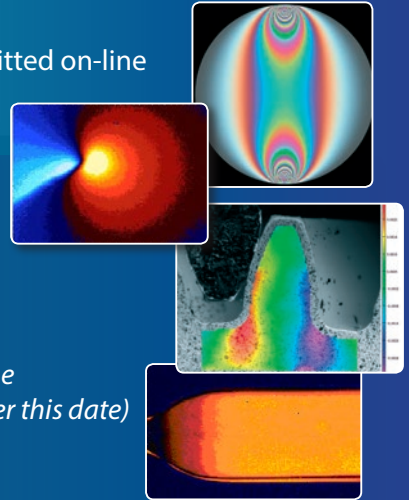
14th November 2016 to 30th January 2017
online extended 2-page abstract submission

6th March 2017 *Author notification*

28th April 2017 *Early bird registration deadline
(no student fees available after this date)*

30th May 2017 *Author registration deadline*

12th June 2017 *Final programme*



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BSSM Measurements Lecture

This prestigious annual lecture will be given by Professor Margaret Lucas from The University of Glasgow, Scotland, who will be speaking on characterising the behaviours of ultrasonic devices.

Plenary Lectures

Prof Eann Patterson from the University of Liverpool will give a plenary talk on 'The credibility of computational models

based on experimental mechanics in biological applications".

Sam Daly, Associate Professor from the University of California, Santa Barbara, will give a plenary talk on "Linking Length Scales: Investigating the Effect of Microscale Strain Localization on Macroscopic Response".

Venue

The technical sessions and exhibition of the conference will take place in The Diamond, the University of Sheffield's new £81M, multi-disciplinary engineering teaching building.



Programme

The conference covers all areas of experimental solid mechanics and abstracts are welcome on any topic that falls within this broad scope. The conference will have thematic sessions on specialist and emerging areas in experimental mechanics.

Conference themes

The conference focuses on research that advances experimental techniques across the very widest range of applications in mechanics, including stress, strain and vibration analysis.

● Measurement techniques and their application

Innovations in measurement techniques, e.g. strain gauges, DIC, OCT, XCT

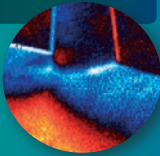
Non-destructive strain and stress measurement techniques

Material characterisation and behaviour

Experimental validation of analytic and numerical models

Measurements at the micro- and nano-scale

Geomechanics and geomaterials



● Mechanics in challenging environments

High-temperature strain and stress measurement

In-process measurements for welding and additive manufacture

Measurements in hazardous environments

Remote measurements

● Mechanics of composites

Mechanical characterisation of fibre-reinforced materials

Damage assessment

● Fatigue and fracture

Fracture mechanics

Determination of remaining life

● Mechanics in biology and medicine

*Characterisation of biomaterials
Measurement on cell and sub-cellular structures*

● Dynamic testing

● Condition monitoring

Acoustic emission

Health monitoring of structures and mechanisms

Full-scale testing

● Stress and strain analysis techniques

Scientific Committee

Dr Ifigeneia Antoniadou	<i>University of Sheffield, UK</i>
Dr Dave Asquith	<i>Sheffield Hallam University, UK</i>
Dr David Backman	<i>NRC, Canada</i>
Prof Leslie Banks-Sills	<i>Tel Aviv University, Israel</i>
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Dr Thorsten Becker	<i>Stellenbosch University, South Africa</i>
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Prof Stephen	<i>Eichhorn University of Exeter, UK</i>
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Dr Pascal Lava	<i>MatchID, Belgium</i>
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Prof Huajiang Ouyang	<i>University of Liverpool, UK</i>
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Conference Secretariat

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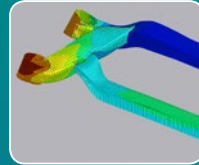
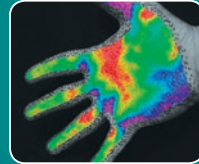
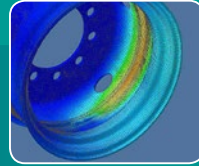
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