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.

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.
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

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  
University of Sheffield, UK

Dr Dave Asquith  
Sheffield Hallam University, UK

Dr David Backman  
NRC, Canada

Prof Leslie Banks-Sills  
Tel Aviv University, Israel

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Dr Johan Hoefnagels  
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National Cheng Kung University, Taiwan

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Prof Wolfgang Osten  
University of Stuttgart, Germany

Prof Huaijiang Ouyang  
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Prof Eann Patterson  
University of Liverpool, UK

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Cardiff University, UK

Prof Bob Rowlands  
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Dr Pablo Ruiz  
Loughborough University, UK

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University of Kobe, Japan

Prof Chris Smith  
University of Exeter, UK

Prof Luca Susmel  
University of Sheffield, UK

Prof Mike Sutton  
University of South Carolina, USA

Dr Gianluca Tozzi  
University of Portsmouth, UK

Prof Chris Truman  
University of Bristol, UK

Prof Keith Worden  
University of Sheffield, UK
Conference Secretariat

Amanda Boaler
British Society for Strain Measurement
Telephone: +44(0) 7756 915295
E-mail: amandaboaler@bssm.org

Organising Committee

Dr Rachel Tomlinson University of Sheffield
Prof Simon Quinn University of Southampton
Dr Hassan Ghadbeigi University of Sheffield
Dr Rachael Tighe University of Southampton
Amanda Boaler BSSM
Biana Gale BSSM