8-9 June 2022 - ONLINE

3rd International Conference on Health Monitoring of Civil & Maritime Structures

HeaMES 2022

Call for Papers

Endorsed By ISHMII

INTERNATIONAL SOCIETY FOR STRUCTURAL HEALTH MONITORING OF INTELLIGENT INFRASTRUCTURE

About the Conference

There is an urgent need for further progress in structural health monitoring for both civil and maritime structures. Maximising the availability and productivity of onshore and offshore infrastructure and marine vessels, whilst operating them safely and with minimal impact on the environment, is of major concern to operators. Many such structures are unique, e.g. ships such as FPSOs have specific constraints, loading characteristics and damage consequences that make them different to other offshore installations and conventional ships, and often more challenging to maintain and operate. Market research shows that there is a need for efficient SHM which could facilitate structural, fatigue and corrosion analyses and underpin risk based inspections to address the structural integrity of onshore and offshore structures. Radical developments in the telecommunication, sensor and data processing technologies are transforming the way that asset management is conceived and carried out. Sensors and structural health monitoring systems are increasingly becoming an integral part of new and existing buildings, bridges, offshore structures and installations, and vessels. Sensing arrays can be permanently connected to distributed management networks so that owners, users, and in general, all those involved in the management process - connected via the Internet - can query in real time condition and performance during construction and operation. Whereas today the structural engineer conceives the single building or bridge as a stand-alone project, in future it is likely that structures will be regarded as nodes of a complex infrastructure network. Design specifications, real-time operation, and any decision on maintenance, upgrading and reconstruction of the single node will reflect the management policy of the whole system, properly accounting for concepts such as cost, risk and sustainability and structural health monitoring will play a critical role in these transformed approaches. HeaMES 2022 provides an ideal platform for innovative industry and practitioners, leading researchers, technology developers, and supply chain partners to meet. Bringing the pioneering experts together, the conference aims to promote exchange of ideas,

Conference Themes

- Performance and condition monitoring
- Quantitative SHM-based reliability, safety and performance assessment
- Modelling and dealing with uncertainty in SHM data
- Economic analysis of SHM strategies and benefits
- Management of structures exceeding design life
- Damage control, repair and strengthening
- Damage detection
- Modelling of operational and environmental influences
- Digital twin/SHM integration
- SHM-based design
- Validation and certification
- Design guidelines and codes
- Signal processing
- Big data in SHM
- Real time monitoring
- Standardization of SHM systems
- Sensors and actuators for infrastructure instrumentation
- Sensor networks
- Remote monitoring systems
- Global system integration
- Smart structures and materials
- Field applications and case studies
- Critical issues in SHM
- Visionary, disruptive and transformational concepts

Organising Committee

Professor Purnendu Das, *ASRANet Ltd, UK*
Dr Piotr Omenzetter, *University of Aberdeen, UK*

Key Dates

Abstract Deadline: 3rd March 2022
Final Payment : 3 April 2022
Paper Submission: 3 July 2022

Registration Fees

Full Registration: £200

Student Registration: £175

Technical Advisory Panel

Dr Nirosha D. Adasooriya, University of Stavanger, Norway

Prof Suresh Bhalla, Indian Institute of Technology Delhi, India

Dr Sylvain Chataigner, IFSTTAR, France

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Prof. S. A. Sudath Siriwardane, University of Stavanger, Norway

Dr Dmitri Tcherniak, Bruel and Kjaer, Denmark

Dr Ying Wang, University of Surrey, UK

Prof. Ufuk Yazgan, Istanbul Technical University, Turkey

Prof. Daniele Zonta, University of Strathclyde, UK, University of Trento, Italy

Dr Ales Znidaric, Slovenian National Building and Civil Engineering Institute

INFORMATION TO AUTHORS:

The registration fee includes:

- access to the conference oral presentations via Zoom with an opportunity to ask questions

- opportunity to present your work to both in-person and ONLINE participants.

- publication of presented conference papers in conference proceedings with an ISBN number for reference in the British Library.

Oral presentations of remote participants will be arranged live through Zoom platform.