SEMINAR

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Czech Society for Mechanics,
International Measurement Confederation,
and Institute of Theoretical and Applied Mechanics, CAS

invite you to a lecture and discussion within the lecture series **ITAM Seminar**

X-ray biomechanical imaging and digital volume correlation of bone and biomaterials

given by

Dr. Marta Peña Fernández
School of Engineering and Physical Sciences,
Heriot-Watt University (Edinburgh, Scotland)

The use of digital volume correlation (DVC) applied to X-ray Computed Tomography (XCT) images is increasingly gaining interest for the evaluation of 3D full-field displacements and strains in bone and biomaterials undergoing deformation. Ranging from clinical CT to synchrotron-radiation based nano-CT, the combination of *in situ* X-ray biomechanical imaging and DVC can provide important information on the structure-function relationships of bone in a multiscale manner. This seminar will present our latest research in the use of DVC to unravel the mechanical behaviour of bone and biomaterials, and the potential of combining these experimental measurements with computational models to enable predictions of damage mechanisms in bone tissue. Overall, this can ultimately aid the design of novel biomaterials and diagnostic tools for musculoskeletal diseases.

The lecture will be held on Wednesday, June 1, 2022 at 10:00 AM
at ITAM, Prague, small lecture room.
The lecture will be also streamed using the zoom platform

https://cesnet.zoom.us/j/99353016620?pwd=WiszRUI5a0QxelVYektHTWpuNXY4QT09
Meeting ID: 993 5301 6620
Passcode: 498631

Lecture 2022/6
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