

6th International Conference of Engineering Against Failure



Session description

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Title of the session: New/Niche Technologies for Structural Health Monitoring

Objectives: Nowadays structural health monitoring (SHM) techniques are usually based on a small number of "mainstream" approaches. Ultrasonic technologies that make use of Lamb wave propagation are e.g. often applied for damage detection, optical fiber technology for strain monitoring, but also for detecting elastic waves as well. However, under certain circumstances, other approaches based on different physical phenomena do also provide interesting options and they are applicable in various areas. Their main advantage is mostly a lower cost, a higher probability of detection, a less complex setup or just a better accessibility for sensors. These regard for instance:

- Crack propagation gauges for SHM
- Additive manufacturing for SHM
- Percolation threshold sensors for leakage detection