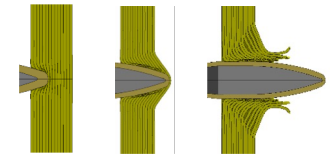


Structural integrity under extreme loads

Topic: High fidelity models and machine learning

•**TITLE:** Development of machine learning methods to improve the fidelity of numerical models for simulating ultrasonic guided waves in solid media.

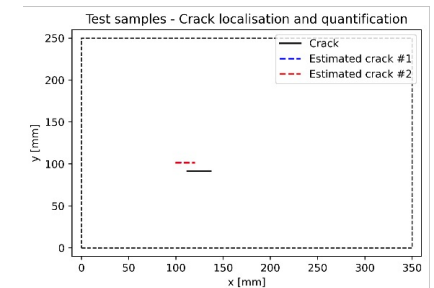


RESEARCH BACKGROUND:

Ultrasonic guided waves can be used to characterise structural damage in solid media. To this purpose, dedicated machine learning algorithms may be developed to improve the accuracy and efficiency of state-of-the-art numerical methods.

RESEARCH ACTIVITIES:

1. Experimental tests on composite and/or hybrid plates subjected to low velocity impact.
2. Numerical simulations of the experimental tests.
3. Development of machine learning methods to characterise damage and/or to improve the accuracy and efficiency of numerical methods.



METHODOLOGY: Numerical - Experimental

DURATION: 6-9 months

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