

Structural integrity under extreme load

Topic: In-depth investigations on composite materials

•**TITLE:** Investigation on the interface of composite materials

•**RESEARCH BACKGROUND:**

•Interface of composite materials (between layers of fibre/matrix) is generally believed as the weak point of the whole assembly. Besides low resistance for delamination, detecting the damage located on the interface is another headache in related field. The work is planned to investigate this topic.

•**RESEARCH ACTIVITIES:**

1. Study capability of different detecting methods for delamination (ultrasonic, thermography, lamb wave,...)
2. Design and Build-up devices for the composite materials based on ultrasonic, known as “C-scan”
3. Analyse the capability of ultrasonic on different composites based on accuracy (optional)
4. Analyse the capability of ultrasonic with the comparison of different detecting methods (optional)

•**METHODOLOGY:** Programming – Experimental – Algorithm

•**DURATION:** 9 months

•**CONTACTS:**

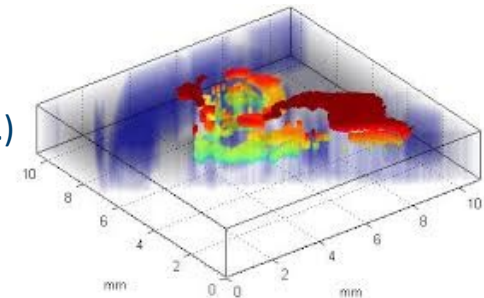
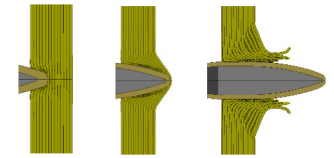
andrea.manes@polimi.it

dayou.ma@polimi.it

marco.giglio@polimi.it

•**POSSIBLE COLLABORATIONS:**

•Federal University of Rio Grande do Sul (Brazil)



Delamination

