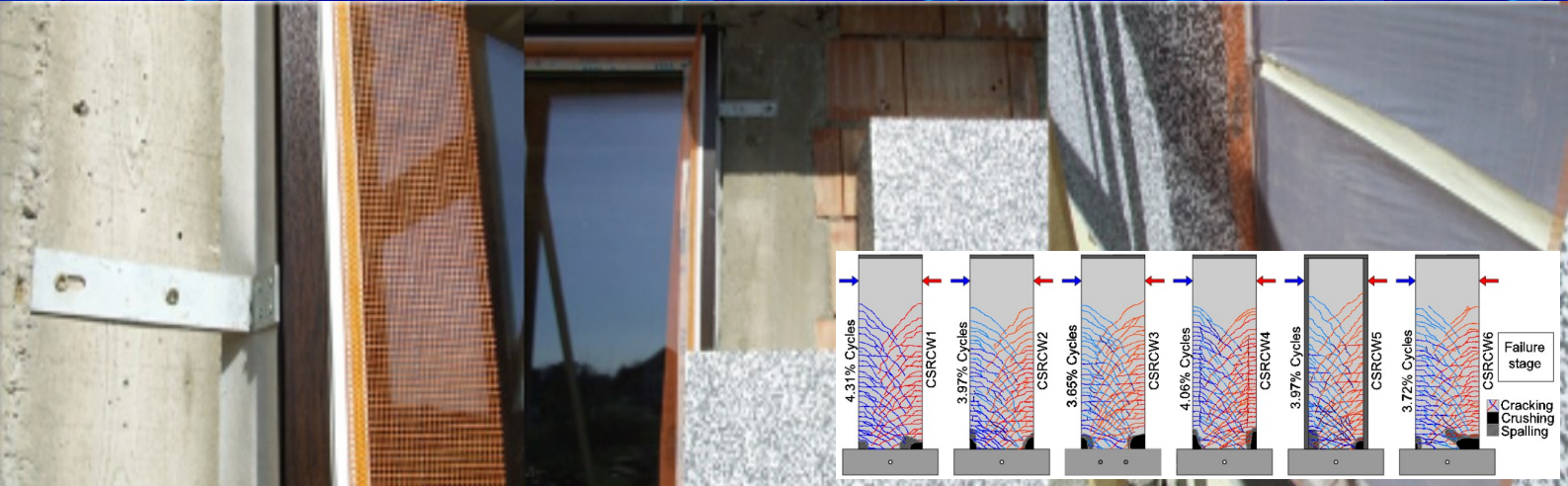


17 de Junho | 14h30 – 16h30  
Faculdade de Ciências e Tecnologia  
Universidade Nova de Lisboa  
Ed. IX, sala 4.17

# palestras

## de ENGENHARIA CIVIL na NOVA



**Shear Walls with Steel Encased Profiles**  
Alternative solution for buildings placed in seismic areas

**Nearly Zero Energy Building and Passive Houses**  
Sustainable solutions for residential houses

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The composite steel-concrete structural shear wall with steel encased profiles is a structural solution to enhance the horizontal strength for buildings placed in seismic areas. The benefits of this structural system, relative to more common systems, include the performance characteristics when subjected to service or ultimate loads. The experimental results of recent research made on six steel-concrete composite elements (scale 1:3), tested in laboratory under cyclic lateral loads are presented.

A theoretical and experimental program was developed at the “Politehnica University of Timisoara”, aiming to demonstrate that the passive houses and nearly zero energy buildings could represent an alternative solution for energy-efficient buildings in temperate climate. The presentation refers to a case study of the development of sustainable solutions among residential buildings in Romania, applied to the local climate conditions, materials and construction techniques.

