

# Structural integrity under extreme loads

## Topic: Vulnerability

**TITLE:** Development of a methodological approach to describe the vulnerability of platforms subjected to complex threat mechanisms.

### RESEARCH BACKGROUND:

Vulnerability assessments are paramount to evaluate the response of structures to threats. Such assessments need to be performed by means of fast running engineering tools employing statistical methods to process the results of experimental and or numerical tests.

### RESEARCH ACTIVITIES:

1. Bibliographic research on state-of-the-art methods to perform vulnerability assessments.
2. Development of statistics-based analytical algorithms to model the effect of complex threat mechanisms on platforms.
3. Implementation of the developments into an in-house vulnerability software and testing on realistic case studies.

**METHODOLOGY:** Analytical

**DURATION:** 6-9 months

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