

Università degli Studi di Pavia

Dipartimento di Ingegneria Civile e Architettura

Computational Fatigue Design of Structures

Fatigue design has been a continuous drive of the engineering community in the last century. The presentation will discuss the main concepts and methods actually used for the computational design of fracture. Our multiscale approach is based on a series of concepts like shakedown and dissipated energy as well (i) fatigue and plasticity observation at the grain scale for metallic materials (ii) on finite element computations the scale of the structure.

The discussion will be illustrated with examples from the lifetime design of engineering structures and analysis of historical accidents.



Contrainte de von Mises

Déformations plastiques





Energie dissipée

Prof. Andrei Constantinescu Lab de Mécanique des Solids, Ecole Polytechnique, France November 19, 09:30am (sharp) Seminar Room, sez. Idraulica Via Ferrata, 3 – Pavia