

# Università degli Studi di Pavia

Dipartimento di Meccanica Strutturale

In collaborazione con

**Centro di Simulazione Numerica Avanzata – CeSNA  
Istituto Universitario di Studi Superiori**

## **A Numerical Model of Atherosclerotic Lesions in Human Arteries**

We present a three-dimensional finite element model of stenotic human arteries, to investigate the influence of the geometry and tissue properties on the stress distribution and to simulate the evolution of the plaque rupture. Plaque rupture manifests at the locations where the stress induced by mechanical and hemodynamic forces exceeds the strength of the material. Plaque rupture can be a spontaneous process (pulse-pressure) or can be caused by an external mechanical action (balloon angioplasty).

*Dr. Anna Ferrara  
CCOSMM – Dipartimento di Ingegneria Strutturale  
Politecnico di Milano*

*Lunedì 19 Ottobre, Aula MS1  
Seminar tentative schedule: 15.00 – 16.00  
Dipartimento di Meccanica Strutturale  
Via Ferrata, 1 – Pavia*

**Anna Ferrara has a post-doc position at the Structural Mechanics Department of the University of Pavia**