

Title:

MOR techniques

People:

Dr. Chady Ghnatios

Collaborators:

Dr. Francisco Chinesta – ENSAM - Paristech

Grant:

No grant

Short Description:

Despite the recent progress in computational power, many physical problems remain intractable. When it comes to high dimensionality problems, the number of degrees of freedom increases drastically, even while using a coarse mesh in each dimension/space. This phenomenon is known as the combinatory explosion or the curse of dimensionality. Thus, the industrial applications need of faster and reliable simulations, at unaffordable computational cost, has lead to the creation of new set of solvers known as the model order reduction techniques, currently known as MOR. In fact, MOR techniques tend to circumvent the curse of dimensionality by using a separated representation of the physical domain. For example, a 3D solution is represented by a sum of products of 1D vectors, or $2D \times 1D$ vectors.

