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Título de la Charla:

*An introduction to isogeometric analysis
with a focus on approximation estimates*

Fecha y Hora:

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Lugar:

Sala ABP, Facultad de Ciencias, Universidad del Bío-Bío.

Resumen

In common engineering practice, the bodies/domains of interest are often described using CAD, which means using Non Uniform Rational B-Splines (NURBS) to define the problem geometry instead of piecewise polynomials. Isogeometric analysis is a new methodology for solving applied problems in the realms of PDE's. The idea is based on using NURBS instead of piecewise polynomials for the discretization of the problem, and on an isoparametric mapping which exactly describes the CAD computational domain. Isogeometric analysis had a huge growth and success in the engineering community since its first appearance in a paper dated 2005.

In the present talk, we first make an introduction to NURBS functions and on the method's idea. Afterwards, in the second part of the talk, we address issues related to the approximation properties of the functions used in Isogeometric analysis.