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## SEMINARIO DE ANÁLISIS NUMÉRICO Y MODELACIÓN MATEMÁTICA

GIMNAP-Departamento de Matemática, UBB  
Centro de Investigación en Ingeniería Matemática (CI<sup>2</sup>MA), UDEC

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*Expositor:*

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*Título de la Charla:*

***Observability inequality for the finite-difference  
semi-discretization of the 1-D Timoshenko system***

**Fecha y Hora:**

**Martes 04 de Noviembre de 2014, 15:30 Horas.**

**Lugar:**

**Sala Seminario, Facultad de Ciencias**

**Universidad del Bío-Bío.**

### **Resumen**

In this talk one discusses the uniform observability of a semi-discrete system in finite difference applied to 1-d Timoshenko equations. We established an observability inequality at continuous level and we prove that there exists a lack of numerical observability in semi-discrete level of the finite difference. In positive counterpart, we prove that there exists a uniform observability in a subspace of solutions generated by the low frequencies. The method of proof relies in multiplicative techniques.

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