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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:*

**David Zorío**

*Departament de Matemàtica Aplicada, Facultat de Matemàtiques, Universitat de València, España*

*Título de la Charla:*

***Efficient WENO methods***

**Fecha y Hora:**

**Martes 12 de Junio de 2018, 15:30 Horas.**

**Lugar:**

**Auditorio Alamiro Robledo, FCFM**

**Universidad de Concepción.**

## **Resumen**

Weighted Essentially Non-Oscillatory (WENO) methods became popular (and are still widely used) in the context of finite-difference schemes for solving hyperbolic conservation laws due to their non-oscillatory properties near discontinuities in numerical approximations of weak solutions, while attaining high-order accuracy when the data is smooth. The topic of the talk is focused on an overview of these methods and their evolution over the past years. Ultimately, a novel family of WENO methods, cheaper in terms of computational cost, will be presented, together with several numerical experiments showing the overperformance in terms of the ratio CPU cost versus error.