



SEMINARIO SANMOMA-GRADUADOS

Centro de Investigación en Ingeniería Matemática, CI²MA, UDEC

Expositor:

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Título de la charla:

HIGH ORDER FINITE DIFFERENCE WENO
SCHEME MODELLING CROWD MOVEMENTS

Lugar:

HALL DEL CI²MA

Fecha:

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Resumen

We present a high order version of the numerical scheme proposed in [1, 2] for a class of conservation laws with non-local flux modelling crowd dynamics. The resulting dynamics captures various well-known patterns of crowd movements, such as the clogging of exits and the spontaneous formation of queues. Particular care is given to how non-local interactions are influenced by walls, obstacles and exits.

REFERENCES

- [1] A. Aggarwal, R. M. Colombo, and P. Goatin, *Nonlocal systems of conservation laws in several space dimensions.*, SIAM J. Numer. Anal. 53 (2015), no. 2, 963–983.
- [2] R. M. Colombo, and E. Rossi, *Modelling crowd movements in domains with boundaries.*, IMA J. Appl. Math. in press (2019).

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