

# AN INTERFACE-FREE MULTI-SCALE MULTI-ORDER MODEL FOR TRAFFIC FLOW

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**ABSTRACT.** In this talk we present a new kind of model for traffic flow which couples a first-order macroscopic approach with a second-order microscopic approach, avoiding any interface or boundary conditions between them. The Euler-Godunov scheme associated to the model is conservative and it is able to reproduce typical traffic phenomena like stop & go waves.

**Keywords:** Traffic flow models, multi-scale models, LWR model, ARZ model, follow-the-leader models, fundamental diagram, stop & go waves.

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