

**Review of "A general real-time formulation for multi-rate mass transfer problems", by O. Silva, J. Carrera, S. Kumar, M. Dentz, A. Alcolea, and M. Willmann submitted for possible publication in *Hydrology and Earth System Sciences***

Multicomponent transport is of great importance in *Hydrology*, and therefore the manuscript addresses to a very important topic. However, I do not think that such a type of paper would strictly meet the standards of the *Journal HESS*. Indeed, by looking at a few (most recently published) papers I see that each contribution is a balance between theory and real data. Given this, I do not see in the case of the submitted paper such a balance.

To my opinion the paper could be much more suitable for a more oriented numerical/theoretical Journal such as *Computational Geosciences*. For these reasons I suggest the Authors to retire the manuscript, and submit it to a different Journal. Last, by reading the manuscript I saw many typos, and therefore I strongly advise the authors to make a very solid editing before resubmitting the manuscript.