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10 years of chaotic mixing in porous media

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In 2013, Lester et al. questioned for the first time the existence of Lagrangian chaos at pore-scale in 3D steady laminar flows through porous media. Ten years later, the ubiquity of chaotic advection has been largely demonstrated experimentally and numerically, in many porous architectures. In this talk, we review some of the main findings associated to chaotic mixing, and outline the consequences for conservative and reactive transport. We present a possible theoretical framework that allows to relax the classical macrodispersive vision of mixing and provide quantitative prediction of transport processes in porous media.

Participation

In-Person

References

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Energy Transition Focused Abstracts

Primary authors: HEYMAN, Joris (CNRS); LE BORGNE, Tanguy (University of Rennes); Prof. LESTER, Daniel (RMIT)

Presenter: HEYMAN, Joris (CNRS)

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