

Special Issue

Tracer and Timescale Methods for Passive and Reactive Transport in Fluid Flows

Message from the Guest Editors

Tracer methods (the analysis of the spreading of tracer patches, as well as clouds of particles) and their associated timescale diagnoses (e.g., age or residence/exposure time) are powerful tools that help to assess and understand the passive and complex reactive transport processes taking place in geophysical (Earth and planetary) flows, environmental fluids, engineering applications, and laboratory experiments. The aforementioned diagnoses apply to natural or artificial tracers, be they numerical or derived from measurements. For their integrative properties, tracer and timescale methods are holistic, in that they include all of the available pieces of information about the underlying transport processes taking place in the fluid flows. This Special Issue aims to present the recent advances in tracer and timescale methods. Numerical methods using Eulerian or Lagrangian approaches will be considered, as well as techniques based on remotely sensed or in situ data. We will seek a balance between contributions from natural sciences and engineering, as well as between numerical, observational, and theoretical approaches.

Guest Editors

Prof. Dr. Eric Deleersnijder
Dr. Inga Monika Koszalka
Dr. Lisa V. Lucas

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Water
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
water@mdpi.com

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST

Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique (CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane, Toulouse, France

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