Karlsruher Institut für Technologie

Institut für Wasser und Umwelt

Fachbereich Wasserbau und Wasserwirtschaft

Prof. Dr. Mário Franca

Lecture

Transport Processes in Rivers

(LV-Nr. 6222807)

Lecturer:	Dr. Davide Vanzo		
Time:	Monday, 11:30 to 13:00		
Place:	Building: 10.83 (L+E)	Room:	001/ SR IWU (L+E)
Is offered in:	Summer Term		

Content:

In this course, we discuss the main physical principles of transport processes in rivers. We focus on large/macroscopic particles like natural sediment, wood, plastics, as well as on scalar transport (i.e. heat and gas). We identify sources and sinks, transport mechanisms, and monitoring techniques for such processes. In the course, **students will conduct laboratory experiments** on transport of plastic particles (Fig 1 left).

By the end of the course, students will be able to describe the main physical mechanisms and ecological implications of different transported particles in rivers, identify relevant sources and sinks, and evaluate methods for quantifying transport processes.

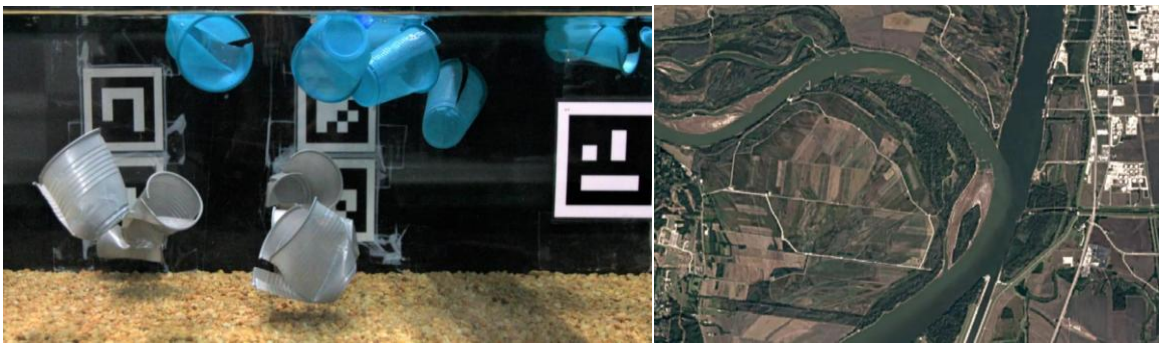

Fig. 1: Left: plastic transport experiment (from https://doi.org/10.1016/j.watres.2022.119078) Right: mixing processes at Missouri-Mississippi confluence (from Google Earth)