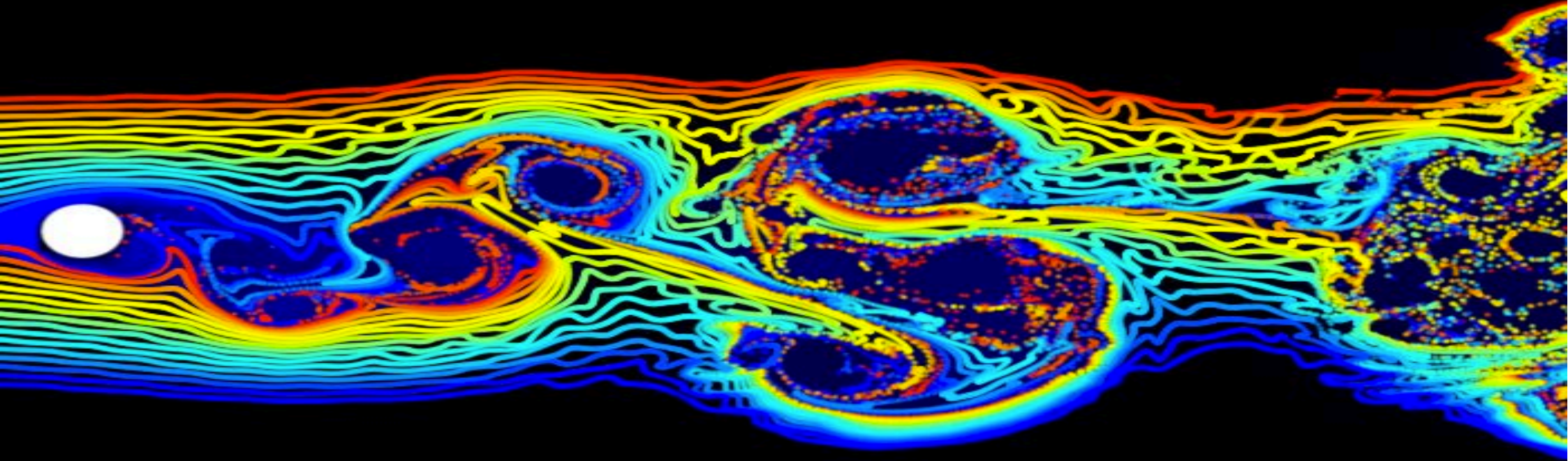


Conceptual Understanding in Engineering Education

Embedded MOOCs in physical transport phenomena



The project

The course Physical Transport Phenomena, has been changed two years ago to a flipped classroom model, which makes use of embedded MOOC materials. Despite the high quality level MOOC, results of students on campus have gone down. The teachers feel students have difficulty with conceptual understanding of the phenomena discussed in the course.

Objective & approach

4TU.CEE studies what happened to the conceptual understanding of the students

within this course and determines on the basis of evidenced based research via a mixed methods approach which interventions can be realised in the on-campus education and aligned with the MOOC.

Outcomes

The outcome is a set of recommendations to address concepts according to a certain 'working format' and potential interventions to realise alignment with Embedded MOOCs and enhancing the conceptual understanding. Ultimately, we aim at improved retention and pass rates.

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