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## A New Approach to Teach to Beginners How to Analyze Tracing Results by a Rapid Visual Method

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When people learn how to analyze the results of Residence Time Distribution (RTD) experiments, it is very difficult to them to immediately be able to have a pertinent idea of the kind of mixing only by looking at the RTD curve; the difficulty remaining in the understanding of the effects of flows in the system (in parallel and/or series, recirculation...) on the global RTD curve. Every people need a long experience to be able to do that (several months and even years). However this period can be significantly reduced. To do this, we developed a new visual method to start to learn RTD complementing the classical method (theory about the residence time, transfer function, simple systems like CSTR or Plug flow reactor). We use the software DTS®. The students use it in an unusual way, to do simulations of reactors associations from the simplest to the very complex. We tested the method along a several years period with students preparing a master of engineering degree, and we progressively improved the different reactors configurations, so that the teaching efficiency was the best. Now, in only one or two hours, the students testing a dozen of selected configurations can gain several months of experience.

### Country/Organization invited to participate

France

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