



## Numerical Analyses of Flow Mixing in T shape Passive Micro Mixer

### Objective

❑ To study the effects of geometric and flow parameters variation on mixing of low Reynolds number fluids in passive micro mixers.

### Methodology

❑ Micro fluidic devices have revolutionised the field of modern science especially biomedical and biochemical over the last few years in areas like DNA assays, cell storing, high throughput screening, etc

❑ CFD based numerical analyses were carried out to analyse the mixing of two fluids at low Reynolds number in a passive micro mixer (T channel)

❑ Mixing methods for macro scales are not suitable for micro scales, because of absence of turbulence due to low Reynolds number and small dimensions.

❑ Analyses were carried out at different operating and geometric conditions to understand the effect of their variation on mixing at low Reynolds number in micro channels.

### Outcome

❑ This study provided a detailed insight of mixing phenomena of fluids at micro level. Results show a considerable influence of operating and geometric parameters variation on the mixing of fluid in passive micro mixers.

