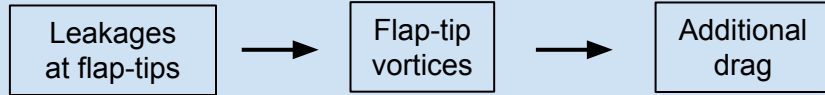


# Aerodynamic Investigations of a Low-Drag Rectangular Wing with Discontinuous and Seamless Smooth Camber-Morphed Flaps

Ravi Kumar\*, Santanu Ghosh, Joel George M

[Click to view this paper](#)

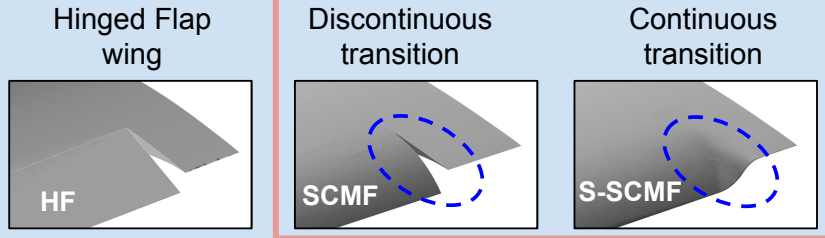
## Motivation



## Objective

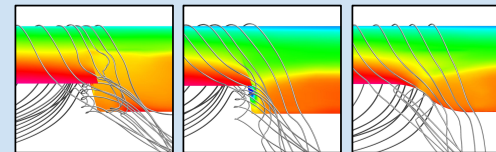
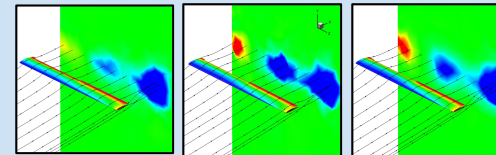
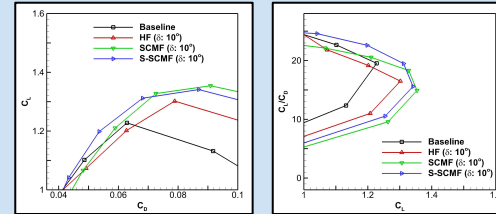
Qualitative & quantitative aerodynamic comparative assessment of spanwise **Seamless Smooth Camber-Morphed** flap (S-SCMF)

## Methodology



Linear HF, SCMF & S-SCMF are designed based on [Jawahar et al.](#), [Daynes and Weaver](#), and [Woods et al.](#) respectively.

## Results



- Improvement in A/D coefficients:
  1. Reduced drag generation ( $C_D$ )
  2. Better efficiency ( $C_L/C_D$ ) potential for typical  $C_L$  range (1.1-1.3) take-off and landing

- S-SCMF generates weaker flap-tip vortices compared to SCMF, confirmed by lesser swirling motion at flap-tip(s)