## WENYUAN LIAO, University of Calgary

Robust HOC schemes for Burgers' equation with high Reynolds number

Two fourth-order compact finite difference methods are proposed to solve the one-dimensional Burgers' equation with high Reynolds number. The methods are based on the Hopf–Cole transformation, Richardson's extrapolation and multilevel grids. Numerical experiments are included to demonstrate the efficiency, accuracy, robustness and unconditional stability of the methods.