Integral form of the skin friction coefficient suitable for experimental data[1] CHRISTOPHER WHITE, FARAZ MEHDI, University of New Hampshire — An integral method to evaluate skin friction coefficient for turbulent boundary layer flow is presented. The method replaces streamwise gradients with total stress gradients in the wall-normal direction and is therefore useful in cases when velocity profiles at multiple locations are not available or feasible. It is also shown to be especially useful for experimental data with typical noisy shear stress profiles such as rough-wall boundary layer flows. This is significant, particularly in view of the limited ways by which skin friction can be determined for rough-wall flows.

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