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List of Symbols and Abbreviations

List of symbols

Strouhal number	St
Drag coefficient ,	C_D
RMS lift coefficient	C_L
multiple channel roughness coefficient Manning's	n
Chezy's	C
Darcy-Weisbatch coefficient	f
Scour depth	D_{sc}
Equilibrium Scour depth	D_{se}
Pier diameter	D
Discharge	Q
Depth of flow	Y
Channel width	B
Froude no.	F_r
Average velocity	V_{av}
Approach velocity	V_{app}
Per unit width of discharge	Q/b
Collar width	W

Collar elevation relative to the channel bed	y_c
% Finer	N
Corresponds to 50% of the sample finer in weight on the grain size distribution curve.	D_{50}
Median particle size	d_{50}
Coefficient of uniformity	C_u
Coefficient of curvature	C_c

List of abbreviation

Computational Fluid Dynamics	CFD
Acoustic-Doppler Velocity-Profiler	ADVP
Shallow Water Equations	SWEs
Mean/Root-Mean-Square	RMS
Root Mean Squared Error	RMSE
Surface Gradient Upwind Method	SGUM
Generalised Likelihood Uncertainty Estimation	GLUE
Hydrologic Engineering Center's River Analysis System	HEC-RAS
Large-Eddy Simulation	LES
Shiono and Knight Method	SKM

Horseshoe Vortex	HV
Partially Averaged Navier–Stokes approach	PANS
Reynolds Averaged Navier–Stokes	RANS
Horse Power	HP