# Definition of Fiber, Bundle and Yarn Strength
# And Studying Relationship Between them,
# and Estimation of yarn Density [*]

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**ABSTRACT**

research The aim of this is to find an explicit relationship between the strength of fibers, bundle and yarns. The *CV* values of the strength are given as well. This provides a relatively simple method for estimation of staple yarn strength, while avoiding some difficulties of an empirical method. The effects of important factors such as fiber length and thickness, twist and count of yarn are considered. The results are verified by published data in Mechanical Engineering of Textile Industries and Their Technologies, Faculty of Mechanical and Electrical Engineering, Damascus University. and also in Al-Kumasiah company in Damascus city.

This research provides suggestions if we apply it it will help in estimating directly the yarn strength without manufacturing and suitable testing of the yarn.

**key words :** Strength – Fiber – Bundle – Yarn – Coefficient Variation – Length – Twist – Liner Density (Count) .

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