## ABSTRACT

Investigation was carried out on the effect of some prominent variables on surface roughness and dimensional stability in the para-wood turning process using ceramic cutting tools. Turning experiment was performed on furniture grade para-wood at different cutting condition combinations covering 3 levels of cutting speed (256, 363 and 534 m/min), 3 levels of feed rate (0.6, 0.8 and 1.0 mm/rev). Depth of cut was fixed at 1.0 mm. Surface roughness was found to significantly increase as feed rate increased.

Cutting speed and feed rate were investigated in more details for the optimum values that gave the best surface roughness ($R_a$) for furniture parts. The optimum recommended cutting conditions for turning para-wood were cutting speed of 534 m/min, feed rate of 0.6 mm/rev.