

## OPTIMIZATION OF MACHINING PARAMETERS IN DRILLING OF Al6061/CNT USING SINE COSINE ALGORITHM

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### ABSTRACT

Aluminium Metal Matrix Nano Composites (AMMNCs) are very promising materials featuring for physical and mechanical characteristics. These materials when compared to Metal Matrix Composites (MMCs) have lot of scope for light weight and good specific strength based applications. In the present work, Al 6061 is reinforced with CNT (0.3%, 0.6% & 0.9% wt) and AMMNCs were fabricated using Ultra-sonic stir casting process method. The fabricated AMMNCs are machined and the output responses were recorded. The optimum levels of process parameters are identified by using the optimization technique Sine Cosine Algorithm (SCA).

**Keywords:** AMMNCs, Al6061, Carbon Nano Tubes, Drilling, SCA optimization

