

## Fractional double Laplace transform and its properties

### ABSTRACT

In this article, we introduce definition of a fractional double Laplace transform of order  $\alpha$ ,  $0 < \alpha \leq 1$ , for fractional differentiable functions. Some main properties and inversion theorem of fractional double Laplace transform are established. Further, the connection between fractional double Laplace and fractional double Sumudu transforms are presented.

**Keyword:** Fractional double Laplace transform; Fractional differentiable function