

## OPERATIONAL CALCULUS OF THE EXTENDED SUMUDU TRANSFORM

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### Abstract

A space  $P$  is constructed algebraically by using the elementary calculus and theory of the Sumudu transform. The Sumudu transform is defined on the elements of  $P$ . An operational calculus is developed. The Sumudu transform properties are proved. Inversion formula of the extended Sumudu transform is derived. Some examples are illustrated.

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Key Words : *Sumudu transform, Laplace transform, Operational calculus.*

AMS Subject Classification : 44A99, 44-XX, 44A10.

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