

**NEW GENERALIZED SUBCLASSES OF BI-UNIVALENT
FUNCTIONS ASSOCIATED WITH FRACTIONAL
DIFFERENTIAL OPERATOR**

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Abstract: Motivated by work of Srivastava-Owa, we define new generalized subclasses of bi-univalent functions defined in the open unit disk which are associated with fractional differential operator. Furthermore, we have obtained estimates of the coefficients $|a_2|$ and $|a_3|$ for the functions belonging to these subclasses.

Keywords and Phrases: Univalent function, Srivastava-Owa fractional operators, bi-univalent function, coefficient estimates.

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1. Introduction

The study of fractional operators (integral and differential) plays a vital and essential role in mathematical analysis. The fractional calculus operators and their various other generalizations have fruitfully been applied in obtaining various things like coefficients estimates, characterization properties and distortion inequalities for various subclasses of analytic and univalent functions. Srivastava and Owa [12] gave definitions for fractional operators (derivative and integral) in the complex Z -plane \mathbb{C} as follows.