1135-30-490 **Santosh B Joshi*** (santosh.joshi@walchandsangli.ac.in), Department Of Mathematics, Walchand College Of Engineering, Sangli, Vishrambag, Sangli, India. *Recent Trends in Bi-univalent functions.*

Let A denote the class of functions of the form :

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n \tag{1}$$

which are analytic in the unit disc $U = \{z \in \mathbb{C} : |z| < 1\}$. Let S denote the subclass of A, which is analytic univalent and normalized in U and is of the form given by (1)

A function $f \in A$ is said to be bi-univalent in U if both $f(z)$ and $f^{-1}(z)$ are univalent in U. Let Σ denote the class of bi-univalent functions in U given by (1).

In 1967, Lewin first investigated the class Σ of bi-univalent functions and showed that $|a_2| < 1.51$. Subsequently, Brannan and Clunie in 1967 conjectured that $|a_2| \leq \sqrt{2}$. In 1969 Netanyahu , on the other hand showed that $\max_{f \in \Sigma} |a_2| = \frac{4}{3}$.

The coefficient estimate problem for each of the Taylor-Maclaurin coefficients $|a_n|$ $(n \geq 3; n \in \mathbb{N})$ for each $f \in \Sigma$ given by (1) is still an open problem. We will present survey of aforemensioned work during lecture.

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