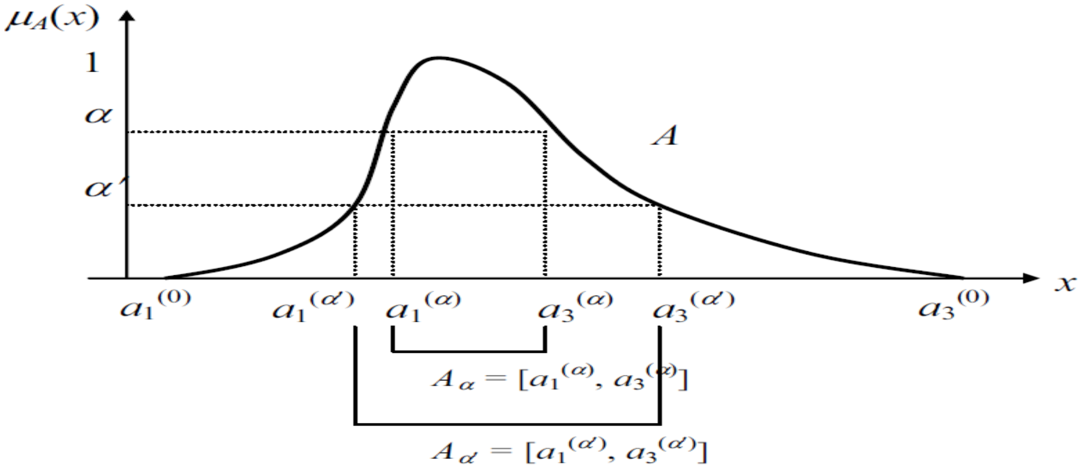

Interval fuzzy number $(\alpha' < \alpha)$, $(A_\alpha \subset A_{\alpha'})\alpha - cut$

Operation of $\alpha - cut$ interval

Operation of $\alpha - cut$ interval fuzzy number $A = [a_1, a_3]$

$A_\alpha = [a_1^{(\alpha)}, a_3^{(\alpha)}]$, $\forall\, \alpha \in [0,1]$, a_1 , a_3, $a_1^{(\alpha)}$, $a_3^{(\alpha)} \in R$

So A_α is a known interval:

- **Addition**

$$[a_1^{(\alpha)}, a_3^{(\alpha)}](+)\, [b_1^{(\alpha)}, b_3^{(\alpha)}] = [a_1^{(\alpha)} + b_1^{(\alpha)}, a_3^{(\alpha)} + b_3^{(\alpha)}]$$

- **Subtraction**

$$[a_1^{(\alpha)}, a_3^{(\alpha)}](-)\, [b_1^{(\alpha)}, b_3^{(\alpha)}] = [a_1^{(\alpha)} - b_3^{(\alpha)}, a_3^{(\alpha)} - b_1^{(\alpha)}]$$

- **Multiplication**

$$[a_1^{(\alpha)}, a_3^{(\alpha)}](.)\, [b_1^{(\alpha)}, b_3^{(\alpha)}] = [a_1^{(\alpha)} \cdot b_1^{(\alpha)} \wedge a_1^{(\alpha)} \cdot b_3^{(\alpha)} \wedge a_3^{(\alpha)} \cdot b_1^{(\alpha)} \wedge a_3^{(\alpha)} \cdot b_3^{(\alpha)},\ a_1^{(\alpha)} \cdot b_1^{(\alpha)} \vee a_1^{(\alpha)} \cdot b_3^{(\alpha)} \vee a_3^{(\alpha)} \cdot b_1^{(\alpha)} \vee a_3^{(\alpha)} \cdot b_3^{(\alpha)}]$$