

$$\begin{array}{l} v \\ \tilde{A} \\ E \\ [0, \alpha] \subseteq \\ R \\ \mu_{\tilde{A}}(x) \end{array}$$

$$\nu_L(\tilde{A}) = \frac{1}{|E|} \sum_{x \in E} \min(\mu_{\tilde{A}}(x), 1 - \mu_{\tilde{A}}(x))$$

(1)

$$\nu_L(\tilde{A}) = \frac{1}{measure(E)} \int_E \min(\mu_{\tilde{A}}(x), 1 - \mu_{\tilde{A}}(x)) \, dx$$

(2)

$$\begin{array}{l} \mu_{\tilde{A}}(x) = \\ x^2 \alpha^2 \\ x \in \\ [0, \alpha] \\ E = \\ [0, \alpha] \\ E \\ [0, \alpha] \end{array}$$

$$\nu_L(\tilde{A}) = 1\alpha \int_0^\alpha \min(x^2 \alpha^2, 1 - x^2 \alpha^2) \, dx$$

(3)

$$\begin{array}{l} x^2 \alpha^2 \\ 0 \\ 1 \\ 0 \\ \alpha \\ \min\left(\frac{x^2}{\alpha^2}, 1 - \frac{x^2}{\alpha^2}\right) \\ x = \\ \alpha \sqrt{2} \\ x^2 \alpha^2 = \\ 1 - \\ x^2 \alpha^2 \\ 0 \\ \alpha \sqrt{2} : \\ \nu_L(\tilde{A}) = \\ \frac{2}{\alpha} \int_0^{\frac{\alpha}{\sqrt{2}}} \frac{x^2}{\alpha^2} \, dx \\ \nu_L(\tilde{A}) = \\ \frac{2}{\alpha^3} \int_0^{\frac{\alpha}{\sqrt{2}}} x^2 \, dx \\ \nu_L(\tilde{A}) = \\ \frac{2}{\alpha^3} \left[\frac{x^3}{3} \right]_0^{\frac{\alpha}{\sqrt{2}}} \\ \nu_L(\tilde{A}) = \\ \frac{2}{\alpha^3} \cdot \\ \frac{\left(\frac{\alpha}{\sqrt{2}}\right)^3}{3} \\ \nu_L(\tilde{A}) = \\ \frac{2}{\alpha^3} \cdot \\ \frac{\alpha^3}{3\sqrt{8}} \\ \nu_L(\tilde{A}) = \\ \frac{\sqrt{2}}{6} \\ \tilde{A} \\ [0, \alpha] \end{array}$$

$$\begin{array}{l} \mu_{\tilde{A}}(x) = \{ \, 4x^2 \alpha^2 \, if \, 0 \leq x \leq \alpha/2, \\ \qquad \qquad \alpha)^2 \alpha^2 \, if \, \alpha/2 < \\ x \leq \\ \alpha \end{array}$$

$$v(\tilde{A})$$

$$\nu(\tilde{A}) = 1\alpha \left(\int_0^{\alpha/2} |4x^2 \alpha^2 - 0.5| \, dx + \int_{\alpha/2}^\alpha |4(x - \alpha)^2 \alpha^2 - 0.5| \, dx \right)$$

(5)

$$\begin{array}{l} |4x^2 \alpha^2 - 0.5| \\ |4(x - \alpha)^2 \alpha^2 - 0.5| \\ 0.5 \\ x \\ 4x^2 \alpha^2 - \\ 0.5 \end{array}$$