v
A
$E =$
$[0,\alpha] \subseteq$
R
$\mu_{\tilde{A}}(x)$

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

(1)

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

(2)

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

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

(3)

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

$$\mu_{\tilde{A}}(x) = \{\ 4x^2\alpha^2 if 0 \le x \le \alpha 2,$$

$$\alpha)^2\alpha^2 if \alpha 2 <$$

$x \le$
$\alpha.$
(4)

$v(\tilde{A})$

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

(5)

$\left|4x^2\alpha^2 - 0.5\right|$
$\left|4(x-\alpha)^2\alpha^2 - 0.5\right|$
0.5
x
$4x^2\alpha^2-$
0.5