

Ferrifuzz Cheat Sheet

03 · Membership Functions & Operators.
ff.mf · ff.Operator · ff.Hedge

01

Shapes · ff.mf

triangle(a, b, c) # a ≤ b ≤ c
trapezoid(a, b, c, d) # plateau b..c
gaussian(center, sigma) · bell(center, width, slope)
sigmoid(center, slope) · singleton(x)

02

Shoulders & Methods

left: triangle(a, a, c) · right: triangle(a, c, c)
hot = ff.mf.triangle(20, 40, 40)
hot.membership(30.0) # 0.5 · also takes arrays
hot.center() · hot.shape() · hot.key_points()

03

Interval Type-2

ff.mf.it2(upper, lower, lower_height=1.0)
blurry.membership(3.0) # (lower, upper)
Upper first, else FuzzyError ("are they swapped?")
Any IT2 term → system auto-switches to IT2

04

AND / OR Operators

and_method: min · product · lukasiewicz ·
  drastic · einstein · hamacher
or_method: max · probor · lukasiewicz ·
  drastic · einstein · hamacher

05

Complements & Hedges

ff.Operator.complement(kind=...):
  standard 1−μ · sugeno (λ > −1) · yager (w > 0)
Hedges (μ^p): very 2 · extremely 3 · plus 1.25
  minus 0.75 · somewhat / more_or_less / slightly 0.5

Next → 04 FuzzySystem