Композиция нечетких отношений

$$\mathbb{M} = \left\{ \; \blacksquare \; , \; \blacksquare \; \right\}$$

$$\mathbb{C} = \left\{ \; \blacksquare \; , \; \blacksquare \; , \; \blacksquare \; , \; \blacksquare \; \right\}$$

$$\mathbb{H} = \left\{ \; \blacksquare \; , \; \blacksquare \; , \; \blacksquare \; \right\}$$

$$\rho \, \widetilde{\subset} \, \mathbb{C} \times \mathbb{M}$$

ρ	![]	![]
![]	0.8	0.8
![]	0.8	0.2
![]	0.2	0.8
![]	0.2	0.2

$$\sigma \, \widetilde{\subset} \, \mathbb{M} \times \mathbb{H}$$

σ	![]	![]	![]
![]	0.5	0.7	0.3
![]	0.5	0.3	0.7

$$\tau = \rho \circ \sigma, \; \tau \, \widetilde{\subset} \, \mathbb{C} \times \mathbb{H}$$

τ	![]	![]	![]
![]			
![]			
![]			
![]			

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

$$\tau = \rho \circ \sigma$$

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} [\mu_\rho(c, m)\mu_\sigma(m, h)]$$

$$\mu_\tau \left(\ \text{} \ , \ \text{} \ \right) =$$
$$\max [0.8 \cdot 0.7, 0.2 \cdot 0.3] = 0.56$$

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

$\mu_\tau \left(\text{} , \text{} \right) =$
$\max \left[0.8 \cdot 0.7, 0.2 \cdot 0.3 \right] = 0.56$

$\mu_\tau \left(\text{} , \text{} \right) =$
$\max \left[0.8 \cdot 0.3, 0.2 \cdot 0.7 \right] = 0.24$

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} [\mu_\rho(c, m)\mu_\sigma(m, h)]$$

τ			

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			
	0.4		

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			
	0.4	0.56	

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			
	0.4	0.56	0.56

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m)\mu_\sigma(m, h) \right]$$

τ			
	0.4	0.56	0.56
	0.4	0.58	0.24

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			
	0.4	0.56	0.56
	0.4	0.58	0.24
	0.4	0.24	0.58

Композиция нечетких отношений

ρ		
	0.8	0.8
	0.8	0.2
	0.2	0.8
	0.2	0.2

σ			
	0.5	0.7	0.3
	0.5	0.3	0.7

$$\tau = \rho \circ \sigma$$

$$\mu_\tau(c, h) = \max_{m \in \mathbb{M}} \left[\mu_\rho(c, m) \mu_\sigma(m, h) \right]$$

τ			
	0.4	0.56	0.56
	0.4	0.58	0.24
	0.4	0.24	0.58
	0.1	0.14	0.14