library(fcm)

library (reshape2)

library (ggplot2)

act.vec <- data.frame(.5,.7,0,0)

colnames(act.vec) <- c("C1","C2","C3","C4")

C1=c (0,0.75,0.78,0.92)

C2=c (0,0,0.79,0.89)

C3=c (0,0,0,0.90)

C4=c (0,0,0,0)

w.mat <- matrix (c (C1,C2,C3,C4), nrow = 4, ncol=4, byrow = TRUE)

colnames(w.mat) <- c("C1","C2","C3","C4")

w.mat <- as.data.frame(w.mat)

w.mat

output <- fcm.infer(act.vec,w.mat,50,"k","s")

iteration <- as.numeric(rownames(output$values))

df <- data.frame(iteration,output$values)

df2 <- melt(df,id="iteration")

ggplot(data=df2, aes(x=iteration,y=value,group=variable,colour=variable))+theme\_bw()+geom\_line(size=0.7)+geom\_point(size=2)

print(df)

library(FuzzyNumbers)

A <- TriangularFuzzyNumber(-1, -0.75, -0.50)

B <- TriangularFuzzyNumber(-1, -0.75, -0.70)

plot(A, xlim=c(-1,1))

plot(B, add=TRUE, col="red", lty=1)

C <- TriangularFuzzyNumber(-0.75, -0.5, -0.25)

plot(C, add=TRUE, col="black", lty=1)

D <- TriangularFuzzyNumber(-0.5, -0.25, 0)

plot(D, add=TRUE, col="green", lty=1)

E <- TriangularFuzzyNumber(-0.25, 0, 0)

plot(E, add=TRUE, col="blue", lty=1)

F <- TriangularFuzzyNumber(0, 0.25, 0.50)

plot(F, add=TRUE, col="yellow", lty=1)

G <- TriangularFuzzyNumber(0, 0.25, 0.70)

plot(G, add=TRUE, col="brown", lty=1)

K<- TriangularFuzzyNumber(0.25, 0.75, 0.80)

plot(K, add=TRUE, col="orange", lty=1)

L<- TriangularFuzzyNumber(0.5, 0.75, 1)

plot(L, add=TRUE, col="violet", lty=1)

M<- TriangularFuzzyNumber(0.75, 1, 1)

plot(M, add=TRUE, col="gray", lty=1)

evaluate(M ,.67)

evaluate(C, c(-0.8,0,0.25))

expectedInterval(L)

library(FCMapper)

matrix = matrix(nrow=4,ncol=4)

matrix[1,] = c(0,0.75,0.78,0.92)

matrix[2,] = c(0,0,0.79,0.89)

matrix[3,] = c(0,0,0,0.90)

matrix[4,] = c(0,0,0,0)

concept.names = c("C1","C2","C3","C4")

results = nochanges.scenario(matrix,iter=25,concept.names)

graph.fcm(matrix,concept.sizes=results$Equilibrium\_value,concept.names)