# Supplemental material

## S1. Code to reproduce the examples

# Installing the package (only at first instance)  
# devtools::install\_github("OnofriAndreaPG/drcte")  
  
# Loading the package  
library(drcte)  
  
  
# Example 1  
filePath <- "https://www.casaonofri.it/\_datasets/alfalfa3.csv"  
dataset <- read.csv(filePath, header = T)  
head(dataset)  
  
mod <- drmte(nSeeds ~ timeBef + timeAf, fct = W1.3(),  
 data = dataset)  
coef(mod)  
  
# Example 2  
rm(list = ls())  
filePath <- "https://www.casaonofri.it/\_datasets/TwoFlushes.csv"  
dataset <- read.csv(filePath, header = T)  
head(dataset)  
  
mod <- drmte(nEmerg ~ timeBef + timeAf, data = dataset,  
 fct = NPMLE())  
  
plot(mod, ylim = c(0, 1), xlim = c(0, 35),  
 xlab = "Time (d)",  
 ylab = "Cumulative proportion of emerged seedlings")  
  
mod2 <- drmte(nEmerg ~ timeBef + timeAf, fct = KDE(),  
 data = dataset)  
mod3 <- drmte(nEmerg ~ timeBef + timeAf, data = dataset,  
 fct = KDE(bw = "boot"))  
mod4 <- drmte(nEmerg ~ timeBef + timeAf, data = dataset,  
 fct = loglogistic())  
  
plot(mod2, ylim = c(0, 1), xlim = c(0, 35),  
 xlab = "Time (d)", ylab = "Cumulative proportion   
 of emerged seedlings")  
points(mod3$curve[[1]][[1]](1:30) ~ c(1:30),  
 type = "l", lty = 2)  
points(as.numeric(mod4$curve[[1]](1:30)) ~ c(1:30),  
 type = "l", lty = 3)  
  
# Example 3  
rm(list = ls())  
data(verbascum)  
head(verbascum)  
modVerb <- drmte(nSeeds ~ timeBef + timeAf, curveid = Species,  
 fct = NPMLE(), data = verbascum)  
  
plot(modVerb, legendPos = c(12, 0.6), legendText = c("V. arcturus", "V. blattaria",  
 "V. creticum"),  
 ylab = "Cumulative proportion of germinated seeds",  
 xlab = "Time (d)")  
test <- compCDF(modVerb, units = verbascum$Dish)  
test  
  
tab <- predict(modVerb, newdata = c(5, 10), se.fit = T, units = verbascum$Dish)  
tab  
  
probsList <- c(0.1, 0.5)  
GR <- lapply(probsList, function(x) quantile(modVerb,  
 probs = x, restricted = F, rate = T,  
 interval = "boot", units = verbascum$Dish,  
 display = F))  
GR <- do.call(rbind, GR)  
GR  
  
# Example 4  
rm(list = ls())  
data(rape)  
head(rape, 20)  
modTE <- drmte(nSeeds ~ timeBef + timeAf + Psi,  
 data = rape, fct = HTLL())  
# modNLS <- drm(propCum ~ timeAf + Psi,  
# data = rape, fct = HTLL())  
coef(modTE)  
summary(modTE)  
summary(modTE, units = rape$Dish)  
  
# Example 5  
rm(list = ls())  
path <- "https://www.casaonofri.it/\_datasets/Lactuca.csv"  
lactuca <- read.csv(path, header = T)  
head(lactuca)  
mod <- drmte(nSeeds ~ timeBef + timeAf,  
 data = lactuca,  
 fct = lognormal())  
plot(mod)  
tab1 <- summary(mod)  
tab1  
tab2 <- summary(mod, units = lactuca$dish)  
tab2