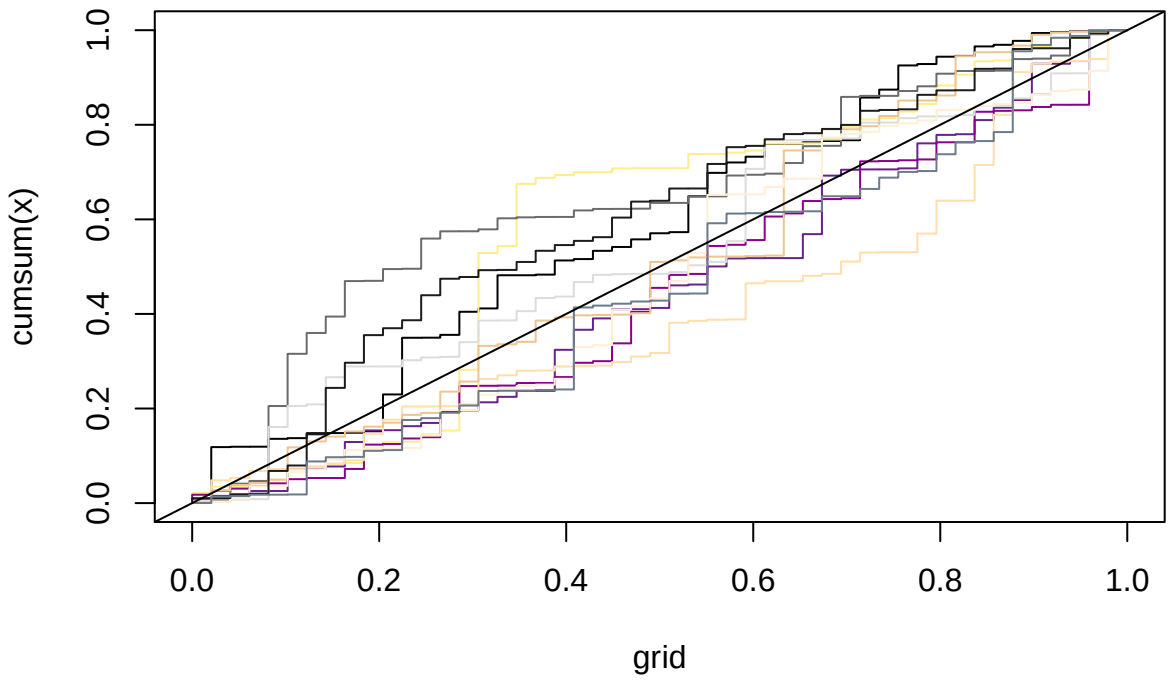
Dirichlet Processes

Simulation of CDF realizations from a DP

```
library("LearnBayes")
#Simulate from dirichlet distribution
x<-rdirichlet(1,c(1,2,3))
x
```

```
##           [,1]      [,2]      [,3]
## [1,] 0.1099398 0.5812575 0.3088027
```

```
grid<-seq(0,1,length.out=50)
diffgrid<-diff(grid)
#grid<-sort(runif(50))
alpha<-20
##Q_{0} is uniform G(x)=x
x<-rdirichlet(1,alpha*c(0,diffgrid))
plot(grid,cumsum(x),type="S")
for (j in 1:10){
x<-rdirichlet(1,alpha*c(0,diffgrid))
points(grid,cumsum(x),type="S",col=sample(colors()))
}
abline(c(0,1))
```



More examples from: https://www.ma.utexas.edu/users/pmueller/bnp/