Product of Bivariate Copulas

Pham Van Trung, Mazo Gildas

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First, we create an PBC object

```
> library(PBC)
> g <- graph.formula(X1-X2, X2-X3, X3-X4, X4-X5, simplify = FALSE)
> myPBC <- pbcGumbel(g)
```

We plot PBCs on the graph

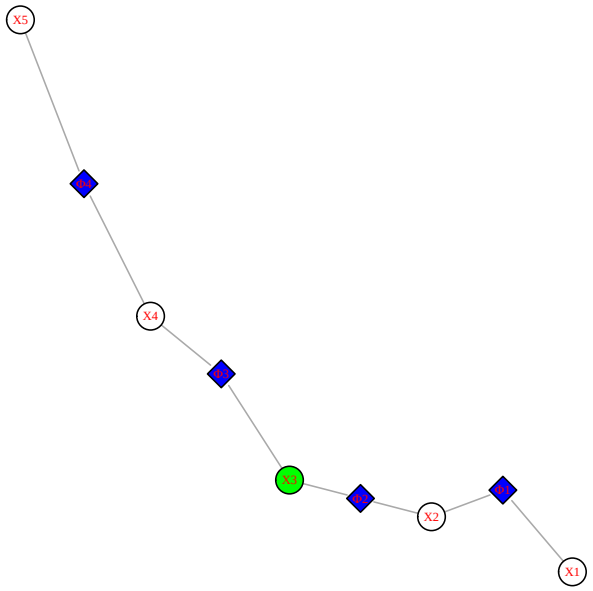

Figure 1: Display PBC on the graph.

Now we simulate 100 observations of PBC object created

```
> theta <- 1/runif(4)
> data <- rPBC(100, theta, myPBC)
```

Finally, we estimate parameters

```
> thetaEstimated <- pbcOptim(rep(1, 4), data, myPBC, method = 'BFGS')
```

```
[1]  1.561154 12.263682  1.477789  1.034945
```

And compare with true parameters

```
[1]  1.353414 10.144162  1.603300  1.035018
```