AIDS - Semiparametric Mixed Model

November 1, 2024

The "AIDS"–data from "catdata" are loaded.

```
> library(catdata)
> data(aids)
```

As for normal GAMs for GAMMs the package "mgcv" is used.

```
> library(mgcv)
```

The Semiparametric Mixed Model (or Generalized Additive Mixed Model) for "AIDS"–Data is fitted by the function "gamm". Here the only random effect is the random intercept.

```
> gammaids<-gamm(cd4 ~ s(time) + drugs + partners + s(cesd) + s(age),
+                random=list(person=~1),  family=poisson(link=log), data=aids)
```

The summary of the fixed effects is printed.

```
> summary(gammaids$gam)
```

Finally the three smooth effects from the gam are plotted.

```
> plot(gammaids$gam,ylab=" ",cex.lab=1.8,cex.axis=1.5,select=1)
```

```
> plot(gammaids$gam,ylab=" ",cex.lab=1.8,cex.axis=1.5,select=2)
```

```
> plot(gammaids$gam,ylab=" ",cex.lab=1.8,cex.axis=1.5,select=3)
```