

# dynamicNetworkID

*Madhur Parihar, Warren Anderson, Rajanikanth Vadigepalli*

*2017-11-21*

This vignette describes basic usage of the version 1 dynamicNetworkID package. The package is currently available on [github.com](https://github.com).

## Installation and data

```
# install the package
library(devtools)
install_github("WarrenDavidAnderson/dynamicNetworkID")
library(dynamicNetworkID)

# load sample data
data(multiorgan)
```

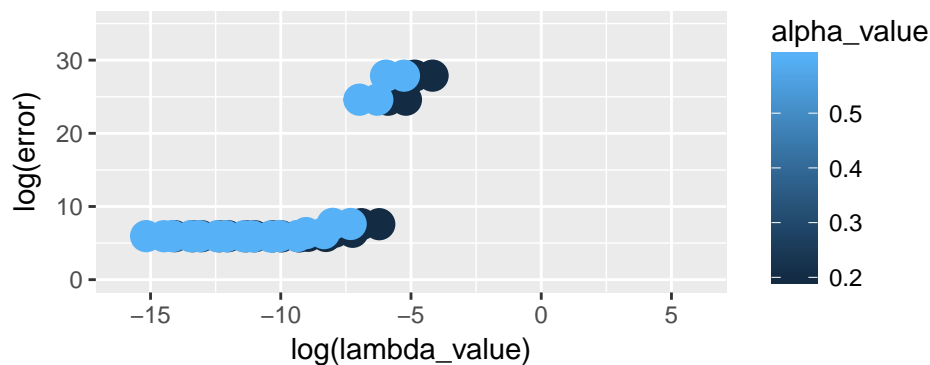
## Implement network identification

```
# scale the data to the 0-1 range
datHMF <- scale_zeroOne(multiorgan, center="mean")

# implement the analysis
result = HMF_fit(datHMF, N_mRanges=2, dt=0.1, alpha=c(0.2, 0.6))
```

## Plot effects of regularization parameters

```
library(ggplot2)
ggplot(result$errors, aes(x=log(lambda_value), y=log(error), color=alpha_value)) +
  geom_point(size=5) + xlim(-16, 6) + ylim(0, 35)
```



## Plot parameter heatmap

```
library(NMF)
aheatmap(result$best_params, Rowv=NA, Colv=NA, breaks=c(0))
```



## Save simulation plots

```
pdf("fits.pdf")
par(mfrow=c(2,3))
sim_plots(multiorgan, result$best_sim)
dev.off()
#> pdf
#> 2
```