
R-CODE FOR BIBLIOMETRIX

```
install.packages(bibliometrix)
library(bibliometrix)

#### reading and converting the bibtex files
Scopus <- c("C:/.../scopus_algebra.bib")
WoS <- c("C:/.../wos_algebra-part1.bib", "C:/.../wos_algebra-part2.bib")
M <- convert2df(Scopus, dbsource="scopus", format="bibtex")
N <- convert2df(WoS, dbsource="isi", format="bibtex")

#### merge scopus and wos databases
O <- mergeDbSources(M,N,remove.duplicated = TRUE)

#### computing bibliometric analysis
sink(file="Summary.txt")
results <- biblioAnalysis(O, sep=";")
S <- summary(object=results, k=10, pause=FALSE)
sink(file=NULL)

#### generate plots
plot(x=results,k=10,pause=FALSE)

#### obtaining most frequent cited manuscripts
sink(file="most-cited-manuscripts.txt")
CR <- citations(O, field="article", sep=";")
cbind(CR$Cited[1:15])
sink(file=NULL)

#### obtaining most frequent cited first authors
sink(file="most-cited-authors.txt")
CR <- citations(O, field="author", sep=";")
cbind(CR$Cited[1:15])
sink(file=NULL)

#### obtaining most frequent local cited authors
sink(file="most-local-cited-authors.txt")
CR <- localCitations(O,sep=";")
CR$Authors[1:15,]
CR$Papers[1:15,]
sink(file=NULL)

#### plotting top-author' productivity over time
topAU <- authorProdOverTime(O, k=10, graph=TRUE)

#### plotting country scientific collaboration
collab <- metaTagExtraction(M, Field="AU_CO", sep=";")
NetMatrix <- biblioNetwork(collab, analysis="collaboration",
network="countries", sep=";")
net=networkPlot(NetMatrix, n=dim(NetMatrix)[1], Title="Country Collaboration", type="circle",
size=TRUE, remove.multiple=FALSE, labels=0.7, cluster="none")

#### plotting thematic map using author keywords
Map <- thematicMap(O, Field="DE", n=250, minfreq=5, stemming=FALSE, size=0.7, n.labels=2,
repel=TRUE)
plot(Map$map)
```