



vlado

August 27, 2024

```
> wdir <- "C:/Users/vlado/work/OpenAlex/API"
> setwd(wdir)
> library(httr)
> library(jsonlite)
> source("https://raw.githubusercontent.com/bavla/Rnet/master/R/Pajek.R")
> source("https://raw.githubusercontent.com/bavla/OpenAlex/main/code/OpenAlex4.R")
> # source("OpenAlex4.R")
>
> CD <- read.csv2("ISO2codes.csv",head=TRUE,na.strings="--")
> CN <- CD$name; CC <- CD$code
> # sequence of networks for selected Years
> Years <- as.character(1990:2023)
> # Years <- c("1991-1995", "1996-2000", "2001-2005", "2006-2010", "2011-2015", "2016-2020")
> S <- list()
> for(year in Years){
+   R <- coAuthorship(CC,year=year)
+   S[[year]] <- R
+   # save(R,file=paste0("WrldCo",year,".Rdata"))
+   matrix2net(R$M,Net=paste0("WrldCo",year,".net"))
+   vector2clu(R$G,Clu=paste0("WrldCo",year,"G.clu"))
+   vector2vec(R$T,Vec=paste0("WrldCo",year,"T.vec"))
+ }
```

```
Year =1990 Tue Aug 27 19:39:20 2024
collected Tue Aug 27 19:40:01 2024
k = 0   a = 0   dmax = 0
```

```
Year =1991 Tue Aug 27 19:40:01 2024
collected Tue Aug 27 19:40:43 2024
k = 0   a = 0   dmax = 0
```

```
Year =1992 Tue Aug 27 19:40:43 2024
collected Tue Aug 27 19:41:24 2024
k = 0   a = 0   dmax = 0
```

```
Year =1993 Tue Aug 27 19:41:24 2024
collected Tue Aug 27 19:42:05 2024
k = 0   a = 0   dmax = 0
```

```
Year =1994 Tue Aug 27 19:42:06 2024
collected Tue Aug 27 19:42:47 2024
k = 0   a = 0   dmax = 0
```

```
Year =1995 Tue Aug 27 19:42:47 2024
collected Tue Aug 27 19:43:28 2024
k = 0   a = 0   dmax = 0
```

```
Year =1996 Tue Aug 27 19:43:29 2024
collected Tue Aug 27 19:44:10 2024
k = 0   a = 0   dmax = 0
```

```
Year =1997 Tue Aug 27 19:44:10 2024
collected Tue Aug 27 19:44:53 2024
k = 0   a = 0   dmax = 0
```

```
Year =1998 Tue Aug 27 19:44:53 2024
collected Tue Aug 27 19:45:35 2024
k = 0   a = 0   dmax = 0
```

```
Year =1999 Tue Aug 27 19:45:36 2024
collected Tue Aug 27 19:46:18 2024
k = 0   a = 0   dmax = 0
```

```
Year =2000 Tue Aug 27 19:46:18 2024
collected Tue Aug 27 19:47:11 2024
k = 3   a = 0   dmax = 0
```

```
Year =2001 Tue Aug 27 19:47:11 2024
collected Tue Aug 27 19:47:56 2024
k = 6   a = 0   dmax = 0
```

```
Year =2002 Tue Aug 27 19:47:57 2024
collected Tue Aug 27 19:48:38 2024
k = 6   a = 0   dmax = 0
```

```
Year =2003 Tue Aug 27 19:48:38 2024
collected Tue Aug 27 19:49:20 2024
k = 9   a = 0   dmax = 0
```

```
Year =2004 Tue Aug 27 19:49:21 2024
collected Tue Aug 27 19:50:02 2024
237 76 GB FR 4032 4033 -1
238 103 US IN 2403 2404 -1
238 110 US IT 6326 6325 1
k = 8   a = 3   dmax = 1
```

```

Year =2005 Tue Aug 27 19:50:02 2024
collected Tue Aug 27 19:50:45 2024
k = 14   a = 0   dmax = 0

Year =2006 Tue Aug 27 19:50:45 2024
collected Tue Aug 27 19:51:28 2024
k = 19   a = 0   dmax = 0

Year =2007 Tue Aug 27 19:51:29 2024
collected Tue Aug 27 19:52:12 2024
k = 25   a = 0   dmax = 0

Year =2008 Tue Aug 27 19:52:13 2024
collected Tue Aug 27 19:52:57 2024
k = 20   a = 0   dmax = 0

Year =2009 Tue Aug 27 19:52:57 2024
collected Tue Aug 27 19:53:39 2024
k = 32   a = 0   dmax = 0

Year =2010 Tue Aug 27 19:53:40 2024
collected Tue Aug 27 19:54:21 2024
k = 36   a = 0   dmax = 0

Year =2011 Tue Aug 27 19:54:22 2024
collected Tue Aug 27 19:55:06 2024
k = 46   a = 0   dmax = 0

Year =2012 Tue Aug 27 19:55:06 2024
collected Tue Aug 27 19:55:47 2024
k = 41   a = 0   dmax = 0

Year =2013 Tue Aug 27 19:55:47 2024
collected Tue Aug 27 19:56:30 2024
k = 78   a = 0   dmax = 0

Year =2014 Tue Aug 27 19:56:30 2024
collected Tue Aug 27 19:57:11 2024
k = 103  a = 0   dmax = 0

Year =2015 Tue Aug 27 19:57:12 2024
collected Tue Aug 27 19:57:54 2024
k = 117  a = 0   dmax = 0

Year =2016 Tue Aug 27 19:57:55 2024
collected Tue Aug 27 19:58:35 2024
k = 109  a = 0   dmax = 0

Year =2017 Tue Aug 27 19:58:36 2024
collected Tue Aug 27 19:59:17 2024
k = 123  a = 0   dmax = 0

Year =2018 Tue Aug 27 19:59:18 2024
collected Tue Aug 27 19:59:59 2024
k = 140  a = 0   dmax = 0

Year =2019 Tue Aug 27 19:59:59 2024
collected Tue Aug 27 20:00:43 2024
76 15 FR AT 2685 2684 1
109 11 IL AR 213 214 -1
220 14 TW AU 1018 1019 -1
k = 188  a = 3   dmax = 1

Year =2020 Tue Aug 27 20:00:43 2024
collected Tue Aug 27 20:01:25 2024
k = 269  a = 0   dmax = 0

Year =2021 Tue Aug 27 20:01:26 2024
collected Tue Aug 27 20:02:08 2024
k = 270  a = 0   dmax = 0

Year =2022 Tue Aug 27 20:02:09 2024
collected Tue Aug 27 20:02:50 2024
k = 333  a = 0   dmax = 0

Year =2023 Tue Aug 27 20:02:51 2024
collected Tue Aug 27 20:03:33 2024
k = 341  a = 0   dmax = 0
> save(S,file=paste0("MatList.Rdata"))
> cat("finished Years",date(),"\n"); flush.console()
finished Years Tue Aug 27 20:03:34 2024

> # complete OpenAlex for all years
> R <- coAuthorship(CC)

Complete search Tue Aug 27 20:23:50 2024
collected Tue Aug 27 20:24:31 2024
83 76 DE FR 273184 273183 1
168 40 NO CA 24307 24306 1
168 76 NO FR 36671 36670 1
180 11 PT AR 5956 5957 -1
180 40 PT CA 14666 14667 -1
185 76 RU FR 56709 56708 1
205 76 SI FR 8382 8381 1
208 46 ZA CN 14003 14004 -1
211 11 ES AR 36809 36810 -1
211 40 ES CA 57624 57625 -1

```

```
217 76 SE FR 63245 63244 1
237 11 GB AR 18247 18248 -1
237 14 GB AU 261643 261642 1
237 40 GB CA 232250 232251 -1
238 11 US AR 55167 55168 -1
238 40 US CA 692495 692496 -1
238 46 US CN 902403 902404 -1
238 76 US FR 485853 485852 1
240 11 UY AR 6188 6189 -1
240 40 UY CA 1385 1386 -1
k = 1854 a = 20 dmax = 1
> save(R,file="MatComp.Rdata")
> matrix2net(R$M,Net="WrldCoComp.net")
> vector2clu(R$G,Clu="WrldCoComp.clu")
> vector2vec(R$T,Vec="WrldCoComp.vec")
> cat("finished complete",date(),"\n"); flush.console()
finished complete Tue Aug 27 20:24:37 2024
```