Embedded zonings

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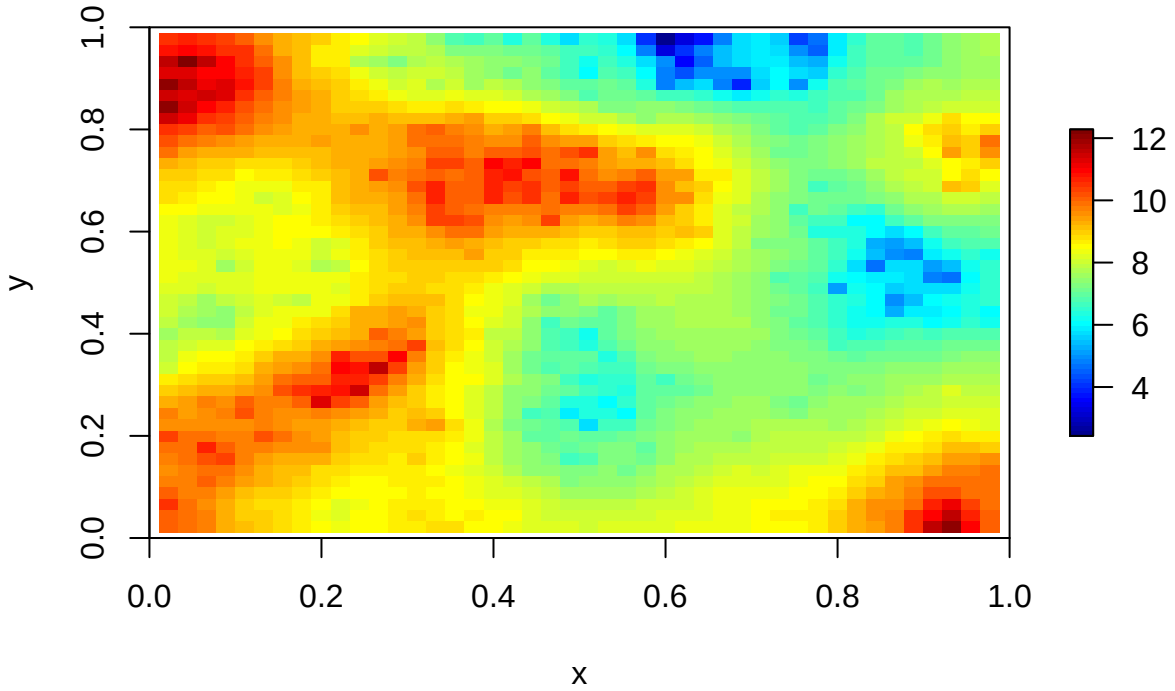
2017-09-26

Contents


```
  library(geozoning)
  library(rgeos)
```

This vignette illustrates the creation of zonings for nested quantiles.

```
data(mapTest)
map = mapTest
plotM(map)
```




```
res2 = loopQ2(map,disp=0,step=0.075,QUIET=TRUE)
res3 = loopQ3(map,disp=0,step=0.075,QUIET=TRUE)
res4 = loopQ4(map,disp=0,step=0.075,QUIET=TRUE)


epsilon = 1
len = 11 # length(list_nested_quantile) , initialized to 6 to enter the loop
while(len >= 7){
  list_nested_quantile = list()
  res2_best = res2[which( (res2[1,1] - res2[,1])<=epsilon ), ]
  res3_best = res3[which( (res3[1,1] - res3[,1])<=epsilon ), ]
  res4_best = res4[which( (res4[1,1] - res4[,1])<=epsilon ), ]
  index = 0
```

```
  for(i in 1: nrow(res2_best)){
    q2 = as.matrix(res2_best[i,5:6])
    for(j in 1:nrow(res3_best)){
      q3 = as.matrix(res3_best[j, 5:7])
      if(sum(q2%in%q3) == 2){
        for(k in 1:nrow(res4_best)){
          q4 = as.matrix(res4_best[k, 5:8])
          if(sum(q3%in%q4) == 3){
            index = index+1
            list_nested_quantile[[index]] = list(q2,q3,q4)
          }
        }
      }
    }
  }
  epsilon = epsilon - 0.05
  len = length(list_nested_quantile)
}

list_nested_quantile
```

```
## [[1]]
## [[1]][[1]]
##      iq   kq
## 11 0.05 0.95
##
## [[1]][[2]]
##      iq   jq   kq
## 42 0.05 0.65 0.95
##
## [[1]][[3]]
##      iq   jq  kq   pq
## 84 0.05 0.65 0.8 0.95
##
##
## [[2]]
## [[2]][[1]]
##      iq   kq
## 11 0.05 0.95
##
## [[2]][[2]]
##      iq    jq   kq
## 30 0.05 0.425 0.95
##
## [[2]][[3]]
##      iq    jq  kq   pq
## 74 0.05 0.425 0.8 0.95
##
##
## [[3]]
## [[3]][[1]]
##      iq   kq
## 11 0.05 0.95
##
```

```
## [[3]][[2]]
##      iq    jq   kq
## 30 0.05 0.425 0.95
##
## [[3]][[3]]
##      iq    jq    kq   pq
## 73 0.05 0.425 0.725 0.95
##
##
## [[4]]
## [[4]][[1]]
##      iq   kq
## 11 0.05 0.95
##
## [[4]][[2]]
##      iq    jq   kq
## 30 0.05 0.425 0.95
##
## [[4]][[3]]
##      iq  jq    kq   pq
## 13 0.05 0.2 0.425 0.95
```

Session informations

```
## R version 3.4.0 (2017-04-21)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: Debian GNU/Linux 8 (jessie)
##
## Matrix products: default
## BLAS: /usr/lib/libblas/libblas.so.3.0
## LAPACK: /usr/lib/lapack/liblapack.so.3.0
##
## locale:
##  [1] LC_CTYPE=fr_FR.utf8       LC_NUMERIC=C
##  [3] LC_TIME=fr_FR.utf8        LC_COLLATE=C
##  [5] LC_MONETARY=fr_FR.utf8    LC_MESSAGES=fr_FR.utf8
##  [7] LC_PAPER=fr_FR.utf8       LC_NAME=C
##  [9] LC_ADDRESS=C              LC_TELEPHONE=C
## [11] LC_MEASUREMENT=fr_FR.utf8 LC_IDENTIFICATION=C
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] rgeos_0.3-23    geozoning_1.0.0
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_0.12.11             raster_2.5-8
##  [3] knitr_1.17               magrittr_1.5
##  [5] maptools_0.9-2           maps_3.1.1
##  [7] lattice_0.20-35          FNN_1.1
##  [9] stringr_1.2.0            xts_0.9-7
```

```
## [11] fields_8.15              tools_3.4.0
## [13] RandomFields_3.1.50      grid_3.4.0
## [15] gstat_1.1-5              spam_1.4-0
## [17] deldir_0.1-14            intervals_0.15.1
## [19] RandomFieldsUtils_0.3.25 htmltools_0.3.6
## [21] yaml_2.1.14              rprojroot_1.2
## [23] digest_0.6.12            evaluate_0.10.1
## [25] rmarkdown_1.6            sp_1.2-4
## [27] stringi_1.1.5            compiler_3.4.0
## [29] backports_1.1.0          spacetime_1.2-0
## [31] foreign_0.8-68           zoo_1.8-0
```