

Package ‘venneuler’

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Title Venn and Euler Diagrams

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Depends rJava

Description Calculates and displays Venn and Euler Diagrams

SystemRequirement Java 1.5 or higher

License MPL-1.1

URL <http://www.rforge.net/venneuler/>, <http://www.cs.uic.edu/~wilkinson/>

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venneuler	<i>Calculates Venn and Euler Diagram</i>
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Description

venneuler calculates a Venn diagram from a set specification.

Usage

```
venneuler(combinations, weights, ...)
```

Arguments

combinations	This can be one of: <ul style="list-style-type: none"> • a character vector (specifies disjoint class combinations as class names separated by the ampersand & character – e.g. <code>c("A", "B", "A&B")</code>) • a named numeric vector (names specify class combinations and values specify weights – e.g. <code>c(A=1, B=2, 'A&B'=0.5)</code>) • a character matrix of two columns (specifies mapping of elements to sets – elements in the first column and set names in the second column, weights argument is ignored) • a logical or numeric matrix whose columns represent sets and co-occurrence is defined by non-zero (rep. TRUE) values in rows (weight for a row being 1 for logical matrices or the row sum for numeric matrices). <p>For convenience data frames can be passed instead of matrices and they will be coerced using <code>as.matrix()</code>.</p>
weights	If combinations is a character vector then this argument specifies the associated weights. It is ignored in all other cases.
...	Additional arguments (currently unused).

Value

An object of the class `VennDiagram` with following components:

centers	centers of the circles (columns are x and y coordinates)
diameters	diameters of the circles
colors	colors of the circles as values between 0 and 1
labels	labels of the circles
residuals	residuals (percentage difference between input intersection area and fitted intersection area)
stress	stress value for solution
stress01	.01 critical value for stress based on random data
stress05	.05 critical value for stress based on random data

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Examples

```
vd <- venneuler(c(A=0.3, B=0.3, C=1.1, "A&B"=0.1, "A&C"=0.2, "B&C"=0.1, "A&B&C"=0.1))
plot(vd)
# same as c(A=1, 'A&B&C'=1, C=1)
m <- data.frame(elements=c("1","2","2","2","3"), sets=c("A","A","B","C","C"))
v <- venneuler(m)
plot(v)
m <- as.matrix(data.frame(A=c(1.5, 0.2, 0.4, 0, 0),
```

```
B=c(0 , 0.2, 0 , 1, 0),  
C=c(0 , 0 , 0.3, 0, 1))  
  
# without weights  
v <- venneuler(m > 0)  
plot(v)  
# with weights  
v <- venneuler(m)  
plot(v)
```

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