

# Package: ppks (via r-universe)

May 25, 2026

**Type** Package

**Title** Permutation Based Paired Kolmogorov-Smirnov Test

**Version** 1.0

**Date** 2025-09-21

**Author** Michail Tsagris [aut, cre]

**Maintainer** Michail Tsagris <mtsagris@uoc.gr>

**Depends** R (>= 4.0)

**Imports** Rfast, stats

**Suggests** Rfast2

**Description** Permutation based Kolmogorov-Smirnov test for paired samples. The test was proposed by Wang W.S., Amsler C. and Schmidt, P. (2025) <doi:10.1007/s00181-025-02779-0>.

**License** GPL (>= 2)

**NeedsCompilation** no

**Repository** <https://cran.r-universe.dev>

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ppks-package

*Permutation Based Paired Kolmogorov-Smirnov Test*

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### Description

Permutation Based Paired Kolmogorov-Smirnov Test

### Details

Package: ppks  
Type: Package  
Version: 1.0  
Date: 2025-09-21  
License: GPL-2

### Maintainers

Michail Tsagris <mtsagris@uoc.gr>

### Author(s)

Michail Tsagris <mtsagris@uoc.gr>.

### References

Wang W.S., Amsler C. and Schmidt, P. (2025). A randomly swapped bootstrap for paired data: testing equality of distribution for correlated samples. *Empirical Economics*, To appear. <https://link.springer.com/article/10.1007/025-02779-0>

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colppks

*Permutation Based Paired Kolmogorov-Smirnov Test*

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### Description

Permutation Based Paired Kolmogorov-Smirnov Test

### Usage

```
colppks(x, y, R = 999)
```

**Arguments**

x	A numerical matrix with data.
y	A numerical matrix with data.
R	The number of permutations to perform.

**Details**

The permutation based Kolmogorov-Smirnov test for paired samples (Wang W.S., Amsler C. and Schmidt, P., 2025) is performed. The x and y matrices contain the paired observations. The i-th column of x is paired with the i-th column of y.

**Value**

A vector with permutation based p-values. Each p-value corresponds to a column in the matrices.

**Author(s)**

Michail Tsagris.

R implementation and documentation: Michail Tsagris <mtsagris@uoc.gr>.

**References**

Wang W.S., Amsler C. and Schmidt, P. (2025). A randomly swapped bootstrap for paired data: testing equality of distribution for correlated samples. Empirical Economics, To appear. <https://link.springer.com/article/10.1007/025-02779-0>

**Examples**

```
x <- matrix( rnorm(30 * 10), ncol = 10 )
y <- x + rnorm(30 * 10)
colppks(x, y)
```

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ppks

*Permutation Based Paired Kolmogorov-Smirnov Test*

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**Description**

Permutation Based Paired Kolmogorov-Smirnov Test

**Usage**

```
ppks(x, y, R = 999)
```

**Arguments**

x	A numerical vector with data.
y	A numerical vector with data.
R	The number of permutations to perform.

**Details**

The permutation based Kolmogorov-Smirnov test for paired samples (Wang W.S., Amsler C. and Schmidt, P., 2025) is performed. The  $x$  and  $y$  vectors contain the paired observations.

**Value**

The permutation based p-value.

**Author(s)**

Michail Tsagris.

R implementation and documentation: Michail Tsagris <mtsagris@uoc.gr>.

**References**

Wang W.S., Amsler C. and Schmidt, P. (2025). A randomly swapped bootstrap for paired data: testing equality of distribution for correlated samples. *Empirical Economics*, To appear. <https://link.springer.com/article/10.1007/025-02779-0>

**Examples**

```
x <- rnorm(30)
y <- x + rnorm(30)
ppks(x, y)
```

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