Subject: Re: "bootstrap" statistics
Posted by Wayne Landsman on Mon, 20 May 2002 20:58:16 GMT
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> I have found:
>
> http://www.astro.washington.edu/deutsch-bin/getpro/library14 .html?PERMUTE
>
> which is a somewhat better way, but still slow. Is there a no-loops version?

Interesting question. I had modified the above PERMUTE program to use a vector call to RANDOMN(/DOUBLE), (the /DOUBLE keyword has been available since V5.4). My feeling was that with ~5e15 distinct double precision numbers between 0 and 1, that probablity of RANDOMN returning two identical numbers was vanishingly small, in a typical call of say less than 10,000 numbers

But I've never been comfortable enough with the modification to actually use it. I suppose I should add a check for any equal numbers in the RANDOMN(/DOUBLE) call, and then randomize those numbers.

--Wayne

```
FUNCTION PERMUTE,M, RSEED, OUTSEED = seed
;+
; NAME:
;       PERMUTE
; PURPOSE:
;       Randomly permute the elements of a vector
; USAGE:
;       NewIndex = PERMUTE( M, [ InSeed, OUTSEED = ] )
; INPUT:
;       M = length of vector
; OPTIONAL INPUT-OUTPUT:
;       SEED = random number seed to be passed to RANDOMU
;              Upon return, it will updated as a vector containing a new seed
; OUTPUT:
;       PERMUTE returns M randomly shuffled integers between 0 and M-1
; EXAMPLE:
;       To shuffle the elements of a vector V,
;
;       V = V [ PERMUTE(N_ELEMENTS(V) ) ]
;
; REVISION HISTORY:
;       Written,  H.T. Freudenreich, HSTX, 2/95
;       Use vectorized call   W. Landsman  SSAI  December 2001
;-
;
; Select M numbers at random, repeating none.
```

```
if N_elements(rseed) GT 0 then seed = rseed
return, sort( randomn(seed, m,/Double) )
```