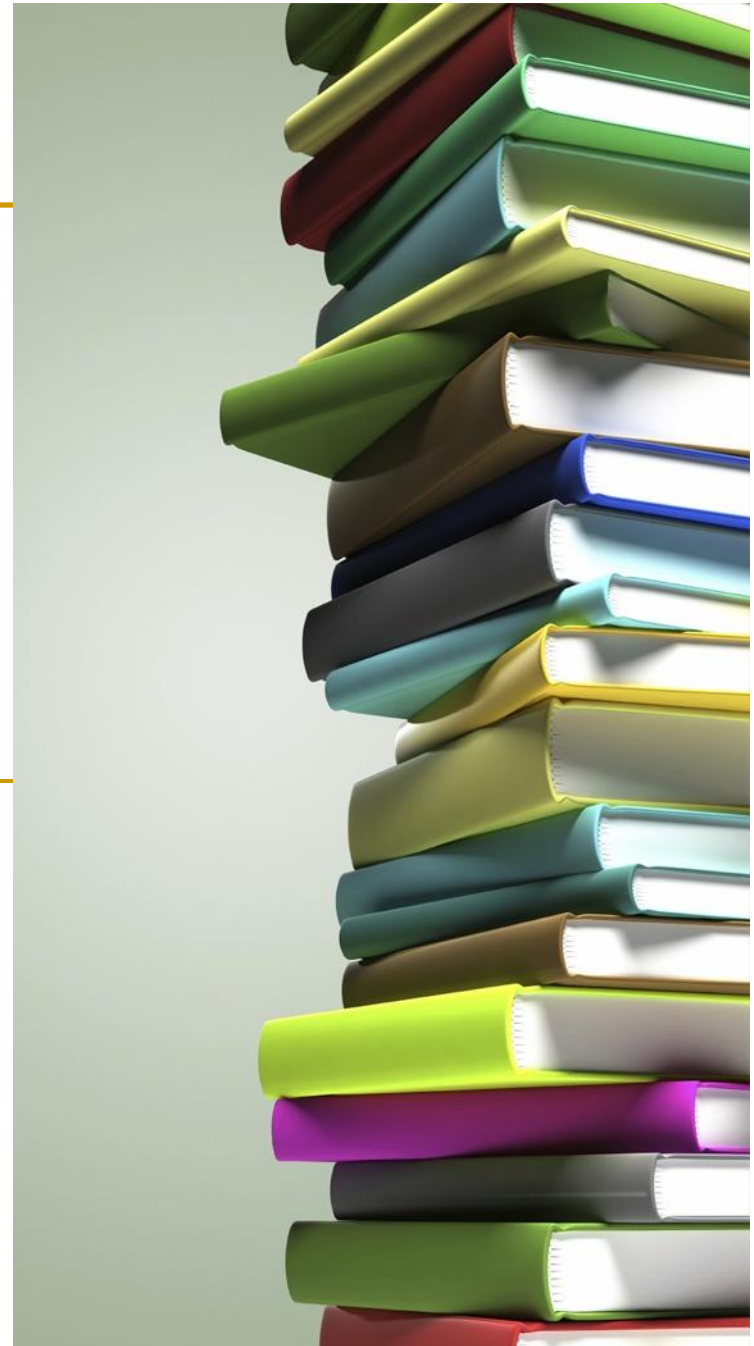

SAS® Functions *by* **Example** *Second Edition*

Ron Cody



Summary



- *Examination of SAS Functions and Calls in the SAS programming Language*
 - *Organized into Chapters of related categories (such as character or statistics functions)*
 - *Update of earlier version to include SAS features found in SAS 9.2*
-

Summary



- *SAS Functions*
 - *Computation or manipulation returning a single value in the format: Value=name(arguments) ;*

 - *SAS Calls – Stand alone SAS statement*
 - *May return more than a single value.*
-

The Author – Ron Cody

- Has worked with SAS since 1977
- *Retired professor from Robert Wood Johnson Medical School.*
- *Private consultant and instructor for SAS*

- *Author of many SAS programming books.*
- *Presented at Many SUGI/SGF Excellent presentations*



Strengths

- *It fills the intended purpose by covering many of the most used functions within SAS*
- *It is easy to follow and has many relevant examples*
- *Layout into categories and groups is well done and thoughtful*
- *Has a useful list of functions although some functions seem to be missing.*



Weaknesses

- *I can not keep my copy on my desk.*
 - *You need to have an idea of what you want to accomplish.*
 - *It does not go much beyond what can be found in the SAS manuals*
-

Recommend?



- *This book is an excellent resource for anyone working within the SAS datastep for calculations and manipulation.*
-



Learning & Tips

Character Functions

- **COMPRESS**(*string*, 'compress-list', 'modifiers')
 - *Regularly used function for compressing out characters. Now has modifiers to identify whole groups of characters (e.g. d – digits, a – letters, s – all space characters).*
-



Learning & Tips

Character Functions

- *CATS(string-1, <,string-n>) or
CALL CATS(result, string-1 <,string-n>)*
 - ❑ *Concatenate the listed strings into one variable result stripping both leading and trailing blanks.*
 - ❑ *Reminder use of length statement or \$200*



Learning & Tips

Character Functions

- `COUNTW(string, <,delim>, <,'modifiers')`
 - ❑ *Count the number of 'words' in a string.*
 - ❑ *Similar to the compress modifiers this provides a way to indicate groups of delimiters (p – all punctuation, q – ignore delimiters inside quotes, s – include all space characters, m – multiple delimiters as multiple missing).*
 - ❑ *Really useful when using the scan() function*
-



Learning & Tips

Character Functions

- *NOTDIGIT(string <,start>)*
 - ❑ *Identify location of any non-digit in a string*
 - ❑ *Related functions include anydigit, anyalpha, nonalpha, anyspace, anypunct, etc...*



Learning & Tips

Perl Regular Expressions

- *SAS regular expressions dropped in this edition.*
 - *Basic tutorial or overview in the manual.*
 - *An Introduction to Perl Regular Expressions in SAS 9, Ronald Cody, SUGI 29*
 - *Perl Regular Expressions, Kenneth Borowaik, SAS Global Forum 2007.*
 - *Some Simple Perl Regular Expressions Examples in SAS® 9, Selvaratnam Sridharma, SAS Global Forum 2010.*
-



Learning & Tips

Math and Numeric and Other

- *CONSTANT('constant' <, parameter >)*
 - *Returns a constant value – PI, e, EULER, EXACTINT.*

 - *RAND(distribution <,parameters >)*
 - *Generates random numbers based on many (21+) distributions. Can be used in place of other random functions.*
 - *Use the Call STREAMINIT to start with a known seed.*
-



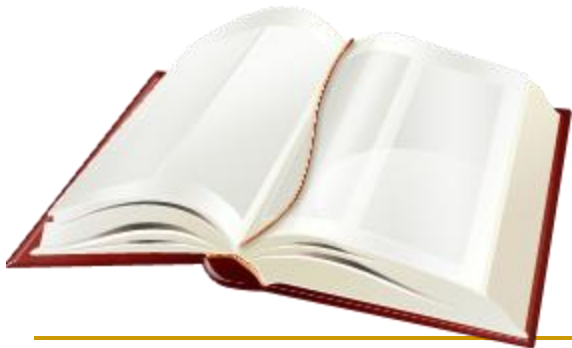
Learning & Tips

Other

- *GEODIST(lat-1, long-1, lat-2, long-2 <,options>)*
 - *Distance (straight line) between two sets of lat and long co-ordinates.*
 - *Options allow:*
 - *m – returns miles*
 - *k – returns kilometers (this is the default)*
 - *d – locations in degrees (default)*
 - *r – locations are in radians*
-

Other Books

- *The Little SAS Book: A primer by Delwiche and Slaughter.*



Questions?

