Joe Murphy's LRFD stuff   http://joeinmadison.com/lrfd

This is LRFD stuff Joe Murphy has put together.
Programs I have written can be used for personal use only!
*.exe files in the *.zip file have been renamed with a *.jpg
extension. Rename them back to *.exe to be executable.

Open file links in new window!

You can reach me at joe_@mailbag.com

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02/15/18 07:17:16	http://joeinmadison.com/lrfd/MOR_2X10.txt	4,364 B	5 KB
04/05/18 06:04:10	http://joeinmadison.com/lrfd/NBS577js.html	33,967 B	34 KB
04/05/18 06:04:13	http://joeinmadison.com/lrfd/NBS577js.pdf	148,487 B	146 KB
03/31/17 01:09:34	http://joeinmadison.com/lrfd/NBSSP577.pdf	4,346,617 B	4,245 KB
04/26/17 08:23:15	http://joeinmadison.com/lrfd/WDF_Q1_2017.pdf	1,305,298 B	1,275 KB
03/03/18 16:25:32	http://joeinmadison.com/lrfd/wdist.html	4,669 B	5 KB
02/25/18 09:44:05	http://joeinmadison.com/lrfd/Wexample.pdf	189,259 B	185 KB
02/25/18 09:01:32	http://joeinmadison.com/lrfd/wgraph.html	19,270 B	19 KB
04/11/17 19:49:41	http://joeinmadison.com/lrfd/arrL.gif	2,153 B	3 KB
04/11/17 19:49:41	http://joeinmadison.com/lrfd/arrR.gif	2,163 B	3 KB
04/11/17 18:21:04	http://joeinmadison.com/lrfd/ccw.gif	2,097 B	3 KB
04/05/18 06:04:07	http://joeinmadison.com/lrfd/correction1.pdf	123,310 B	121 KB
04/11/17 18:21:05	http://joeinmadison.com/lrfd/cw.gif	2,124 B	3 KB
04/05/18 08:42:49	http://joeinmadison.com/lrfd/filesinfo.pdf	75,849 B	75 KB
04/02/17 17:56:42	http://joeinmadison.com/lrfd/fplgtr72.pdf	254,187 B	249 KB
05/02/18 19:55:16	http://joeinmadison.com/lrfd/index.php	2,512 B	3 KB
04/05/18 06:04:09	http://joeinmadison.com/lrfd/jfmjz.txt	1,028 B	2 KB
05/13/17 02:31:16	http://joeinmadison.com/lrfd/jfmreport.pdf	5,809,192 B	5,674 KB
04/05/18 06:04:09	http://joeinmadison.com/lrfd/kr_beta.txt	1,562 B	2 KB
05/13/17 02:30:04	http://joeinmadison.com/lrfd/readme1.pdf	26,018 B	26 KB
04/05/18 08:40:36	http://joeinmadison.com/lrfd/readme2.pdf	16,062 B	16 KB
06/15/17 09:44:18	http://joeinmadison.com/lrfd/sp57764.zip	70,326 B	69 KB
04/05/18 06:04:25	http://joeinmadison.com/lrfd/tablA12.txt	3,064 B	3 KB

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- Example Calculations to Derive Input Values for Reliability Analysis of Wood Products -- David S. Gromala, PE, Philip Line, PE, Joseph F. Murphy, PhD, Thang Dao, PhD

- Historical Approach Making a Comeback: Closed Form Equations to Determine LRFD Reliability Indices (β) and Resistance Factors (φ) -- David S. Gromala, PE, Philip Line, PE, Joseph F. Murphy, PhD, Thang Dao, PhD

More material is available

I have more material available which I have uploaded to my website. You can access the website at http://joeinmadison.com/lrfd You will find these files.

- readme1.pdf - a copy of this section

- jfmreport.pdf - a copy of this report

- sp57764.zip - a zip files containing source *.bas code and *.jpg files. The *jpg files are just *.exe files with the wrong extension name. One must rename the *.jpg files with a *.exe extension for them to function. (I store them as *.jpg to pass through some file transfer protocols.) All the *.bas source code is compiled into *.exe executables with PowerBASIC Console Compiler 6.01 for Windows. Also contains input *.txt files for sp57764.exe which I used in this report.

  > sp57764.bas program listing like pp 49, sp57764.jpg compiled with PowerBASIC
  > input filename.txt (just like NBS 577 APPENDIX F pp 36), output filename.htm
  > input filename.txt uses the DOS 8.3 file naming convention.

  > NBSbeta.bas *.jpg program scans the sp57764 output for the beta values
  > input filename.htm, output filenameNBS.dat

  > FOSMbeta.bas *.jpg program to compute FOSM beta values using sp57764 input
  > input filename.txt, output filenameFOSM.dat

  > do1dot.bat batch file to do all input *.txt files in a folder
  > do1dot.bat, sp57764.exe, NBSbeta.exe, FOSMbeta.exe have to be in the same folder

  > do2dot.bat batch file to do all input *.txt files in a folder
  > do2dot.bat has to be in the same folder
  > sp57764.exe, NBSbeta.exe, FOSMbeta.exe have to be in one folder above (parent folder)

  > snowS2D.txt - input *.txt file for sp57764.exe
  > snowCV.txt - input *.txt file for sp57764.exe
  > liveL2D.txt - input *.txt file for sp57764.exe
  > liveCV.txt - input *.txt file for sp57764.exe

- NBSSP577.pdf - a copy of NBS Special Publication 577, National Bureau of Standards. Digitized by Google.

- fplgtr72.pdf - John Zahn's General Technical Report with his Fortran program listing. Some of the code contains typos. Referenced by ASTM D-5457. See References.

- WDF_Q1_2017.pdf - Wood Design Focus, A Journal of Contemporary Wood Engineering, Volume 27, Number 1, Spring 2017. See References.

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5 April 2018

Joe Murphy's ASTM and LRFD reports and programs (Personal use only!)
are all in joeinmadison.com/lrfd subdirectory

Note: filenames are case sensitive.

- http://joeinmadison.com/lrfd will index of all of my files in /lrfd Open file links in new window!

- http://joeinmadison.com/lrfd/readme1.pdf will give explanation of some of index. Not listed here.

- http://joeinmadison.com/lrfd/wdist.html Javascript and HTML, use on server or download converts mean, cov to alpha, eta and vice versa. Finds $\Gamma(x)$ and $\Gamma(1 + x)$.

- http://joeinmadison.com/lrfd/wgraph.html Javascript and HTML, use on server or download fits a 2-parameter Weibull distribution to data (both complete distributions and tail fit) and shows a graph using Google Charts.

- http://joeinmadison.com/lrfd/MOR_2X10.txt example unranked data set to be used with Wgraph.html

- http://joeinmadison.com/lrfd/Wexample.pdf example output using MOR_2X10.txt and Wgraph.html

- http://joeinmadison.com/lrfd/index.php index all files in joeinmadison/lrfd subdirectory

- http://joeinmadison.com/lrfd/readme2.pdf This file.

- http://joeinmadison.com/lrfd/NBS577js.html NBS SP 577 Appendix F FORTRAN reliability program ported by me to Javascript HTML program. Download and run with an NBS577 format input file.

- http://joeinmadison.com/lrfd/NBS577js.pdf This pdf gives an screen shot of the program, a Table of what the Distribution Parameters are, for each distribution, and a Table of what distributions go with each load. The third Table has some load combinations. There are 3 input.txt files with results attached so users can check if the program is working properly.

- http://joeinmadison.com/lrfd/jfmjz.txt Input to NBS577js.html which compares exactly with output I have from John Zahn which compared his FORTRAN output with mine in the 90's.

- http://joeinmadison.com/lrfd/tablA12.txt Input to NBS577js.html in the above pdf gives KR for Table A1.2, though only 5 CVs and β = 2.44 . KR = PHIc/pf(1).

- http://joeinmadison.com/lrfd/kr_beta.txt Input to NBS577js.html comparing β for exact ϕs and ϕs rounded to nearest 0.05.

- http://joeinmadison.com/lrfd/correction1.pdf Correction to jfmreport.pdf May 2017 typo in gamma distribution CDF. In developing NBS577js.html I implemented the incomplete gamma "gamin" as spelled out on pages 24 and 28 of the jfmreport.pdf. I discovered the documentation is wrong. I have checked all my programs and the gamin subroutines are correct. It is only in the documentation that it is wrong. In the report I had put a 1 in the factor when it should not be there. This pdf shows my derivation of the incomplete gamma function and gamma CDF from Kummer's confluent hypergeometric function. Also are corrected pages 24 and 28.

- http://joeinmadison.com/lrfd/filesinfo.pdf Combination of index.php, readme1.pdf and readme2.pdf.

Open file links in new window!

Direct comments, questions to murphyjf@sbcglobal.net