

Before downloading files from this website, please read  
the *disclaimers and permissions* tab.

## The Purposes of This Website

- To entertain offers of employment as a consultant, programmer, or teacher. I'm old enough to be picky about what I work on, but if you have an interesting project and I have the right skills for it we should talk.
- To provide instructional materials to current and prospective students in the course "Reading Classical Hebrew." If you think you might be interested in taking this course, please read about it at the *course description* tab of this web page.
- To promote my published books and make it easier for readers to use them. At roughly \$4 per copy sold the royalties have never made me rich, but if you read these books it will make me happy, and that is priceless.
- To share certain of my writings that have not yet been commercially published.
- To share certain parts of my software library that are relevant to the documents mentioned here. Other parts sometimes find application in work that I do for hire.

## Documents Not Commercially Published

- *Introduction to Mathematical Programming*. Two famous textbook publishers were interested in this book, but one wanted to divide it into three volumes and the other wanted to leave out 40%. By the time I finished not selling the book to either of them the final draft had been in use at several universities for several years, so rather than continue the search for a commercial outlet I have made the book available here. If you are a teacher or student who is not already using it, please take a look.
- *Voicing Hebrew* and *Hannah Senesh Word by Word*. I wrote these books for my Hebrew students. The first plays a role in the course "Reading Classical Hebrew," but you might find both books useful even if you are not currently enrolled.
- *Computing Fourier Transforms*. I wrote this book for a course I taught about FFTs because none of the published texts developed the algorithm at the right level of detail.
- Quirky research papers. *Least-Absolute-Value Regression* and *Bilevel Nonlinear Programs* have yet to meet the bar for journal publication, but some of my students in mathematics and engineering have found them interesting and each contains the seeds of several little research projects. The BNLP paper includes a carefully-curated collection of test problems. For my research papers that *have* met the bar for publication, please see the *research publications* tab of this web page.

## Software Relevant to Documents

- The `pivot` program is described in §27 of *Introduction to Mathematical Programming* and is used extensively in that book. It will also be of interest to teachers and students who are using *Introduction to Operations Research* as a text, and perhaps to others.
- The Octave codes that appear in *Introduction to Mathematical Programming* are collected for your convenience at that tab.
- The raster plotting program mentioned in §7.1 of *Computing Fourier Transforms* and the simulation program mentioned on page 7 of *Least-Absolute-Value Regression* might be useful to students of those topics. The raster plotter might also be useful in other settings, and it illustrates how to generate Postscript code with a Fortran program.
- The Hebrew typesetting programs documented in *Homebrew Hebrew* were indispensable to me in preparing *Voicing Hebrew*, the other course materials for “Reading Classical Hebrew,” and *Hannah Senesh Word by Word*. Anyone undertaking the serious study of Hebrew ought to be able to typeset the language with vowel points, and if you already know how to use  $\text{\LaTeX} 2_{\epsilon}$  this approach is easy and free.
- General-purpose subprograms that are used in the programs are collected at the *subprograms* tab, and all of the Unix man pages are collected at the *documentation* tab. These archives also include all of the library subprograms from *Classical Fortran*; one of them, `TIMER`, is also used in *Introduction to Mathematical Programming*.

## Reading Documents

Your web browser should open any file having the extension `.pdf`, and from there you can print the document or download it to your computer.

Any file having an extension that is *not* `.pdf`, `.tar.gz`, `.png`, `.tfm`, or `.pk` is plain (non-rich) ASCII text. If your browser does not know what to do with it, you can suggest opening it with Notepad or Wordpad on Windows, TextEdit on a Mac, or `gedit` in Unix. Outside of the browser you can use those programs to open a file that you have downloaded, and in Unix you can also use `more` or `vi` or `emacs` to read it.

Some tabs of this web page might link to a document explaining that the file you asked about is “Under Construction.” This placeholder will eventually be replaced by the content described by the tab, which I might be revising, or preparing, or just hoping to prepare someday. I apologize for any inconvenience the absence of the file might cause.

## Downloading Software

In several cases computer code, documentation, and fonts are provided in the form of `tar` archives (see <https://opensource.com/article/17/7/how-unzip-targz-file>). If you click on the link to a file named `dir.tar.gz` your browser might untar it, creating a folder named `dir` containing the files in the archive. In Unix you can also download the file and use `tar xvzf dir.tar.gz` to create the directory, or you can examine the files by editing the compressed `tar` file with `vim`.

The Fortran source of the `pivot` program is a single 5898-line text file (*not* a `tar` archive) and it includes the general-purpose subprograms that it uses, so the program can be installed on any computer in the simple way described in §27.2 of *Introduction to Mathematical Programming*. If you will use the program in a Unix environment you should also consider installing, from the `impsrc.tar.gz` archive described below, the `pivot.help` file, the `pivotprint` shell script, and the `fixscript` program, and you should use the `.bashrc` provided there to replace or modify yours, all as described in §27.2.2 of the text.

Each other Fortran program includes only the pieces that are particular to it, and might invoke general-purpose subprograms that are not in that file. In a Unix environment you can build a library of the routines provided at the `subprograms` tab, as described in §14 of *Classical Fortran*, and link from it to make each application. In other operating systems it is customary to use an application development platform for building a program from its parts (see <https://www.g2.com/categories/application-development-platforms>) but if you do not know how to use one you can copy the routines you need into the source for the application and install the result in the way described for `pivot`.

The Octave functions are discussed in detail in *Introduction to Mathematical Programming*, the FFT codes are described in *Computing Fourier Transforms*, the Hebrew typesetting software is described in *Homebrew Hebrew*, and many of the general-purpose subprograms are described in *Classical Fortran*. Each Fortran program and subprogram is also documented in a Unix `man` page, which you can read on a Mac by using Terminal.

Some of the routines have embedded filenames that must be customized in obvious ways for your environment; if you have trouble doing that or in using the software please tell me by sending email to the appropriate address at the `contact` tab and I will try to help.

## Summary of Contents

This website consists of an `index.html` file, a file named `img001.png` containing the portrait sketch, and the linked-to files described below and on the next page.

archive	files	contents
<code>impsrc.tar.gz</code>	<code>=files</code> <code>ReadMe</code> <code>.bashrc</code> <code>fixscript.f</code> <code>pivotprint</code> <code>*.m</code>	table of contents for this archive disclaimers specific to this archive Unix configuration file program filters <code>typescript</code> output Unix shell script captures a <code>pivot</code> session in a file 191 Octave functions
<code>redis.tar.gz</code>	<code>redis*.tfm</code> <code>redis*.pk</code>	11 TeX font-metric files for different point sizes 91 TeX packed-bitmap files for different resolutions
<code>hebpqm.tar.gz</code>	<code>*.f</code>	9 programs described in <i>Homebrew Hebrew</i>
<code>lib.tar.gz</code>	<code>*.f</code> , <code>*.c</code> <code>*.f</code>	23 utility routines from <i>Classical Fortran</i> 34 other routines used in the downloadable programs
<code>man.tar.gz</code>	<code>heb*.1</code> <code>*.1</code> <code>*.3</code>	Unix manual pages for Hebrew typesetting programs Unix manual pages for other downloadable programs Unix manual pages for the subprograms in <code>lib.tar.gz</code>

In the table below, files marked D are documents, those marked S are software (including program source, documentation, or data), and those marked A are tar archives described in more detail on the previous page.

file name	type	contents
cons.pdf	D	my consulting areas of competence
prog.pdf	D	my programming skills
teach.pdf	D	my teaching experience
contact.pdf	D	how to contact me
cv.pdf	D	my curriculum vitae
extracv.pdf	D	my extracurriculum vitae
rp.pdf	D	my research publications
about.pdf	D	about this website (this file)
disclaim.pdf	D	disclaimers and permissions
toc0R.txt	D	<i>Introduction to Operations Research</i> contents
fix0R.txt	D	<i>Introduction to Operations Research</i> corrections
imp.pdf	D	<i>Introduction to Mathematical Programming</i> text
pivot44.f	S	tableau pivoting program
impsrc.tar.gz	A	Octave codes in <i>Introduction to Mathematical Programming</i>
lavreg.pdf	D	<i>Least-Absolute-Value Regression</i>
simulation.f	S	program simulates noise in regression data
cft.pdf	D	<i>Computing Fourier Transforms</i>
raster.f	S	raster plotting program
bnlp.pdf	D	<i>Bilevel Nonlinear Programs</i>
fixCF2.txt	D	<i>Classical Fortran</i> corrections
tocCF2.txt	D	<i>Classical Fortran</i> contents
more.pdf	D	more <i>Classical Fortran</i> exercise solutions
precise.pdf	D	<i>Classical Fortran</i> new §18.9
fixCF1.txt	D	<i>Classical Fortran</i> first edition corrections
course.pdf	D	syllabus for “Reading Classical Hebrew”
supp.pdf	D	supplementary materials for “Reading Classical Hebrew”
courseind.pdf	D	index for “Reading Classical Hebrew”
voice.pdf	D	<i>Voicing Hebrew</i>
senesh.pdf	D	<i>Hannah Senesh Word by Word</i>
homebrew.pdf	D	how to use the Hebrew textprocessing software
hebrew.tex	S	L <sup>A</sup> T <sub>E</sub> X 2 <sub>ε</sub> Hebrew typesetting commands
redis.tar.gz	A	Hebrew font files
milon.dat	S	editable Hebrew dictionary
hebrew.hsh	S	hashed Hebrew dictionary
hebpqm.tar.gz	A	Hebrew text processing programs
lib.tar.gz	A	general-purpose Fortran subprograms
man.tar.gz	A	manual pages for Fortran codes

## Revision History

If you notice a mistake in any of the content posted on this website, or if you want to suggest an improvement, please tell me by sending email to the appropriate address at the *contact* tab. I will carefully consider every bug report and suggestion.

release date	changes from previous version
01 Jan 24	initial release