

## Senior Scientific/Engineering Programmer/Analyst

Norman S. Clerman  
360 E. Randolph St., Apt. 408  
Chicago, IL 60601  
U.S.A.  
[norm.clerman@gmail.com](mailto:norm.clerman@gmail.com)  
312-240-0118 (home); 224-300-8396 (mobile)

## Professional Skills

- large-scale program design and maintenance
- mathematical and scientific programming, optimization, algorithm development, numerical analysis
- user-interface development, computer graphics
- optical-design software; structural-analysis software;
- debugging, program performance analysis
- network administration

## Computer Skills

- **LANGUAGES:** Fortran (expert programmer, over 40 years experience) - FORTRAN 77, Fortran 90/95, Fortran 2003/2008, including coarrays; Python; Delphi (Object Pascal); VBA;  $\text{\LaTeX}$ ; C/C++; Assembly; OpenMP; GKS Graphics; Perl; HTML5; CSS; JavaScript
- **SYSTEMS:** Windows, Linux (SuSE, Ubuntu, Fedora); DEC VAX/VMS; DOS
- **SYSTEM UTILITIES:** bash and Korn shell scripts; cvs; awk; sed; make; Samba; cygwin, MKS Toolkit, CVS
- **MISC:** Excel

## Professional Experience

*7/2013 - 4/2016      Software Engineer      Global Data Consultants, Chambersburg, PA*

- Worked as a contract employee at Manitowoc Crane, Incorporated. Responsible for maintaining and upgrading a suite of Fortran programs used for the structural analysis and capacity rating of the lattice cranes manufactured at Manitowoc Crane. (See [www.manitowoc.com](http://www.manitowoc.com))
- Engineering programming written in Fortran. All test and administration programming done in Python.

*9/2012 - 6/2013      Senior Fortran Developer      TEKsystems, Inc., Hanover, Maryland*

- Working as a contract employee at United Airlines, Chicago, IL. Responsible for maintaining Flight Attendant, Crew Management Systems program.

*5/2010-12/2011*

- Devoted full time to completion of the book *Modern Fortran: Style and Usage*, published in Jan. 2012 by Cambridge University Press (see Publications under Miscellaneous Information).

*8/1979-4/2010      Chief Computer Scientist      Opcon Design Associates, LLC; Israel, Maryland, New York, NY; Cincinnati, OH*

- Responsible for all program development and maintenance of the Opcon proprietary lens design program.
  - The Opcon program has been used to design over 100 patented lenses, millions of which have been manufactured. (see [www.opconassociates.com](http://www.opconassociates.com))
  - Activities include software development for lens analysis, design and optimization; user-interface design; parallelization analysis; performance analysis; program maintenance; and technical documentation.
- Responsible for maintaining and administering a small mixed network of PC Workstations running the Windows 2000, Windows XP and the Linux operating systems.

#### Continuing Education

* 5/3/2016-5/5/2016:	Pandas Crash Course	Enthought Scientific Computing Solutions.
* 5/18/2013-6/27/2013:	Beginning Python	Univ. of Ill.
* 6/7/2012-7/9/2012:	JavaScript: An Introduction	Univ. of Ill.
* 5/16/2012-6/7/2012:	Introduction to HTML5 and CSS	Univ. of Ill.

#### Education

<i>Degree</i>	<i>School</i>	<i>Location</i>
M.Sc. Civil Engineering (Structures)	Univ. of Maryland	College Park, MD
M.Sc. Aeronautics and Astronautics	MIT	Cambridge, MA
B.Sc. Aerospace Engineering (High Honors)	Univ. of Maryland	College Park, MD

#### Languages

<i>Language</i>	<i>Proficiency</i>
English:	Fluent
Hebrew:	Converse fluently. Read with high competence and write at an intermediate level.
Spanish:	Read at an advanced intermediate level. Converse at an advanced beginner level

#### Miscellaneous Information

- **Publications:** Co-author of *Modern Fortran: Style and Usage*, published by Cambridge University Press. (see [www.cambridge.org/us/knowledge/isbn/item6577536/?site\\_locale=en\\_US](http://www.cambridge.org/us/knowledge/isbn/item6577536/?site_locale=en_US) and [www.computer.org/web/cnbooks/blog/-/blogs/modern-fortran:-style-and-usage](http://www.computer.org/web/cnbooks/blog/-/blogs/modern-fortran:-style-and-usage))
- **Nationality:** USA
- **Security Clearance:** None
- **Military:** Lieutenant, United States Air Force, March 1970 to August 1972. Navigator C-130 Hercules.
- **Professional Affiliations:** Member of ACM, and SIAM.
- **Family Status:** Married, two grown children
- **Willing to Relocate:** Yes.

References provided on request.