

# Peter Solfest

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## Summary

I develop and engineers software solutions using state-of-the-art techniques and technologies. I am especially interested in positions that leverage my applied/computational mathematics and physics background to solve novel problems for customers in the space domain.

## Professional Experience

- **Mathematician** Northrop Grumman  
*SWAFS, Weather and Space Impacts Research and Development Center* Feb 2017 – present
  - Primary Responsibilities: modernize software infrastructure, develop/improve software processes, develop innovative new applications to demonstrate space weather impacts, mathematical validation of algorithms
  - Roles: SWAFS Tech Lead, SWAFS Software Developer, Research Assistant
- **Engineering Scientist Associate** Applied Research Laboratories, UT  
*Space and Geophysics Laboratory* Oct 2015 – Jan 2017
  - Major Projects: data assimilating ionospheric models, web services for supplying models
- **Research Assistant** University of Minnesota  
*Dept. of Computer Science* July 2014 – Mar 2015
- **Calculus Instructor** Michigan Tech Dept. of Mathematics  
*Calculus 1 and 2* Jan 2013 – June 2014 (4 semesters)

## Professional Certifications

- **CSSLP (pending exam)** (ISC)<sup>2</sup>  
*secure software throughout development lifecycle* Exam Date: 27 July 2020
- **Model-Based Systems Engineering** Caltech  
*SysML training and model creation* 2019
- **System Engineering Fundamentals** Caltech  
*Practical methods and tools for system engineering* 2019
- **Security+** CompTIA  
*Application, network, and device security* Feb 2018 – Feb 2021

## Education

- **Michigan Technological University** Houghton, MI  
*M.S. in Applied Mathematics; GPA: 4.00* Aug 2012 – June 2014
  - Advisor: Dr. Jiguang Sun
- **Michigan Technological University** Houghton, MI  
*B.S. in Physics and Applied/Computational Mathematics; GPA: 3.94* Aug 2008 – Apr 2012
  - Graduated Summa Cum Laude

## Skills

- **Software Practices:** (automated) unit testing, cross-language development, DevSecOps, Documenting design and courses of action, Software Design via Modeling
- **Tools:** Bitbucket, Cameo, Eclipse: Papyrus, Fortify, GitHub, git, JIRA, L<sup>A</sup>T<sub>E</sub>X, Linux, MATLAB, mercurial, SharePoint, Sparx Enterprise Architect
- **Programming Languages:** BASH, C, C++, Fortran (Modern and 77), Java, Python, SysML, SQL

## Achievements

- **NG IP trade secret awards** MS IP Committee  
*3 related to space and weather effects on communications* 2018-2019
- **Outstanding Teaching Award** Michigan Tech Dept. of Mathematics  
*Graduate Level* 2014
- **Co-Recipient of Ian W. Shepherd award** Michigan Tech Dept. of Physics  
*"presented each year to the most outstanding physics graduate(s)"* 2012
- **Departmental Scholar** Michigan Tech Dept. of Physics  
2011

## Research Experience

- **Senior Research (BS degree)** Houghton, MI  
*Computational analysis of spectra arising from Mo doped Tungstenite* 2011 - 2012  
– Advisor: Dr. John Jaszczak
- **Lunar and Planetary Space Academy** NASA - Goddard, MD  
*Instrumentation development for space based Gamma Ray Spectroscopy* Summer 2011  
– Mentor: Dr. Ann Parsons
- **Yap Research Group** Michigan Tech  
*Boron Nitride Nanotube (BNNT) synthesis and application* Summer 2010