

# Antonius Torode

Active Secret Security Clearance

<https://torodean.github.io>

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Exceptionally well organized and resourceful professional with more than 10 year's experience, with a solid academic background, excellent analytical and problem solving skills, and able to handle multiple projects while producing high quality work. Experienced in software development and a strong working knowledge of algorithms and data structures.

## Skills Summary

- Problem-Solving
- Research & Development
- Software Development
- Engineering
- Software Deployment
- GUI Design
- Debugging
- Web Development
- Mathematics
- Technical Documentation
- End User Documentation
- Software Testing

## Computer and Technology Summary

- Languages C++, PYTHON, C#, JAVA, GIT, BASH, CMAKE, PHP, ROOT GEANT4, HTML, CSS, CAD, L<sup>A</sup>T<sub>E</sub>X, Perforce, Qt, Eclipse, CLion, NetBeans, Cygwin, Makefiles, LabVIEW, Mathematica, TLS/SSL, Telnet, IBM MQ, Systemd, GDB
- Systems Microsoft Windows (all modern), Linux (Ubuntu, RedHat, Kali, Debian, CentOS, Fedora, Raspian, others), MAC OS, UNIX
- Software OpenOffice products, Microsoft Office Suite, Adobe (Premiere Pro, Illustrator, Photoshop, After Effects, Audition), TexStudio, DS9, Stellarium, Sony Vegas, Final Cut Studio, GIMP, PuTTY, Notepad++, FileZilla, VLC, OBS, Blender

## Experience

- 2024–Pres **Owner, Torode On The Road, LLC.**, Austin, TX.
- An multidisciplinary artisan and innovation startup.
  - Specializing in custom carpentry, lumber work, integrated circuitry, handyman services, and innovative device design.
- 2019–Pres **Engineering Scientist**, APPLIED RESEARCH LABORATORIES, Austin, TX.
- Programming and implementing new technologies used by satellite GPS systems.
  - Developed multiple applications for automating and improving the GPS network, systems, and development process.
  - Managing and implementing system design structures via high and low level documentation.
  - Training others in software skills, standards, best practices, and application development.
- 2019 **IT Helpdesk Specialist**, CASEY'S, Des Moines, IA.
- Computer, register, and other Casey's hardware/software troubleshooting and repair.
- 2017–2018 **Undergraduate Research Assistant**, NATIONAL SUPERCONDUCTING CYCLOTRON LABORATORY, East Lansing MI.
- Experimental nuclear astrophysics with a primary focus was with scintillator detectors and experimental setups to better understand nucleosynthesis. This involved designing, building, and testing detector systems and collecting data using photomultiplier tubes and the NSCL DAQ system.
  - I also performed calculations and simulations written in PYTHON and C++ for determining existing detector properties and new detector properties.

- Summer 2018 **LabVIEW Programmer**, MICHIGAN STATE UNIVERSITY, East Lansing MI.
- Programming and documentation of experimental data acquisition systems for an advanced lab class at MSU for quantum physics (optical pumping) and superfluidity experiments by integrating National Instruments I/O devices to a computer system.
- 2016–2018 **Physics and Astronomy Computing Assistant**, MICHIGAN STATE UNIVERSITY, East Lansing MI.
- My responsibilities included managing and fixing any computer related problems that may arise while maintaining or improving efficiency within multiple departments. These included problems such as setting up experimental camera systems, restoring corrupted operating system files, recovering lost data, replacing damaged hardware, troubleshooting malfunctioning software and more.
- Summer 2016 **Physics Teaching Assistant**, MICHIGAN STATE UNIVERSITY, East Lansing MI.
- A tutor and exam proctor for PHY 232C, an online course taught at MSU.
  - Assisting students in the understanding of concepts and problems via online and in person.
- 2013–2015 **CRLA Certified Math, Physics and Chemistry Tutor**, OAKLAND COMMUNITY COLLEGE, Auburn Hills MI.
- Tutor for fundamental concepts and ideas of mathematics, physics and chemistry.
- Summer 2013 **Condensed Matter Physics Researcher**, OAKLAND UNIVERSITY, Auburn Hills MI.
- Extensively studied Raman spectroscopy and graphite/graphene under high pressures.
  - Performed a Raman spectroscopy experiment on graphene using a diamond anvil cell.
  - Designed and set up resistivity experiments to confirm spectroscopic findings.
  - Presented research in a professional and comprehensive manner in front of an audience.
- 2011–2013 **Data Research Analyst**, CLRS, INC., Southfield MI.
- Performed Data analysis of different financial markets such as the GM commercial car market.
  - In depth research of Las Vegas casino populations.
  - Improved business functionality and efficiency by optimizing data verification process.
- 2010–Present **d0sag3-Films**, HOME BUSINESS.
- Graphic design and 3D modeling for film and animation industry.
  - Contract work for Detroit In Focus and also many personal projects.

## Peer Reviewed Publications

- May 2023 "High-pressure phase of cold-compressed bulk graphite and graphene nanoplatelets." Phys. Rev. B 107, 184102 - <https://doi.org/10.1103/PhysRevB.107.184102>
- Jan 2020 "Extracting the Anharmonic Properties of the G-Band in Graphene Nanoplatelets." Journal of Physical Chemistry - 2020, 124, 8, 4835–4842 - <https://doi.org/10.1021/acs.jpcc.9b10875>
- Jan 2018 "Software Development to Determine the Optimal Parameters of a Tape Transport System." Student Journal of Physics - International Version - Vol. 7. No. 1. Jan-March 2018 - Indian Association of Physics Teachers.
- Jun 2017 "Exploration of the Quantum Casimir Effect." Student Journal of Physics - International Version - Vol. 6. No. 2. April-June 2017 - Indian Association of Physics Teachers.

## Education

- 2018–2019 **Degree in Biblical Studies**, *Ambassador Bible College*, Milford OH.  
Theology and historical studies pertaining to the history and contents of the Bible and other religions.
- 2015–2018 **B.S., Physics, Mathematics (Dual Majors)**, *Michigan State University*, East Lansing MI.
- Graduated with an undergraduate physics degree and mathematics degree.
  - Nominated for and received the Lawrence W. Hantel Endowed Fellowship.
- 2011–2014 **Undergraduate Studies**, *Oakland Community College*.  
General studies as well as math/sciences up to and including Calculus III, Differential Equations, Engineering Physics II and General Chemistry II (4.0 in all).