

# Antonius Torode

## *Achieving Higher Education*

### Education

- 2015–Present **Physics and Mathematics Undergraduate Degrees**, *Michigan State University*, Lansing MI, *GPA – 3.7*.  
Finished all requirements for an undergraduate physics degree and will be finishing a Mathematics degree by May 2018. Graduating at the end of Summer 2018.
- 2011–2014 **General Educational Studies**, *Oakland Community College*, *GPA – 3.7*.  
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).
- 2008–2011 **High School**, *Clarkston High School*, Clarkston MI, *GPA – 4.0 (ACT standards)*.  
AP Physics, AP Calculus, AP computer Sciences, CSMTech (3 year advanced math, science and technology program).

### Experience

- 2017–Present **UnderGraduate Research Assistant**, NATIONAL SUPERCONDUCTING CYCLOTRON LABORATORY (NSCL), Lansing MI.  
I work in experimental nuclear astrophysics. My primary focus is with new detectors and experimental setups to better understand nucleosynthesis. I also perform calculations and simulations for determining existing detector properties and new detector properties.
- 2016–Present **P-A Computing Assistant**, MICHIGAN STATE UNIVERSITY, Lansing MI.  
I work to manage and maintain the computers and networks for multiple departments at MSU, including Physics & Astronomy, Physiology, and Microbiology & Molecular Genetics. My responsibilities include fixing any common or difficult problems that may arise while applying my knowledge to maintain or improve efficiency within the department.
- Summer 2016 **Physics Teaching Assistant**, MICHIGAN STATE UNIVERSITY, Lansing MI.  
I was a weekly tutor and an exam proctor for PHY 232C which is an online course taught at Michigan State University. I was in charge of assisting students in the understanding of concepts and problems via both an online forum and in person.
- 2013–2015 **CRLA Certified Math, Physics and Chemistry Tutor**, OAKLAND COMMUNITY COLLEGE, Auburn Hills MI.  
I worked in the Auburn Hills campus Mathematics lab tutoring students in fundamental concepts and ideas having to do with but not limited to mathematics, physics and chemistry.

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Summer 2013 **Condensed Matter Physics Research**, OAKLAND UNIVERSITY, Auburn Hills MI.  
I started off by extensively studying Raman spectroscopy and graphite/graphene under high pressures. After familiarizing myself with the current work, I ran a Raman spectroscopy experiment on graphene using a diamond anvil cell to achieve high pressures.

- Learned and ran experimental setups using Raman Spectroscopy.
- Personally designed and set up resistivity experiments to confirm 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 including the General Motors commercial car market.

- Learned and filled in for other positions when needed, including management duties.
- Performed analysis of economic markets and businesses.
- In depth research of Las Vegas casino populations.
- Analyzed business functionality and efficiency and improved upon them.

#### Miscellaneous

2010–Present **d0sag3-Films**, HOME BUSINESS.  
d0sag3-Films is a video editing and graphic design title I created while in high school. I have done paid projects for Detroit In Focus but also many personal projects. Many of my projects can be viewed at <https://www.facebook.com/d0sag3> (d0sag3 is spelled with a zero).

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## Publications and Projects

- 2018 "Multiple Integrated Applications (MIA)." Program created for further development of application design. Contains mathematical functions, encryption algorithms, windows key code simulations, a comprehensive workout generation system, and more.
- Oct 2017 "Characterizing a Tape Station and Beta Detector For Radioactive Isotope Beam Experiments." Conference Poster presented at the Fall Meeting of the Division of Nuclear Physics of the American Physical Society
- 2017 "Generations of Nuclear Activity (GINA)." Program created for performing nuclear decay calculations for a new radioactive transport system at the NSCL.
- 2017 "Local Operations Listing Agent (LOLA)." Program created for improved efficiency and computer database management at MSU.
- 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.
- May 2017 "The Antonius Cookbook." Self Published: Free cookbook download.
- Nov 2016 "Antonius' Handbook." Comprehensive reference of useful formulas, constants, units and definitions. Self Published: Free book download.

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## Clubs and Honors

2017 Lawrence W. Hantel Endowed Fellowship Fund, in Memory of Professor Donald J. Montgomery

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- 2016 Astronomy Club
- 2016 Physics Club
- 2016 Karate Club
- 2016 Michigan State University Dean's List
- 2015 Member of the Phi Theta Kappa Honor Society
- 2011-2015 Oakland Community College Dean's List
- 2010 Member of the National Junior Classical League

## Computer skills

- Basic PHP, MAC OS
- Intermediate to Advanced Linux, JAVA, HTML, CSS, CAD,  $\text{\LaTeX}$ , C++, C#, Python, DS9, Stellarium, all OpenOffice products, all Microsoft Office products, Microsoft Windows xp/7/8/10, Adobe Premiere Pro, Adobe Illustrator, Sony Vegas, Final Cut Studio, Adobe Photoshop, Adobe After Effects, Computer Hardware and Support

## Interests and Hobbies

Mathematics, Chess, Chemistry, Physics, Mathematics, Video Design, Computer Sciences, Health and Education, Technology

## References

- 2015–Present **Artemis Spyrou**, *National Superconducting Cyclotron Laboratory*, Cyclotron, 640 S Shaw Ln, East Lansing, MI 48824, spyrou@nscl.msu.edu (517)-908-7141.  
Supervisor at NSCL.
- 2015–Present **Esther V. V. Reed**, *MSU Faculty*, Biomed/Physical Science Building: 567 Wilson Road, Room 1209, East Lansing, MI 48824, reed@pa.msu.edu (517)-884-5469.  
Supervisor at Michigan State University.
- 2013–2015 **Michael Robinson**, *OCC Faculty*, 739 S Washington Ave, Royal Oak, MI 48067, mdrobins@oaklandcc.edu (248)-232-4438.  
Employer at Oakland Community College.
- 2013 **Yuejian Wang**, *Assistant Professor*, 2200 N Squirrel Rd, Rochester, MI 48309, ywang235@oakland.edu (248)-370-3423.  
Employer at Oakland University.
- 2011–2013 **Mitch Kanaan**, *CLRS, inc. President/Owner*, 29433 Southfield Road, Suite 106 Southfield, Michigan 48076, mkanaan@clrsinc.com (248)-760-5316.  
Employer at CLRS, Inc.