

ANDY CHEN



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EDUCATION

University of Michigan, Ann Arbor

Ann Arbor, MI

2018 — Present

Ph. D. Candidate in Physics

Georgia Institute of Technology

Atlanta, GA

2014 — 2018

B. Sc. in Physics *summa cum laude*

Minor in Mathematics and Music Performance

EXPERIENCE

School of Physics, Center for Nonlinear Science

Atlanta, GA

Undergraduate Research, Dr. Predrag Cvitanović — Search for Periodic Orbits

August 2017 — December 2017

- Researched about Kuramoto-Sivashinsky equation and Michelson ODEs
- Redesigned code that solves Kuramoto-Sivashinsky evolution forward in space

SLAC National Accelerator Laboratory

Menlo Park, CA

Internship, Dr. Jeff Corbett — TCSPC for Electron Bunch Measurement

June 2017 — August 2017

- Designed MATLAB scripts to collect and send TCSPC data from PicoHarp 300
- Implemented methods to reduce instrumental error in TCSPC data
- Developed EPICS panel for monitoring and maintaining SPEAR3 electron beam
- Presented research results during a seminar and in a technical report

Lawrence Livermore National Laboratory

Livermore, CA

Internship, Dr. Philip C. Myint — Thermodynamic Modeling of Energetic Materials

May 2016 — August 2016

- Extended Peng-Robinson Equation of State to various energetic materials
- Designed Fortran and Python scripts to develop pure and binary mixture models
- Collected data from published literature to validate model predictions
- Presented research progress during a department seminar and poster symposium

Parker H. Petit Institute for Bioengineering & Bioscience

Atlanta, GA

Undergraduate Research, Dr. Mark R. Prausnitz — Ionic Liquids for Drug Delivery

January 2015 — December 2015

- Synthesized ionic liquids that incorporate active pharmaceutical ingredients
- Prepared experiments to measure properties of ionic liquids and their alternatives
- Performed independent research on antifungal drugs as ionic liquids project
- Presented research at AIChE 2015 ASC Undergrad Student Poster Competition

PUBLICATIONS

B. Xu, E. Carranza, A. Chen, S. Condamoor, and J. Corbett. Electron bunch pattern monitoring via single photon counting at SPEAR3. *IBIC17, Lansing, MI*, 2017.

A. Chen. TCSPC monitoring of SPEAR3 electron beam via EPICS. *SULI Report*, 2017.

A. Chen, T. T. N. Huynh, A. Majumdar, and B. Musheno. *Origanum vulgare* subsp. *hirtum* glyceraldehyde-3-phosphate dehydro-genase-like (gapc) gene, partial sequence. *NCBI GenBank Nucleotide Database*, 2013.

SKILLS

Platforms and Software:

UNIX	Git	Adobe CS5
EPICS	Linux	Microsoft Office Suite

Programming Languages and Techniques:

Python	L ^A T _E X	Monte Carlo Methods
MATLAB	Java	Parallelization
C++	JavaScript	
Fortran	HTML	

Familiar Topics:

Classical Mechanics	Particle Physics	Abstract Algebra
Electrodynamics	Radiation Physics	Real Analysis
Quantum Mechanics	Optics	Complex Analysis
Statistical Mechanics	General Relativity	Numerical Methods
Thermodynamics	Special Relativity	Probability & Statistics
Quantum Field Theory	Organic Chemistry	Differential Geometry

Linguistic Languages:

English	Native Proficiency
Mandarin Chinese	Minimum Professional Proficiency
French	Elementary Proficiency
Korean	Elementary Proficiency

SCHOLARSHIPS AND AWARDS

Hitohiro Fukuyo Physics Scholarship (2018)

Physics Scholarship awarded to students whose achievements and character reflect Dr. Fukuyo's intellectual accomplishments and personal integrity.

Kelley Family Music Scholarship (2016, 2017)

Music Scholarship awarded upon recommendation by the Music Department to undergraduate students participating in the Georgia Tech music program.

President's Undergraduate Research Award (2015)

Competitive awards funding undergraduate students conducting research with a Georgia Tech faculty member or Georgia Tech Research Institute scientist.

Phoenix Youth Symphony Young Musician's Competition (2014)

Music Camp Scholarship awarded to first and second place recipients of each instrument division of the Concerto Competition.

LEADERSHIP

Georgia Tech China Care Club

Atlanta, GA

Treasurer

May 2017 — May 2018

- Documented the expenditures and managed the budget for all club activities
- Crafted and submitted bills and grant proposals to various funding groups
- Oversaw responsibilities and needs of Fundraising Coordinator and Social Chair

Co-Fundraising Coordinator

January 2015 — May 2015, May 2016 — May 2017

- Coordinated fundraisers that sponsor orphaned children from One Sky Foundation
- Aided Treasurer in applying for funding from the Student Government Association

Historian

May 2015 — May 2016

- Recorded club events and activities on social media to spread club awareness
- Collaborated with other committee members in the planning of large events

Georgia Tech Yellow Jacket Archery Club

Atlanta, GA

Secretary

May 2015 — May 2016

- Managed membership, minutes and records, attendance, and announcements
- Organized club social, recruitment, and advertising initiatives
- Provided coaching and instruction as a Level 2 NTS certified instructor