THAIHANG CHUNG

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EDUCATION

University of Florida, Gainesville, FL *January 2016 - December 2019*
Bachelor of Science in Physics

PROJECTS

High Energy Data Acquisition Electronics (DUNE & LHC CMS)
Set up FPGA-based test stand in collaboration with UPenn, UBristol, and CERN data acquisition groups for the Deep Underground Neutrino Experiment. Assembled warm electronics interfaces (WIB, FELIX) as well as cold front end components (FEMB, COLATA), ran tests on optical and timing clock endpoints, and modified software source code to run standalone Linux kernels. Work on CMS hardware for High Luminosity Upgrade as part of NSF MREFC in progress...

Multi-messenger Astrophysics (IceCube Gen-2 Experiment)
Cataloged cost effective and environmentally safe compounds in efforts to improve the photo-collection sensitivity of Digital Optical Modules of water based neutrino detectors. Performed exploratory data analysis using Python to study EPR spectra and UV-Wavelength shifting properties of compounds using leading Python packages (PI: Dr. Imre Bartos).

High Energy Data Analysis (Compact Muon Solenoid Experiment)
Utilized CERN ROOT's C++ data analysis framework to investigate luminosity and particle cross-section data in efforts to boost muon signal vs background on the Level 1 Endcap Muon Track finder installed on the Large Hadron Collider's CMS detector. (PI: Dr. Darin Acosta)

Orbital Dynamics Simulation Simulated interacting stellar disk galaxies during a parabolic encounter and eccentric orbits in Python using 4th order Runge-Kutta Methods and Leapfrog methods based on the restricted three body problem using Python.

Optical Tweezers
Measured and analyze frequency spectrum of silica spheres under Brownian motion to characterize physical parameters of an optical trap with high precision, presented as final project for Advanced Physics Laboratory II

TECHNICAL SKILLS

Programming: Python, C++, Linux/Unix, git, bash, CERN ROOT, LabView, LT Spice, HTML, CSS, LaTeX, Cherwell IT Service Manager

Miscellaneous: Modeling and Simulations, Hazardous Waste Management, Multimeter, Oscilloscope, UV-vis Spectroscopy, Function Generator, Optical Tweezers

WORK EXPERIENCE

Thesis & Dissertation Support, *University of Florida* June 2016 - June 2021
Supervisor/Technical Consultant

- Provided formatting assistance with Microsoft Word, Excel, and LaTeX for UF graduate students across all disciplines of research. Assisted with interpreting information and effectively communicating in writing.
- Supervised, monitored productivity, and maintained close communication and collaboration with up to 50 employees at a time while ensuring adherence to operating standards, policies, and procedures.
- Coordinated with the Graduate Editorial Office to effectively and accurately prepare documents for publication necessary to complete Thesis and Dissertation requirements.

· Awarded Employee of the Month for outstanding strong initiative, teamwork, problem solving, and customer engagement

Teaching Assistant, ***University of Florida*** Spring 2020 - Summer 2020
Courses Taught: Second Semester Physics Labs *Dr. Robert Deserio, Charles Parks*

· Instructed and lectured second year Physics II laboratory concepts such as electromagnetic fields, Kirchhoff's Law, Resistance, Capacitance
· Responsible for grading weekly quizzes and lab reports; provided constructive and guided feedback
· Held weekly office hours to mentor undergraduate students in ensuring proper understanding of concepts and completion of assignments, analyze information and problem solve on a one on one basis
· Responsible for operation, setup and troubleshooting of standard laboratory equipment and ensured students are utilizing best practices.

HONORS AND AWARDS

Dean's List
Campaign2000 Scholarship

SERVICE

Event Publiciser, Women in Science 2019
Propagandist, Society of Physics Students 2018-2019
Tutoring Chair, Society of Physics Students 2017-2018
WVUM 90.5 Specialty Show: Get Smart, "*Frontiers of Physics*", Miami, FL 2018

CERTIFICATES/WORKSHOPS ATTENDED

UF CMS Student Community
Bi-Weekly discussion and presentation group comprised of Grad/Undergrad students and professors on High Energy, data analysis, and High Performance computing topics.

Nvidia Deep Learning Institute
Fundamentals of Accelerated Computing with CUDA Python (Certificate awarded April 2021)

Nvidia Deep Learning Institute
Fundamentals of Accelerated Computing with CUDA C/C++ (Certificate awarded April 2021)

Nvidia Deep Learning Institute
Fundamentals of Deep Learning (Certificate awarded March 2021)

National Instruments
LabVIEW Associate Developer Boot Camp

UF Research Computing
Research Computing: Training: Introduction to Research Computing and HiPerGator

UF Research Computing
Getting Started in AI: Image Classification with PyTorch in Jupyter on HiPerGator