

Dang Pham

Email: dang.c.pham@hotmail.com

Website: dangcpham.github.io

RESEARCH

Gravitational Lensing (work in progress) Summer 2015 - Present

Astronomy research at the Harvard Center for Astrophysics on gravitational lensing. Conducted mass data analysis by programming to find irregularity in events to seek for dark objects such as black holes or planets and prediction of possible future events from statistical analysis and database cross-matching. Research directed and guided by Dr. Rosanne Di Stefano. (anticipating publication)

Topic keyword: light curves, high proper motion stars, neutron stars, statistical data analysis, high mass objects

Research on Diatomic Anions 2014-2015

Astronomy - chemistry research on possible exotic diatomic anions' (such as H_2^- and N_2^-) existence, properties, and potential impacts in stars or interstellar mediums. Guided by Dr. Edward Chen and Herman Keith. (work published)

Topic keyword: stellar astrophysics, anions, physical chemistry of diatomic anions.

Variable Stars Light Curve Research Summer 2014

Astronomy research and observations at Harvard University on variable stars' trends in variability and periods of RR Lyrae and SX Phe type stars. Guided by Dr. Joshua Schroeder and Dr. Rosanne Di Stefano. (work published)

Topic keyword: trends, light curves, periods, RR Lyrae, SX Phe, variable stars.

Electron Affinity of Lead 2013

Analysis and theoretical calculation of the electron affinity of Pb that shows that accepted value of the electron affinity of lead in the NIST may be erroneous(not published - research paper available). Guided by Dr. Edward Chen and Herman Keith.

Topic keyword: lead, electron affinity

Scientific Peer-Reviewed Publications

Hylleraas hydride binding energy: Diatomic electron affinities Published in 2015

Edward S. Chen, Herman Keith, Tristan Lim, Dang Pham, Reece Rosenthal, Charles Herder, Sunil Pai, R. A. Flores, Edward C. M. Chen. Journal of Molecular Modeling (2015) 21:79, (DOI:10.1007/s00894-015-2598-0)

Report on the Photometric Observations of the Variable Stars DH Pegasi, DY Pegasi, and RZ Cephei Published in 2014

Abu-Sharkh, I., Fang, S., Mehta, S., and Pham, D. 2014, Journal of the American Association of Variable Star Observers (JAAVSO), 42, 315

EDUCATION

Cypress Christian School August 2012 - Present

11123 Cypress N. Houston Road, Houston

Graduation: Anticipated 2016

Harvard Summer School Summer Term 2014 and 2015

ASTR S-30 A Short Tour of the Universe Guided by Einstein and Others

ASTR S-35 Fundamentals of Contemporary Astronomy

STAT S-100 Statistics: Introduction to Quantitative Methods

Independent Study 2012-Present

Studied Mechanics, Electricity and Magnetism, and Thermodynamics

Mentor: Herman Keith

University of Edinburgh, Coursera
Astrobiology and the Search for Extraterrestrial Life
Accomplished with Distinction

March 2013

Computer Science, Udacity
Introduction to Computer Science
Completed With High Distinction

July 2012

VOLUNTEER SERVICES

Chapel Praise Team
Grade 9
Hours per week: 3 hours
Playing piano during practice and school chapel

September 2012 - May 2013

Doan Thanh Nien Anh Sang
Grade 11
La Vang Catholic Church group and choir
Singing for weekly Sunday masses and visiting the sick and elderly.
Hours per week: 3-6 hours

October 2014 - Present

Hospital Volunteering at Christmas for Children
Grade 11
Hours: 5
Service with the National Honor Society. Played with children who had to stay in the hospital for Christmas.

December 2014

Geometry and Algebra 1 Tutoring
Grade 9, 10
Hours per week: 2 hours
Helping 9th-10th grade students on math topics primarily on Algebra 1 and Geometry.

September 2012 - October 2014

Physics Assistant to Middle School Science Fair
Grade 10
Hours per week: 3-5 hours
Aiding 8th grade science fair students on physics topics primarily on electrical circuits and conductivity.

December 2013 - March 2014

LEADERSHIP POSITIONS

Vice President for National Honor Society
Grade 12
Hours per week: 3-7 hours
Working and helping the president to coordinate events and management of the National Honor Society.

April 2015 - Present

Secretary for National Honor Society
Grade 11
Hours per week: 3-7 hours
Sending communications to members of the National Honor Society and helping to organize events.

April 2014 - April 2015

EXTRA- CURRICULAR ACTIVITIES & ORGANIZA- TIONS

Texas Music Educators Association Regional Choir Member
Grade 11
Tenor 2, Region 27

October 2014

National Honor Society Membership November 2013 - Present
Grade 10, 11

Chamber Choir April 2012 - Present
Grade 9, 10, 11
Piano Accompanist, Tenor 2 Singer, Bass singer

CCS Academic Team March 2015, March 2014
March 2015 - Competed at state level in Math, Calculator, and Science
March 2014 - Competed at regional level in Calculator

American Association of Variable Stars Observers - Contributor July 2014 - Present
222 Observations submitted

AWARDS AND HONORS

Hypercube Scholar (Selected) March 2015
Award by Hyperchem
Selected by Dr. Edward Chen

Presidential Service Award May 2013 and May 2015
Silver Award on May 2015

ACSI Distinguished Student Award May 2015
Recognized in Academics, Leadership, Fine Arts, Christian Service

Texas Music Educators Association (TMEA) November 2014
All-state Area Audition
Candidate to All-state Small School TMEA Choir.
First chair regional, and pre-area

Texas Association of Private and Parochial Schools
State Superior Rating for Piano Solo March 2015, 2014, 2013

Texas Association of Private and Parochial Schools
State Excellent Rating for Vocal Solo March 2015

Maestro Award for World Heritage Festival March 2014, February 2013

COMPUTER SKILLS

Programming Languages: Python 2.7, .NET Programming
Skill level: Intermediate
Self-taught in computer programming, as well as completing one Introduction to Computer Science course online. Created programs for researches mentioned above.

Client-side Website Designing: Javascript, CSS3, HTML5, AJAX, jQuery
Skill level: Intermediate
Developed websites. Projects mainly personal and for school-related topics such as the National Honor Society's website.

LANGUAGES

Languages: Vietnamese, English, Spanish
Native language: Vietnamese
Fluent in English
Intermediate in Spanish