Hyerin Cho

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EDUCATION

GIST(Gwangju Institute of Science and Technology), Korea
B.S. Physics Major, Math Minor March 2015 - Present
Overall GPA: 4.0/4.5
Major GPA: 4.4/4.5 [1]

University of California, Berkeley June 2016 - August 2016
Summer Session
Chemical Structure and Reactivity
The Beauty and Joy of Computing

California Institute of Technology September 2017 - December 2017
Study Abroad Program
Ph127a Statistical Mechanics,
Ph77a Advanced Physics Laboratory,
ACM116 Introduction to Probability Models,
Ay20 Basic Astronomy and the Galaxy,
Ph103 Atomic and Molecular Physics(audit), Ph125a Quantum Mechanics(audit)

RESEARCH EXPERIENCE

GIST General Intelligence and Smart Environment Laboratory
Student Intern October 2015 - August 2017
Advisor: Professor Kin Choong Yow
Studying Deep Learning and its applications to physics problem.
I worked on a project to derive physical formulas from data using Deep Learning.

Caltech Theoretical Astrophysics June 2018 - August 2018
Summer Undergraduate Research Fellow
Advisor: Professor Sterl Phinney
Numerical Modeling of Time-Independent Accretion Discs with Instabilities.
I wrote from scratch Python code that solves the time-independent accretion disc equations numerically. These included OPAL and Ferguson opacities, equations of state, and treatment of convection. The purpose of the project was to make realistic and general models of accretion discs covering all parameter space from Cataclysmic Variables to Active Galactic Nuclei and to investigate instabilities caused by the onset of convection and hydrogen recombination.

TEACHING EXPERIENCE

Teaching Assistant March 2018 - June 2018
GIST PS3101 Electromagnetism II (3rd year course)
I was selected to be the Teaching Assistant as the best student of previous year's class. I graded problem sets, midterm and final exams. I also held weekly office hours to answer questions from students.

[1] The courses with PS(Physics) course code in GIST transcript, including courses taken at Caltech.

PUBLICATIONS & TALKS

Caltech SURF Seminar Day — August 2018
Presentation of summer research project.

AWARDS & FELLOWSHIPS

Korea National Science and Engineering Scholarship[2] — March 2015 - Present
Caltech Summer Undergraduate Research Fellowship — June 2018 - August 2018

TECHNOLOGY SKILLS

Programming Languages:[3] Python, MATLAB, LaTeX, C++, Mathematica, C, Fortran
Operating Systems: Linux, Windows

LANGUAGE PROFICIENCY

Korean (native)
English (fluent[4])

OTHER ACTIVITIES

GIST student ambassador, *Member* — March 2015 - December 2015
GIST student council, *Member* — June 2015 - February 2016
GIST student ambassador, *Vice President* — December 2015 - December 2016
MESA[5] Summer School, *Student* — August 2018
Palomar Observatory observing proposal accepted for one night — August 2018
Spectroscopic follow-up observation of several short period binaries discovered with ZTF

HOBBIES

Hiphop dance
I was a practice director of a dance club in GIST, and I was also an instructor for a hiphop class in Caltech.

[2] Full tuition covered for four years.
[3] In order of decreasing familiarity.
[4] Cumulative 3 years in the U.S. during middle school and university.
[5] Modules for Experiments in Stellar Astrophysics