



SAMUEL W. COURVILLE

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OBJECTIVES

Obtain a doctorate degree in Planetary Science and pursue a career in planetary geophysics research with the incorporation of high performance computing.

EDUCATION

- Colorado School of Mines, Golden CO. — Master of Science in Geophysics (In progress, GPA: 4.0 on 4.0 scale).
- Colorado School of Mines, Golden CO. — Bachelor of Science in Geophysical Engineering with a minor in Computer Science - May 2017 (Summa Cum Laude - GPA: 4.0 on 4.0 scale) Deans List Honors Fall 2014 - Spring 2017.
- Pikes Peak Community College, Colorado Springs CO. — Began college level courses at age 16. Attended from 2012 -2014 before transferring to the Colorado School of Mines.
- Poster Presentation, American Geophysical Union's 2016 Fall Meeting: Thermophysical Variation within Dune Fields in the Southern Hemisphere of Mars — Presented a poster detailing research from a planetary geology and geophysics undergraduate research program. See 'Research Intern' under experience.
- Designing a Mars Rover, Senior Design Project, Colorado School of Mines — Actively working with a planetary scientist and a faculty advisor to design a Mars Rover to acquire active source seismic data. NASA Fellowship applications are in progress.
- Assistant Student Project Manager, Geophysics Field Camp, Colorado School of Mines, Summer 2016 — Was voted to be one of the two project managers by the class of 50 students attending the field camp. Oversaw the completion of a 200 page report detailing the findings of the field camp's surveys in Pagosa Springs, CO.

EXPERIENCE

RESEARCH ASSISTANT, CENTER FOR WAVE PHENOMENA; GOLDEN CO. — FALL 2017 - PRESENT

Research assistant to Dr. Paul Sava. Studying the application of a laser doppler vibrometer on asteroid and planetary surfaces from orbit in order to collect seismic data. Funded by a NASA PICASSO grant.

SUMMER INTERN, LUNAR AND PLANETARY INSTITUTE — SUMMER 2017

Selected to be one of 14 summer interns at the Lunar and Planetary Institute. Worked with planetary scientists at LPI and NASA's Johnson Space Center to study the interior structure of Schrodinger Basin on the Moon using GRAIL gravity data. Created 2D and 3D numerical gravity models to compare with data. Results provided important implications for the formation of large impact events and the interior evolution of the Moon.

RESEARCH INTERN, NASA'S PLANETARY GEOLOGY AND GEOPHYSICS RESEARCH PROGRAM — SUMMER 2016

Selected to be an intern in a program that pairs qualified undergraduate students with NASA funded scientists to assist in planetary science research. Worked with a scientist to study the thermal properties of 171 dune fields on Mars using thermal emission spectrometer data from satellites. Comparing the observed thermal response with modeling software allowed for a physical composition assessment of the dune fields to be made. Gained experience with satellite remote sensing and ArcGIS. This research was presented at the 2016 American Geophysical Union's Fall Meeting.

UNDERGRADUATE RESEARCH FELLOWSHIP - APP DEVELOPMENT, COLORADO SCHOOL OF MINES; GOLDEN, CO. — JANUARY 2016 - PRESENT

In progress research project working with a professor to develop a virtual reality mobile app to aid in the viewing of 3D geophysical data. The project is being developed in Android Studio using Java and OpenGL and has required learning to code computer graphics.

PROGRAMMING CONCEPTS TUTOR, COLORADO SCHOOL OF MINES; GOLDEN, CO. — SPRING 2016

Tutoring students for an intro to programming class at the Colorado School of Mines for the spring 2016 semester. Gained valuable experience explaining concepts to others.

FILE ORGANIZER AND OFFICE HELP, COLORADO SCHOOL OF MINES; GOLDEN CO. — SPRING 2015

Organized and prepared files to be scanned and added to a computerized database. An on campus job helping the academic affairs office at the Colorado School of Mines to modernize their file system.

TEAM MEMBER, COSGC DEMOSAT PROGRAM, PIKES PEAK COMMUNITY COLLEGE; COLORADO SPRINGS, CO. — SPRING 2014

Gained significant teamwork, design, and research skills. Worked on a team to design an experiment to be completed on a high altitude weather balloon. Along with collecting basic atmospheric data, the experiment was to measure the effect of radiation on skin cells at high altitude. The project required the construction of a size limited module and sensors (programmed using Arduino) to carry out this specific task and concluded with the writing of a formal report.

INVENTORY MANAGER/SALESMAN, HALLENBECK COIN GALLERY; COLORADO SPRINGS, CO. — 2008-2015

Managed used section of store inventory, pricing items for retail sale and liquidating excess items on a wholesale market. Gained valuable communication and customer interface skills and experience buying and selling precious metals and rare/collectible numismatic items. Obtained high level authentication and grading skills for rare coins.

ACTIVITIES AND AWARDS

COLORADO SCHOOL OF MINES GEOPHYSICS OUTSTANDING GRADUATING SENIOR — 2017

MEMBER OF AMERICAN GEOPHYSICAL UNION — 2016 - PRESENT

MEMBER OF TAU BETA PI ENGINEERING HONOR SOCIETY — 2016 - PRESENT

RECEIVED CHEVRON PETROTECHNICAL SUPPORT SCHOLARSHIP — SPRING 2015

MEMBER OF PHI THETA KAPPA HONOR SOCIETY — 2012 - PRESENT

MEMBER, MAYOR'S 100 TEENS PROGRAM; COLORADO SPRINGS, CO — 2011 - 2012

Chosen to be one of the "Mayor's 100 Teens," a program honoring the accomplishments of Colorado Springs teens in the areas of leadership, volunteering, and academic success.

SKILLS

Knowledge of computer program design and several programming languages.
Experience coding with C++ using Xcode and Microsoft Visual Studio.
Experience coding with MATLAB and Python.
Experience coding with Java using Eclipse and Android Studio.
Working knowledge of linux and writing documents in Latex.
Extensive experience using ArcGIS.
Competent in field survey techniques using a variety of geophysical data collection equipment.
proficient at Technical writing

PERSONAL INTERESTS

Numismatics, Piano, Biking, Skiing, Hiking, Photography, Yellowstone National Park.