

ELIAS ARIAS

PERSONAL INFORMATION

address [10145 W. 25th Ave. Unit 61 Lakewood, CO 80215](#)
email elias.arias550@gmail.com
website <https://github.com/eliasarias95/ea>
phone (M) +1 (915) 355 4867

EDUCATION

M.S. Geophysics *2013-present* **Colorado School of Mines**
Research group: Center for Wave Phenomena
Thesis: *Estimating seismic reflection slopes*
Research and work interests: Geophysical computing, image processing, seismic imaging, formation evaluation, rock physics, seismic inversion
Advisor: Prof. Dave Hale
Graduation: December 2015

B.S. Geophysical engineering *2009-2013* **Colorado School of Mines**
GPA: 3.147
Graduation: May 2013

WORK EXPERIENCE

CSM *2013-present* **Research assistant, COLORADO SCHOOL OF MINES**
My thesis explores the accuracy of slope estimation methods. I propose a new method based on a modified smooth dynamic warping algorithm that better estimates slope values for discontinuous features such as faults and unconformities - features that have traditionally been difficult for other methods to evaluate.
Reference: Prof. Dave Hale · +1 (303) 273 3461 · dhale@mines.edu

PGS *Summer 2015* **Research intern, PETROLEUM GEO-SERVICES**
Worked in the Imaging and Engineering team. Integrated and implemented smooth dynamic warping algorithm in their internal software package for use in slope estimation and other technologies. Implementation done entirely in C++ using features of the language to maximize memory efficiency and speed. Code uses OpenMP and MPI for multiple levels of parallelization.
Reference: Sam Brown · +1 (281) 509 8725 · samuel.brown@pgs.com

ExxonMobil *Fall 2014* **Geophysics intern, EXXONMOBIL EXPLORATION CO.**
Worked in the Geophysical Applications (GAPS) team on a subsalt hydrocarbon project in the Gulf of Mexico. Generated synthetic well ties, interpreted key seismic horizons, conducted modeled and in-situ AVO analysis, and performed RGB color blending.
Reference: Abbas Raad · +1 (832) 624 6836 · abbas.raad@exxonmobil.com

BHP Billiton *Summer 2014* **Geoscience intern, BHP BILLITON PETROLEUM**
Worked in the Eagle Ford field studies team on an unconventional production assignment. Generated synthetic well ties, interpreted key seismic horizons, and conducted a rock physics analysis to increase production efficiency in the Hawkville field.
Reference: David Bryant +1 (281) 352 4273 · david.dg.bryant@bhpbilliton.com

BHP Billiton *Summer 2013* Geoscience intern, BHP BILLITON PETROLEUM
Worked in the Quantitative Interpretation (QI) team on a proprietary rock physics work flow. Generated rock physics templates for use in 4D seismic evaluation of a field in Australia.
Reference: Mauricio Florez +1 (713) 961 8621 · mauricio.florez@bhpbilliton.com

Halliburton *Summer 2012* Geophysics developer intern, HALLIBURTON
Worked in the DecisionSpace development team on a Wellbore Analyzer plug-in. Wrote over 8000 lines of Java code between three interns to add the functionality and user interface for the plug-in.

TEAM PROJECT EXPERIENCE

Senior design *Senior year* Senior design project
Worked with Chris Graziano on a project using the Gabor-Morlet wavelet transform and a neural network to predict lithologies in seismic data. We first decomposed the seismic data into different Morlet amplitudes, then used the amplitudes as input to the self organizing map.

Field camp *Summer 2012* Geophysics field camp
Worked with students from Imperial College London to characterize a geothermal resource in Pagosa Springs, Colorado. Spent two weeks in the field conducting geophysical surveys and two weeks back at CSM processing the data. During the time in the field, I was selected by the professors as the site boss for one day and during the time spent at CSM processing, I was selected by my classmates as the leader for the remainder of field camp.

PROGRAMMING SKILLS

Basic Android app development
Intermediate PYTHON, MATLAB, L^AT_EX
Advanced JAVA, C++, VIM, Unix, Microsoft Windows

SOFTWARE SKILLS

Basic Kingdom
Intermediate DecisionSpace, Hampson-Russel, RokDoc, OpenOffice
Advanced Techlog, Petrel

OTHER INFORMATION

Awards Honor roll · Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013
National Wrestling Coaches Association All-Academic wrestling team · 2012
Professional Societies Society of Exploration Geophysicists
Denver Geophysical Society

August 24, 2015