

# Abdulah Eljalafi

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## Education:

**The University of Texas at Austin, Jackson School of Geosciences, Austin TX GPA 3.9 2022 (Expected)**

Doctor of Philosophy (Ph.D.) in Geosciences

Advisor: Dr. Charles Kerans

Dissertation Topic #1: "*Geomorphic Expression of Last Interglacial Maximum Reef Complexes of the Florida Keys: New Insights from High Resolution LiDAR Data*"

Dissertation Topic #2: "*Carbonate Platform Development and Demise During the Mid-Cretaceous in Central Mexico: Implications on Platform Response to Ocean Anoxic Events*"

**Colorado School of Mines, Golden CO**

**GPA 4.0 Dec 2017**

Master of Science (MS) in Geology- Green River Consortium

Advisor: Dr. J. Fredrick (Rick) Sarg

Thesis Title: "*Lithofacies, Diagenesis, and Chemostratigraphy of the Microbialite and Marginal Lacustrine Carbonate Units within the Green River Fm., Eastern Uinta Basin, Colorado and Utah*"

**Colorado School of Mines, Golden CO**

**GPA 3.63 (cum laude) May 2015**

Bachelor of Science (BS) in Geological Engineering

Advisor: Dr. Yvette Kuiper

## Teaching Experience:

- Spring 2021: Teaching Assistant – **Field Methods** (undergraduate) – UT Austin.
- Fall 2020: Field Teaching Assistant – **Carbonate Depositional Systems** (graduate) – UT Austin.
- Summer 2020: Teaching Assistant – **Summer Field Camp** (undergraduate) – UT Austin.
- Spring 2020: Teaching Assistant – **Sequence Stratigraphy** (graduate) – UT Austin.
- Spring 2019: Teaching Assistant – **Introduction to Geology** (undergraduate) – UT Austin.
- Spring 2018: Teaching Assistant – **Sedimentary Rocks** (undergraduate) – UT Austin.
- Spring 2015: Assistant TA – **Field Methods** (undergraduate) – Colorado School of Mines.
- 2013 – 2015: **Geology Tour Guide, Teaching Kit Lead** – CSM Geology Museum.
- 2012 – 2013: **Volunteer Earth Science Teacher** – Crescent View Academy – 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> grade.
- 2011-2012: **College Math and Physics Tutor** – Metropolitan State University of Denver.
- 2011-2012: **College Math and Physics Tutor** – Red Rocks Community College.

## Mentorship Experience:

- Leland Spangler (**Graduate student**) – University of Texas at Austin.
- Joseph Syzdek (**Graduate student**) – University of Texas at Austin.
- Emmanuel Escario (**Graduate student**) – Autonomous University of Mexico.
- Mario Martinez-Yanez (**Undergraduate/Graduate**) – Autonomous University of Mexico.
- Urenia Navarro (**Undergraduate student**) – Autonomous University of Mexico.

## **Field Experience:**

- **3 Weeks** Reconnaissance mapping and data collections – **Penn-Permian, Sacramento Mountains, NM**
- **18 Weeks** Research Field Work for PhD – **Cretaceous, Central Mexico**
- **2 Weeks** Field Mapping, Measured Sections, UAV Photogrammetry – **Cretaceous, Pecos River, TX**
- **1 Week** Sample Collection, UAV Photogrammetry – **Pleistocene, Eleuthera, Bahamas**
- **1 Week** Sample Collection, Underwater Mapping – **Pleistocene-Holocene, Turks and Caicos**
- **3 Weeks** Sample Collection, Measured Sections – **Permian, Guadalupe Mountains, NM and TX**
- **6 Weeks** Research Field Work for Master's Thesis – **Eocene, UT and CO**
- **2 Weeks** Reconnaissance Mapping, UAV Photogrammetry – **Eocene, UT and CO**
- **1 Week** Drone Data Acquisition and Sample Collection – **Cretaceous, Kansas**

## **Publications:**

**Eljalafi, A., Sarg, F., (2020-In Review),** Depositional System and Lake Stage Control on Microbialite Morphology, Green River Formation, Easter Uinta Basin, Colorado and Utah: Journal of Sedimentary Research

## **Technical and Conference Presentations:**

- Eljalafi, A., Dutton, A., Kerans, C., (2020),** Geomorphic Expression of Last Interglacial Reefs: New Insights from LiDAR Data: American Geophysical Union Fall 2020 Meeting: Abstract and Oral Presentation
- Eljalafi, A., Kerans, C., (2020),** Sequence Stratigraphic Control on Key Reservoir Facies in Isolated Carbonate Platforms – El Doctor Platform, Central Mexico: Reservoir Characterization Research Laboratory (RCRL) annual Sponsor Meeting
- Eljalafi, A., Kerans, C., (2019),** Stratigraphic Architecture of Isolated Carbonate Platforms: A Case Study from the mid-Cretaceous El Doctor Platform, Central Mexico: American Association of Petroleum Geologists Search and Discovery Abstract and Oral Presentation
- Eljalafi, A., Kerans, C., (2019),** Outcrop Analog for Reservoir Facies Architectures of An Albian Reef Margin – El Doctor Platform, Central Mexico: Reservoir Characterization Research Laboratory (RCRL) annual Sponsor Meeting
- Eljalafi, A., Sarg, J.F., (2018),** Lacustrine Microbialite Architectural and Chemostratigraphic Trends: Green River Formation, Easter Uinta Basin, Colorado and Utah: American Association of Petroleum Geologists Search and Discovery Abstract and Poster Presentation
- Eljalafi, A., Sarg, J.F., (2017),** Classification of Lacustrine Microbialite Morphologies: an Example from the Green River Formation: Rocky Mountain Geobiology Symposium, Abstract and Poster Presentation

## **Publications (in Progress):**

**Eljalafi, A., Kerans, C., (In Progress),** Constraining Last Interglacial Sea Level Using High Resolution LiDAR data: New Insights from Regional Mapping along the Miami Region and the Florida Keys: Quaternary Science Reviews

**Eljalafi, A., Nunez-Useches, F., Kerans, C., (In Progress),** Regional Variations and Timing of Growth and Demise of mid-Cretaceous Shallow Water Carbonate Platforms: Latitudinally Variable Oceanic Conditions During the mid-Cretaceous: Cretaceous Research

**Eljalafi, A., Scott, R., Nunez-Useches, F., Kerans, C., (In Progress),** Stratigraphic Architecture of Isolated Carbonate Platforms: Insights from the mid-Cretaceous El Doctor Platform, Central Mexico

## **Internal and Teaching Field Guides:**

Kerans, C., Helper, M., Butler, K., **Eljalafi, A., 2020.** Sedimentologic and Stratigraphic Constraints on the Paleozoic Evolution of the Sacramento Mountains, Southern Rocky Mountains: In UT Austin Undergraduate Geology Summer Field Camp 2020

Kerans, C., Hattori, K., **Eljalafi, A.,** Rendall, B. R., and Smith, B., Larson, T., Zahm, C., **2018.** Facies Architecture and Platform Demise of the Albian Devils River Trend, Maverick Basin: Reservoir Characterization Research Laboratory Annual Field Trip Guidebook.

**Eljalafi, A., Kerans, C., Nunez-Uches, F., 2018.** Stratigraphy and Sedimentology of the Cretaceous Carbonate Platforms of Central Mexico: Autonomous University of Mexico Field Trip Guide.

**Eljalafi, A., Sarg, F. J., 2017.** Microbial Carbonates of the Green River Formation Colorado and Utah: Student Field Trip Guidebook.

## **Honors and Awards:**

- **2020** Student Travel Grant – American Geophysical Union (\$1000).
- **2019** Best Poster Presentation Award – EAGE/HGS Conference on Latin America.
- **2019** Ronald Kinnison Deford Grant Match -University of Texas at Austin (\$1,000).
- **2019** Graduate Research Grant, Geological Society of America (\$1,725).
- **2017-2022** Graduate Student Funding Sponsorship – Reservoir Characterization Research Laboratory, University of Texas at Austin (5-year Funded Ph.D Degree).
- **2017** Honorary Mention, Geobiology Symposium, Colorado School of Mines.
- **2016** IBA Rocky Mountain Regional 1st Place Winner.
- **2016** IBA International 3rd Place Winner ○ Project Scope: Hydrocarbon Prospectively within the Cooper Basin, Australia using Five 3D Seismic Volumes and 80 Wells.
- **2015-2016** Graduate Student Fellowship Sponsor – Green River Consortium, Colorado School of Mines (2-year Funded Master's Degree).

- **2015** Brunton Award, Scholastic Achievement and Enthusiasm in Geosciences, CO. School of Mines.
- **2015** First Place Senior Design Project (**ABET Accredited Senior Design Class**): Integrated Geological, Geophysical, and Petroleum Engineering Design Class.
- **2014-2015** Undergraduate Student Scholarship, Newmont Mining (\$20,000).
- **2013** Geoscience Student Scholarship, Aera Energy (\$4,000).

## **Employment and Research Experience:**

- **Research Intern, Chevron Co., Houston TX** **Jun 2019 to Sep 2019**  
**Carbonate Stratigraphy Research Team-**  
 Project Title: "Regional Controls on the Distribution of Carbonate Rich Deposits in the Vaca Muerta-Quintucu Fm., Neuquén Basin Argentina".
  - Constructed a Basin Wide Stratigraphic Framework using Well logs, 3D and Inversion Volumes.
  - Collaborated with a Suite of Subject Matter Experts to Integrate Petrophysical Models, Inversion Volumes, and Stratigraphic Frameworks to Develop an Understanding of Regional Controls on Carbonate Deposition and Distribution Across the Basin.
- **Exploration Geology Intern, Chevron Co., Houston TX** **May 2018 to Aug 2018**  
**Deep Water Gulf of Mexico Business Unit - Regional**  
 Project Title: "Geologic prospectively of a Structurally Complex new Haynesville Fm. Play Concept In EGOM".
  - Developed a Regional Depositional Model using Thin Sections, Well Logs, and Seismic Data.
  - Constructed Regional Gross Depositional Environment Maps for new Play Concept.
  - Performed Volumetric Calculations and Risk Assessments on Newly Identified Prospects.
- **Exploration Geology Intern, Statoil, Houston TX** **Sep 2016 to Dec 2016**  
**North America GOM Exploration - Maturation**  
 Project Title: "Influence of Structural Complexity on Deepwater GOM Wilcox Fm. Exploration and Maturation"
  - Analyzed Different Structural Trapping Geometries Affected by Different Velocity Models.
  - Tested Different Depositional Stacking Scenarios and how they Affect Reservoir Pressures.
  - Used Petrel and GEOX to Perform Volumetric Calculations as well as Risk Assessments.
- **Exploration Geology Intern, Noble Energy, Houston TX** **May 2016 to Aug 2016**  
**Africa Frontier Venture – Exploration Division**  
 Project Title: "Structural and Tectonic Controls on Sediment Fairways of Pre-Salt Gamba and Dentale Fm., Gabon and Congo Basins"
  - Analyzed and Interpreted Regional Structural and Local Cross Sections using Petrel and GeoFrame.
  - Constructed Gross Depositional Environment Interpretations using Well Logs and Seismic Data.
  - Performed Risk Assessment Analysis and Maturing of Noble Block of Interest.
- **Exploration Geology Intern, Statoil, Houston TX** **June 2015 to Aug 2015**  
**North America GOM Exploration - Maturation**  
 Project Title: "Prospectively and Hydrocarbon Potential of the Norphlet Formation in EGOM"
  - Conducted sub-regional study on Norphlet-Smackover Deposition using 3D seismic.
  - Performed Prospect Evaluation and Risk Assessment on Blocks of Interest.
  - Conducted Volumetric Calculations using GEOX.
- **Exploration and Production Geology Intern, Juneau AK** **May 2014 to Aug 2014**  
**Greens Creek Hecla Mining Co.**
  - Mapped Underground Geological Structures and Ore Vein Distribution.
  - Performed Underground Surveying and Site Evaluation for Rock Fall Hazard Mitigation.
  - Logged Core Samples for 3D Modeling Using Datamine and AutoCad for Ore Body Interpretation.

- **Geology Intern, United States Geological Survey (USGS), Lakewood CO**      **June 2013 to May 2014**  
**Central Region Mineral and Resources**
  - Mineral Database Project: Literature Research; Data Compilation; GIS mapping, Digitizing, and Geo-referencing; Mine Ore Deposit Study and Analysis.
- **Museum Employee, CSM Geology Museum, Golden CO**      **May 2013 to May 2015**
  - Identification of minerals and rocks brought into the museum by donors.
  - Managing displays and labels.
  - Museum tours: indoor tours through the museum collection, outdoor tours revolving around Colorado geology.

### **Technical Skills:**

- Computer Software: ArcGIS, E-Cognition, Petrel, Kingdom Suite, Petra, GEOX, Petrosys GeoFrame, AutoCad, Microsoft Suite.
- Extensive field mapping experience, reading geologic maps and constructing stratigraphic and structural cross-sections.
- Excellent public speaking and communication skills, great technical writing.
- Introductory and beginner Python coding working knowledge.

### **Professional Associations:**

- American Geophysical Union (AGU).
- Geological Society of America (GSA).
- Society for Sedimentary Geology (SEPM).
- American Association of Petroleum Geologists (AAPG).