

CURRICULUM VITAE

Cory Hughes

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Updated: 12/16/2017

EDUCATION

Bachelor of Science, General Geology

The University of Texas at Austin, Jackson School of Geosciences

August 2017

Texas Business Foundations Program

The University of Texas at Austin, McCombs School of Business

May 2017

RESEARCH INTERESTS

Martian Sedimentology and Geomorphology

Remote Sensing as it relates to Planetary Science and Exo-Geology

Earth Analogues for Planetary Science and Exo-Geology

Impact Craters and Impact Metamorphism

General Exo-Geology

RESEARCH EXPERIENCE

University of Texas at Austin

Undergraduate Research Assistant, Martian and Terrestrial Sedimentology

Supervisors: Dr. David Mohrig and Dr. Gary Kocurek

Created and interpreted geologic maps based on remote sensing data using ArcGIS; performed stratigraphic architecture analysis and developed depositional history hypotheses of martian stratigraphy; interpreted depositional history of terrestrial aeolian, fluvial, carbonate systems for various projects

January 2015 – Present

University of Texas at Austin

Undergraduate Research Assistant, NASA Astronaut Candidate Program

Supervisor: Dr. Mark Helper

Developed and interpreted geologic maps based on remote sensing data; contributed to the development of classroom and field exercises for NASA astronaut candidates

March – April 2014

RELEVANT FIELD EXPERIENCE

Field Assistant, Ghost Ranch, New Mexico

Measured and described sections of Entrada Fm. and Todilto Fm.; defined facies; used total station and GPS measurements to understand lateral thickness changes of facies and relict dune topography; developed early depositional hypotheses based on detailed field notes

April 2017

Field Assistant, Gulf Coast, Texas

Field checked DEM difference maps of erosional and depositional features from before and after Hurricane Ike; trenched over-wash fan deposits to examine internal depositional structure and lobe interactions; collected ground penetrating radar data on over-wash fan deposits

January 2017

Field Assistant, Page, Arizona

Established ground control points for later DEM generation with a total station; characterized and interpreted aeolian architecture of the Page Sandstone Fm.

June 2016

Field Assistant, Green River, Utah

May 2016

Measured and mapped paleo-flow direction on inverted paleo-channels; described and mapped geometry of preserved bar form deposits; developed stereo-derived DEMs, using a UAV drone, of paleo-channels to aid mapping

Field Assistant, Gulf Coast, Texas

March 2016

Preliminary search for field locations for future field excursions; trenched and examined over-wash fans along the beach of barrier islands; explored barrier island beach morphology and storm deposits

Field Assistant, Liberty, Texas

March 2016

Trenched point bars in the Trinity River; examined and interpreted exhumed strata; cored levee flood deposits

Field Assistant, Trinidad and Tobago

July 2015

Analyzed and correlated sedimentary outcrops at multiple field sites at meter and millimeter scales; created detailed field reports; developed depositional history hypotheses based on detailed field reports

Jackson School of Geosciences Field School

May – June 2014

Field Assistant, New Mexico

April 2014

Contributed to the development of classroom and field exercises for NASA astronaut candidates; field checked remote sensing based maps

REFEREED JOURNAL PUBLICATIONS

C.M. Hughes, B.T. Cardenas, T.A. Goudge, D. Mohrig (2017), DELTAIC DEPOSITS INDICATIVE OF A PALEO-COASTLINE AT AEOLIS DORSA, MARS, *Icarus* (Submitted).

T.A. Goudge, D. Mohrig, B.T. Cardenas, **C.M. Hughes**, C.I. Fasset (2017), STRATIGRAPHY AND PALEOHYDROLOGY OF DELTA CHANNEL DEPOSITS, JEZERO CRATER, MARS, *Icarus*, *in press*, DOI: 10.1016/j.icarus.2017.09.034

CONFERENCE ABSTRACTS

T.A. Goudge, D. Mohrig, B.T. Cardenas, **C.M. Hughes**, C.I. Fasset (2017), STRATIGRAPHY AND EVOLUTION OF DELTA CHANNEL DEPOSITS, JEZERO CRATER, MARS, 48th LPSC, Abstract 1195.

B.T. Cardenas, T. A. Goudge, **C.M. Hughes**, D. Mohrig, J.S. Levy (2017), STRATIGRAPHIC ARCHITECTURE OF COMPOUND CHANNEL-FILLING DEPOSITS IN THE CEDAR MOUNTAIN AND MORRISON FORMATIONS, UTAH: STRATIGRAPHIC ANALOGS TO MARTIAN SINUOUS RIDGES, 48th LPSC, Abstract 1946.

T. A. Goudge, D. Mohrig, B. T. Cardenas, **C. M. Hughes**, J. S. Levy, C. I. Fassett (2016), STRATIGRAPHY AND PALEOHYDROGEOLOGY OF DELTA CHANNEL DEPOSITS, JEZERO CRATER, MARS., GSA 2016.

Y. Peng, R. Steel, V. M. Rossi, C. Clayton, **C. M. Hughes** (2016), MIXED ENERGY PROCESS INTERACTION READ FROM A TIDE-DOMINATED SHORELINE: THE PALEO-ORINOCO DELTA, TRINIDAD., ACE 2016.

C. M. Hughes, B. T. Cardenas, T. A. Goudge and D. Mohrig (2016), DELTAIC DEPOSITS INDICATIVE OF A PALEO-COASTLINE AT AEOLIS DORSA, MARS., 47th LPSC, Abstract 2139.

T.A. Goudge, D. Mohrig, B. T. Cardenas, **C. M. Hughes**, J. S. Levy, C. I. Fasset (2016), SEDIMENTOLOGY OF THE JEZERO CRATER WESTERN FAN DEPOSIT: 2. SECULAR CHANGES IN THE STYLE OF CHANNELIZATION., 47th LPSC, Abstract 1656.

B. T. Cardenas, A. B. Bryk, T. A. Goudge, **C. M. Hughes**, D. Mohrig (2016), DETERMINING PALEOFLOW DIRECTION OF MARTIAN CHANNEL BELTS USING PRESERVED CHANNEL-BEND ASYMMETRY: CASE STUDY AT AEOLIS DORSA, MARS., 47th LPSC, Abstract 2367.

PROFESSIONAL EXPERIENCE

VSolvit LLC, Ventura CA

Intermediate GIS Data Analyst & Data Quality Assurance Supervisor
2015

May 2015 – December

Compiled and organized raw data for GIS implementation; established departmental quality assurance guidelines for compiling and organizing data; performed web development quality assurance

C- Innovation LLC, Mandeville, LA

ROV Trainee Technician

May 2012 – August 2012

Completed Remotely Operated Vehicle (ROV) pilot preparatory classes; contributed to the development and maintenance of new and existing ROV & subsea tooling

PUBLIC OUTREACH & SERVICE

Bellville I.S.D., Science and Tech. Booster Club, Space Science Volunteer Educator

2017

HONORS & AWARDS

UT Undergraduate Geologic Society Speaker

2017

SETI Institute LPSC Travel Grant (\$600)

2016

Soft-Rock Talk Speaker

January 2016

Planetary Organization for Space Science and Exploration Speaker

2016

MEMBERSHIPS

Planetary Organization for Space Science and Exploration

American Association of Petroleum Geologists - Student Chapter

UT Undergraduate Geological Society

TECHNICAL SKILLS

Proficient skills with ESRI ArcGIS and Photoshop – adept at quickly learning new software and applications

Experience with Fortran, Python, and Latex