

## Student Presentation Talk and Poster Titles

### Oral Presentations – 8:50 am – 12:30 pm

Located in SR1 Rooms 223 & 634

CHARACTERIZATION OF WIND PATTERNS OVER TEXAS: IMPACT ON DALLAS-FORT WORTH OZONE

ALEXANDER KOTSAKIS, YUNSOO CHOI, AMIR SOURI, AND JAMES FLYNN

REMOTE SENSING EVIDENCE OF DECADEAL CHANGES IN MAJOR TROPOSPHERIC OZONE PRECURSORS OVER EAST ASIA

AMIR HOSSEIN SOURI, YUNSOO CHOI, WONBAE JEON, JUNG-HUN WOO, QIANG ZHANG, AND JUN-ICHI KUROKAWA

STABLE AND RADIOGENIC Mg ISOTOPE STUDY OF THREE SIMILAR EARLY SOLAR SYSTEM REFRACTORY SOLIDS: CAIs

ANDREW KEREKGARTO, RYAN JEFFCOAT, AND MINAKO RIGHTER

ISOTROPIC-FRACTURED FLUID-SATURATED LAYER: DISPERSIVE PROPERTIES AND TUNING EFFECTS

ANNA KRYLOVA

SEDIMENT CHARACTERIZATION OF TILLS AND GLACIOMARINE DIAMICTONS IN THE ROSS SEA, ANTARCTICA: SUBSTRATE DEFORMATION AND ICE SHEET BEHAVIOR

DELANEY ROBINSON

TIMING OF CRUSTAL SUTURING IN THE PAMIR

DUSTIN P. VILLARREAL, JAY CHAPMAN, ILHOMJON OIMAHMADOV, BRIAN MACDONALD, BARBRA CARRAPA, MUSTAFO GADOEV, AND ALEXANDER ROBINSON

THE USE OF DEEP LEARNING TO PREDICT OZONE CONCENTRATION OVER HOUSTON AREA

EBRAHIM ESLAMI AND YUNSOO CHOI

WEST TEXAS MICRO EARTHQUAKES INDUCED OR NOT

HONGLI JING AND HUA-WEI ZHOU

SPECTRAL DECOMPOSITION USING TIME-FREQUENCY CONTINUOUS WAVELET TRANSFORMS FOR FAULT DETECTION IN THE BAKKEN FORMATION

ISMOT JAHAN AND JOHN CASTAGNA

TECTONIC DRIVERS OF THE WRANGELL BLOCK: INSIGHTS ON FOREARC SLIVER PROCESSES FROM 3D GEODYNAMIC MODELS OF ALASKA  
KIRSTIE L. HAYNIE AND MARGARETE A. JADAMEC

UNMIXING DETRITAL ZIRCON U-PB AGE DISTRIBUTIONS  
KURT ERIC SUNDELL AND JOEL SAYLOR

GROUND BASED HYPERSPECTRAL IMAGING OF THE EAGLE FORD FORMATION  
LEI SUN AND SHUHAB KHAN

WATER CONTENTS ALONG THE RIO GRANDE RIFT MANTLE AND UNDERLYING PROCESSES  
LILLIAN SCHAFFER, ANNE PESLIER, AND ALAN BRANDON

INTEGRATED BASIN AND PLAY ASSESSMENT OF UNDISCOVERED OIL AND GAS RESOURCES IN THE WESTERN CARIBBEAN SEA: MISKITO BASIN, COLOMBIAN OFFSHORE  
LUIS CARLOS CARVAJAL

SIMULTANEOUS DETERMINATION OF ORGANOSULFUR COMPOUNDS, DIAMONIDS, AROMATIC AND SATURATED BIOMARKERS IN CRUDE OILS BY GAS CHROMATOGRAPHY-TRIPLE QUADUPOLE MASS SPECTROMETRY  
MEI MEI, K. K. ADRY BISSADA THOMAS B. MALLOY, L. MIKE. DARNELL, AND EWA B. SZYMCIK

LABORATORY MEASUREMENTS OF VELOCITY DISPERSION AND WAVE ATTENUATION IN WATER SATURATED SANDSTONES AT LOW FREQUENCY  
QIANQIAN WEI, DE HUA HAN, AND QI HUANG

COMPARISON OF ANISOTROPIC EFFECTIVE MEDIUM SCHEMES FOR ELASTIC INTERACTIONS OF INCLUSIONS  
SHARIF M. MORSHED AND EVGENY M. CHESNOKOV

LATITUDINAL VARIATION IN SALT-BODY INTERVAL VELOCITIES IN THE DEEPWATER GULF OF MEXICO: KEATHLEY CANYON AND WALKER RIDGE AREAS  
SHARON CORNELIUS AND JOHN P. CASTAGNA

EVALUATION OF THE AIR QUALITY IMPACTS OF INCREASED FREIGHT TRAFFIC IN THE HOUSTON METROPOLITAN AREA IN A FUTURE YEAR  
SHUAI PAN, YUNSOO CHOI, AND ANIRBAN ROY

THE EFFECT OF PROPPANT-FILLED FRACTURES ON THE ELASTIC PROPERTIES OF 3D-PRINTED ROCK MODELS

SURESH DANDE, ROBERT R. STEWART, NIKOLAY DYAU, AND JOSE BAZE-FRANCESCHI

A POTENTIAL IMPACT SITE IN THE SAHARA DESERT, REMOTE SENSING EVIDENCE AGAINST FORMATION FROM ANAOROGENIC MAGMATISM OF THE AIR MOUNTAINS, NIGER

TREY LOBPRIES

PALEOGENE TECTONICS DRAINAGE DYNAMICS AND BASIN FILLING IN NORTH CENTRAL NEW MEXICO

TYSON SMITH, KURT SUNDELL, SHELBY JOHNSTON, CARLOS GUILHERME ANDRADE, ROSS ANDREA, JORDAN DICKINSON, JOEL SAYLOR, YIDUO LIU, MICHAEL MURPHY, AND TOM LAPEN

GEOCHEMICAL MODELS FOR TWO COMPONENTS MIXING FROM ARCTIC MORB

XIANG LING, JONATHAN SNOW, AND YIPENG LI

DELINEATING BEACH AND DUNE MORPHOLOGY FROM MASSIVE TERRESTRIAL LASER SCANNING DATA USING THE GENERIC MAPPING TOOLS

XIN ZHOU, GUOQUAN WANG, YAN BAO, LIN XIONG, VERONICA GUZMAN, AND TIMOTHY KEARNS

TOPOGRAPHY-COUPLED RESONANCE BETWEEN MARS NORMAL-MODES AND PHOBOS TIDAL FORCE

YUAN TIAN

EFFECTS OF VARIATIONS IN FLUID PROPERTIES AND FRACTURE GEOMETRY ON DISPERSION, ANISOTROPY AND REFLECTION IN MEDIA WITH PLANAR FRACTURES

YUANDI GAN AND EVGENI CHESNOKOV

A LAYER-CELL APPROACH OF NEAR-SURFACE FIRST-ARRIVAL TOMOGRAPHY

YUKAI WO AND HUA-WEI ZHOU

APPLICATION OF THE DIRECT WAVEFORM INVERSION ON 2D MODELS

ZHONGHAN LIU AND YINGCAI ZHENG

## Poster Presentations 1:15 – 3:30 pm

### Advanced Ph.D. Students – 1<sup>st</sup> Floor SR1:

ANALYSIS OF SOLAR-INDUCED FLUORESCENCE (SIF), CARBON DIOXIDE, AND PRECIPITATION USING OCO-2 AND TRMM  
ABIGAIL CORBETT

GEOCHEMICAL CHARACTERISTICS OF MONTEREY FORMATION, SANTA MARIA BASIN  
BINGYI ZHAO, CLINT BARNETTE, ADRY BISSADA, ALAN BRANDON, AND QI FU

QUANTITATIVE ANALYSIS OF SILICICLASTIC CLINOFORMS AN EXAMPLE FROM THE NORTH SLOPE ALASKA  
CAROLINA RAMON-DUENAS, KURT W. RUDOLPH, PETE EMMET, AND JULIA S. WELLNER

CLOSE-RANGE GROUND-BASED HYPERSPECTRAL MAPPING OF A COPPER-GOLD-MOLYBDENUM PORPHYRY DEPOSIT: INSIGHTS INTO HYDROTHERMAL ALTERATION PROCESSES  
DIANA KRUPNIK

CHARACTERIZATION OF FAULTS USING SEISMIC ATTRIBUTES FROM 3D SEISMIC DATA IN THE BAKKEN FORMATION  
ISMOT JAHAN, JOHN CASTAGNA, AND MICHAEL MURPHY

NEW OBSERVATION ON SEISMIC ANISOTROPY IN SUBDUCTING SLABS INFERRED BY NON DOUBLE COUPLE EARTHQUAKE RADIATION PATTERNS  
JIAXUAN LI, YINGCAI ZHENG, LEON THOMSEN, THOMAS LAPEN, AND XINDNIG FANG

ELASTIC PROPERTIES OF SALT  
JINGJING ZONG, ROBERT R. STEWART, AND NIKOLAY DYAU

CRUSTAL STRUCTURE AND RIFT TO PASSIVE MARGIN TECTONIC EVOLUTION OF CONJUGATE VOLCANIC PASSIVE MARGINS OF THE SOUTH ATLANTIC OCEAN COMPARED TO RIFT ZONES WORLDWIDE  
KYLE REUBER

ANTI-ALIASING FILTERS FOR DERIVING HIGH-ACCURACY DEMS FROM TLS DATA: A CASE STUDY FROM FREEPORT, TEXAS  
LIN XIONG, GUOQUAN WANG, AND PAUL WESSEL

UNDERSTANDING SLAB-MANTLE INTERACTION BY 3D SEISMIC IMAGING OF REFLECTIVITY IN THE MANTLE WEDGE

LUCHEN LI, HAO HU, XINYAN LI, AND YINGCAI ZHENG

PALEOGENE, MEGA-MASS TRANSPORT COMPLEXES IN THE DEEP-WATER FOZ DO AMAZONAS BASIN, NORTHERN BRAZIL: IMPLICATIONS FOR FUTURE HYDROCARBON EXPLORATION

LUCIA TORRADO

A REVISED FLEXURAL MODEL FOR THE FORELAND LLANOS BASIN OF COLOMBIA: INDICATION OF AN EARLIER ANDEAN UPLIFT AND ITS HYDROCARBON IMPLICATION

LUIS CARLOS CARVAJAL

CONSTRUCTING A HIGH RESOLUTION EVENT STRATIGRAPHY MODEL OF THE CENOMANIAN – TURONIAN OCEANIC ANOXIC EVENT 2 IN A NEOTROPICAL EPICONTINENTAL SEA

MANUEL PAEZ-REYES, JUAN CARLOS SILVA TAMAYO, CHRISTOPHER JUNIUM, HUMBERTO CARVAJAL-ORTIZ, AND BRENT MILLER

WATER OF THE CANADIAN CORDILLERA AND SLAVE CRATON LITHOSPHERIC MANTLE: AN FTIR STUDY

MCKENSIE KILGORE, ANNE PESLIER, AND ALAN BRANDON

IMPROVED GEOCHEMICAL CORRELATION METHODS FOR DETERMINATION OF ORIGINS OF PETROLEUM FLUIDS

MEI MEI, K. K. ADRY BISSADA, THOMAS B. MALLOY, L. MIKE. DARNELL, EWA B. SZYMCYK, TAO SUN, AND ZHENGFAN LIU

BASEMENT AND CRUSTAL STRUCTURE OF JURASSIC OCEANIC CRUST IN THE EASTERN GULF OF MEXICO

PIN LIN

GAS-POCKET-RESERVOIR ANALYSES UTILIZING VECTOR-BASED TO IMAGING AND EXTRACTING ROCK PROPERTIES

PONGTHEP THONGSANG AND HAO HU

GROUND-BASED HYPERSPECTRAL STUDY OF A TIDAL INFLUENCED CHANNEL, CRETACEOUS FERRON SANDSTONE, UTAH

PROMA BHATTACHARYYA AND SHUHAB D KHAN

THE RELATIONSHIP BETWEEN OZONE EXCEEDANCE AND THE METEOROLOGICAL EVENTS  
IN THE HOUSTON-GALVESTON-BRAZORIA AREA

RUIXUE LEI, SING-CHUN WANG, YUXUAN WANG, AND ROBERT TALBOT

TECTONIC ORIGIN OF THE TOBAGO-BARBADOS RIDGE AND TOBAGO FOREARC  
BASIN BASED ON INTEGRATION OF GRAVITY MODELS AND SEISMIC REFLECTION DATA  
SHENELLE GOMEZ

INVESTIGATION OF UPSTREAM NATURAL GAS FUGITIVE LEAK DETECTION  
SHUTING YANG, ROBERT TALBOT, AND MICHAEL B.FRISH

LINKAGES BETWEEN PETROLEUM WITHDRAWAL AND SUBSIDENCE IN GALVESTON  
COUNTY

TIMOTHY J. KEARNS, AND GUOQUAN WANG

MEASURING SPINEL TRACE ELEMENTS IN RESIDUAL MANTLE PERIDOTITE: AN  
ANALYTICAL PROTOCOL

TITHI GHOSH AND JONATHAN SNOW

SURFICIAL MINERALOGICAL HETEROGENEITIES AS POSSIBLE LATE DIAGENETIC  
INDICATORS OF MICROSEEPAGE IN GARZA, TEXAS

UNAL OKYAY

AN OPTIMUM SAMPLE PREPARATION METHOD FOR MULTI-ELEMENT ANALYSIS IN  
CRUDE OR FUEL OILS WITH ICP-OES AND QQQ-ICP-MS BY MINERALIZATION UTILIZING A  
SINGLE-REACTION-CHAMBER MICROWAVE SYSTEM

WEIHANG YANG, JOHN F. CASEY, AND YONGJUN GAO

ASSESSING EFFECTS OF SULFATE MINERALS ON GAS GENERATION IN SHALE USING  
HYDROUS PYROLYSIS

XUEZE CHEN AND CHRISTOPHER XIAO

COMPARISON OF THE SUNDA SLAB FROM MITP08 TOMOGRAPHY AND MANTLE FLOW  
MODELS: IMPLICATIONS FOR PLATE TECTONIC RECONSTRUCTIONS OF SOUTHERN  
SUNDALAND SINCE THE CRETACEOUS

YI-AN LIN, JONNY WU, NICOLAS FLAMENT, AND JOHN SUPPE

THE METAMORPHIC P-T PATH OF THE PAMIR MUZTAGHATA DOME

YIPENG LI AND ALEX ROBINSON

**Masters and Early Ph.D. Students – 2<sup>nd</sup> Floor SR1:**

CASE STUDY OF 1933 TRINIDAD HURRICANE: CAN IT HAPPEN AGAIN?

AARON STUDWELL

LATE JURASSIC STRATIGRAPHIC AND STRUCTURAL EVOLUTION OF THE NORTHERN YUCATAN MARGIN

ANDREW STEIER

GREEN'S FUNCTION IN VISCOELASTIC MEDIA

AVRADIP GHOSH

2D SEISMIC CHARACTERIZATION OF THE MESOZOIC CARBONATE PLATFORM, OFFSHORE GUINEA-BISSAU, SENEGAL BASIN, NW AFRICA: TECTONIC IMPLICATIONS

BEATRIZ E. SERRANO-SUAREZ

ELASTIC WAVE IMAGING USING P-P, SH-SH, AND SV-P EVENTS: MODELING AND DATA PROCESSING

ELENA ERMOLAEVA AND ROBERT R. STEWART

GRAVITY MODELING AND SEISMIC REFLECTION STUDY OF THE BARREIRINHAS AND CEARA BASINS OF NORTHERN EQUATORIAL BRAZIL

ERIC LUNN

BURIED GLACIAL GEOMORPHIC FEATURES ON EROSIONAL SURFACES USING 3D SEISMIC DATA IN THE SOUTHWESTERN BARENTS SEA, ARCTIC NORWAY

JANET KONG

EARTH INNER CORE ANISOTROPY USING PKIKP AND PKIKP REFLECTIONS

JESSICA CHEW, YINGCAI ZHENG, AND HAO HU

APPLICATION OF GEOPHYSICAL TECHNIQUES TO STUDY THE INTERNAL ARCHITECTURE OF COASTAL DUNE MORPHOLOGY, NORTH PADRE ISLAND, TEXAS

JUHI AGGARWAL, SHUHAB KHAN, AND JULIA WELLNER

SUBSURFACE STRUCTURAL MAPPING AND PETROLEUM SYSTEMS MODELING OF THE PORT ISABEL PASSIVE MARGIN FOLDBELT, NORTHWEST GULF OF MEXICO

MUHAMMAD NAWAZ BUGTI

INVESTIGATION OF THE INFLUENCE OF PLANETARY BOUNDARY LAYER EVOLUTION AND METEOROLOGY ON AIR QUALITY IN MEXICO CITY  
OLABOSIPO OSIBANJO AND BERNHARD RAPPENGLUECK

IMPACTS OF CENTRAL AMERICAN FIRES ON OZONE AIR QUALITY IN TEXAS  
SING-CHUN WANG, YUXUAN WANG, RUIXUE LEI, AND ROBERT TALBOT

INVESTIGATING GROUND SURFACE DEFORMATION: EXAMPLE FROM THE HOUSTON AREA  
WANDA E. CRUPA

TRACE ELEMENTS CHARACTERIZATION OF PLAGIOGRANITES FROM BAY OF ISLANDS OPHIOLITE, NEWFOUNDLAND, CANADA  
WEIYAO YAN, JOHN F. CASEY, YONGJUN GAO, AND LINHAN LI

SEISMIC TOMOGRAPHIC CONSTRAINTS ON PLATE-TECTONIC RECONSTRUCTION OF NAZCA SUBDUCTION UNDER SOUTH AMERICA SINCE LATE CRETACEOUS (~80 MA)  
YI-WEI CHEN, JONNY WU, AND JOHN SUPPE

IDENTIFICATION OF SWEET SPOTS FOR HYDRAULIC FRACTURE IN AVALON SHALE, PERMIAN BASIN, USING LITHOFACIES CLASSIFICATION  
ZOHREH SOURI



### **Undergraduate Students – 3<sup>rd</sup> Floor SR1**

URANIUM-THORIUM-LEAD CHRONOLOGY OF FISH BONE IN PETROLEUM SOURCE ROCKS: AN EXAMPLE FROM THE EAGLE FORD GROUP, TEXAS  
ANE SLABIC AND THOMAS J. LAPEN

VISUALIZING GLOBAL SUBDUCTION ZONES WITH 3D IMMERSIVE VIRTUAL REALITY  
BENJAMIN CHANG

USING SUBSIDENCE ANALYSIS TO TEST WHETHER THE EASTERN USA AND NORTHWESTERN AFRICA CONJUGATE MARGINS ARE UPPER PLATE AND LOWER PLATE RIFTED MARGINS  
EMILY STIBBE

FAULT AND RIVER TERRACE DEVELOPMENT IN THE MADISON VALLEY: IMPLICATIONS FOR FAULT SYSTEM BEHAVIOR AND PASSAGE OF THE YELLOWSTONE HOTSPOT  
J.B. CHENIN AND J.M. CANNON

HETEROGENEITY IN THE UNCOMPAHGRE UPLIFT REFLECTED IN PROXIMAL-DISTAL SEDIMENT MIXING IN THE PARADOX BASIN  
KENNETH JAMES LAMBERT, T. M. SMITH, J.E. SAYLOR, T.J. LAPEN, AND P. COPELAND

APTIAN TO RECENT, POST-RIFT COOLING AND SUBSIDENCE HISTORY OF THE SOUTHEASTERN MARGIN OF BRAZIL AND CORRELATION TO LATE CRETACEOUS-CENOZOIC PHASES OF THE ANDEAN OROGENY  
LILI ZHANG

GROUND-BASED HYPERSPECTRAL DETECTION OF GOLD-BEARING HYDROTHERMAL ALTERATION ZONES AT THE GOLDSTRIKE MINING DISTRICT, UT  
MACEY CROCKETT AND SHUHAB D. KHAN

REGIONAL COMPARISON OF DETRITAL ZIRCONS POPULATIONS IN PRE-RIFT PALEOZOIC AND SYN-RIFT MESOZOIC ROCKS FROM THE GULF OF MEXICO TO NORTHERN SOUTH AMERICA AND NORTH AMERICA  
MARIE KOUASSI

COMPARISON OF BURIAL HISTORIES, SUBSIDENCE RATES, AND TECTONIC EVENTS ON THE JURASSIC-RECENT DEMERARA-GUINEA CONJUGATE MARGINS, EQUATORIAL ATLANTIC OCEAN  
OMAR ZAVALA

STRATIGRAPHIC THICKNESS, TOTAL ORGANIC CARBON VALUES, AND SOURCE ROCK  
TYPES PRODUCED BY OCEANIC ANOXIC EVENTS ON ATLANTIC AND GULF OF MEXICO  
PASSIVE MARGINS  
PRESLY CARR

GRAVITY-BASED STUDY OF FLEXURE AND CRUSTAL STRUCTURE AT THE NIGER AND  
MISSISSIPPI DELTAS  
RASHEED AJALA

PETROLOGY OF ZIRCON BEARING DIOGENITE NORTHWEST AFRICA TEN THOUSAND SIX  
HUNDRED SIXTY SIX  
TYLER BROCK TANNER, C.R. JEFFCOAT, M. RIGHTER, E.L. BERGER, T.J. LAPEN, A.J. IRVING,  
S.M. KUEHNER, AND G. FUJIHARA

EVALUATION OF HYPERSPECTRAL CLASSIFICATION METHODS TO MAP AND IDENTIFY  
MINERAL ALTERATIONS AND STRATIGRAPHIC RELATIONSHIPS IN THE ASPHALT-RICH  
ANACACHO LIMESTONE TO IDENTIFY FUTURE PROSPECTS  
VALERIE SMITH