



UT
ENERGY
WEEK
2017

FEBRUARY 7 – 10, 2017

THANK YOU TO OUR HOSTS & SPONSORS

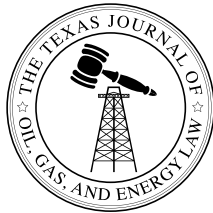
The University of Texas at Austin



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LONGHORN
ENERGY CLUB



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ENERGY WEEK WIFI ACCESS

- 1 Connect to the attwifi network
- 2 Open your web browser
- 3 Click on "Use A Coupon"
- 4 Enter WPAS-XRXB-BR



Longhorn Energy Club seeks to leverage the world-class academic, co-curricular, and extra-curricular energy opportunities at UT for the betterment of all members of the UT community. In particular, the aim of this organization shall be to build community and collaboration between students at UT, support energy-related activities and events, and to aid members in pursuit of energy careers.

Hector Arreola President
 John Adamo VP of Entrepreneurship/Corporate Relations
 Felipe Cardoso VP of Research
 Aanandh Chandrasekar.....VP of Entrepreneurship
 Pamela Daitch.....VP of Finance
 Maria Fernanda De la Fuente.....Speakers Chair
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 Drake Daniel Hernandez Energy Week Co-Chair
 Brooke Holleman Energy Week Co-Chair
 Harshit Jayaswal VP of Research
 Andrew Martin VP of Professional Development
 Maria J Martinez PinanezVP of K-12 Outreach
 Erica Pocs VP of Marketing
 Saad SiddiqueEnergy Week Logistics Chair

UT Energy Week 2017

Welcome to the third *UT Energy Week*, co-hosted by The University of Texas at Austin Energy Institute, the KBH Center for Energy, Law & Business, and two student-run organizations – the Longhorn Energy Club and the Texas Journal for Oil, Gas, and Energy Law. The conference is also supported by schools and colleges engaged in energy research across the UT Austin campus.

UT Energy Week is designed to showcase the interdisciplinary collaboration and sharing of expertise we believe is essential in identifying and solving complex energy problems facing our world.

Our goal for the conference is three-fold: to create a platform for experts representing varying points of view to provide their insights on vital energy issues and emerging trends; to highlight the work of UT Austin students involved in energy research; and to demonstrate the depth and breadth of knowledge among scientists and other researchers at UT Austin, *the* energy university.

Through a series of panel discussions and keynote addresses you'll hear spirited discussions on a variety of energy topics, including entrepreneurship in the oil and gas industry, the continued integration of renewable energy onto the electric grid, the evolving utility-consumer relationship, and the outlook for President Trump's energy policies.

On Thursday and Friday, Feb. 9-10, the Texas Journal for Oil, Gas, and Energy Law will host a symposium exploring a range of topics, including cybersecurity ethics in the oil and gas industry, lessons learned from the downturn in oil prices, and an outlook for the Texas legislative session.

On Friday, Feb. 10, the KBH Energy Center will host its second annual symposium – *"The Future of the Oil and Gas Industry: Peak Oil or Peak Demand – What's on the Horizon?"* – at the Four Seasons Hotel in downtown Austin.

Be sure to check out the student energy research poster competition and start-up challenge, which offers cash and prizes for innovative approaches to solving vexing energy challenges.

UT Energy Week also features several affiliate events, including a demonstration of the university's famed Petroleum Engineering Department's labs, a tour of the School of Architecture's solar decathlon project, and a walk-through of the campus' ultra-efficient power system and micro-grid.

View the complete schedule for *UT Energy Week* in this program, or check out the online schedule of events at <http://energyweek.utexas.edu/2017-program/>

Thank you for attending *UT Energy Week 2017* and for giving us the opportunity to share with you some of the vital energy research taking place at UT Austin.

Sincerely,

Dr. Thomas F. Edgar
 Director, Energy Institute

Hector Arreola
 President, Longhorn Energy Club

Friday, February 3

Hot Science Cool Talks

UT Environmental Science Institute

CLIMATE AND FAITH, MONEY AND POLITICS: CAN WE BUILD A SUSTAINABLE FUTURE?

*AN EVENING AT THE PARAMOUNT THEATRE WITH DR. KATHARINE HAYHOE,
CLIMATE SCIENTIST, AUTHOR, AND AWARD-WINNING COMMUNICATOR*

COMMUNITY SCIENCE FAIR: 5:45 – 6:45 P.M.

TALK WITH Q & A: 7:00 – 8:30 P.M.

What risks does climate change pose to Texas? Is a safe and sustainable future possible, given our energy and economic interests, and widespread political rejection of these risks? And why are evangelicals so opposed to accepting the science of climate change? Join us for a lively discussion with Dr. Katharine Hayhoe, climate scientist and an award-winning communicator.

Katharine Hayhoe is an internationally-known atmospheric scientist, author, communicator, and Director of the Climate Science Center at Texas Tech University. She is also an outspoken Christian, the daughter of missionaries and wife of a pastor. She has been featured in the recent South by South Lawn event at the White House and the documentary series Years of Living Dangerously. She has been named one of Christianity Today's 50 Women to Watch (2012), TIME magazine's 100 Most Influential People (2014), Foreign Policy's 100 Leading Global Thinkers (2014), and the POLITICO 50 list of thinkers, doers and visionaries transforming American politics (2016). In 2014, she received the American Geophysical Union's Climate Communication Prize.

Monday, February 6

Energy Technology Open Competition

Location: Texas Union Building, UT Austin Campus

The University of Texas at Austin invites Texas students, faculty and the startup community to share their ideas, win cash prizes, and meet investors and prospective customers across four categories: Oil & Gas, CleanTech, Energy & Water Efficiency, and Software.

The Texas Energy Technology Open collaborates with the existing energy innovation ecosystem. We work with other startup competitions and organizations to establish a standard application for entrepreneurs. Competitors are able to submit their application to other competitions with minimal additional effort.

We believe that any innovation cluster must be entrepreneur-driven. We encourage competitors to help set the tone of this competition by inviting audience members, be they investors, entrepreneurs, or other parties.



The University of Texas at Austin

WHAT STARTS HERE CHANGES THE WORLD

Energy Technology

Open Competition

STARTUP COMPETITION JUDGES

OIL AND GAS

| | |
|----------------|--------------------------|
| Luis Alcoser | BP Ventures |
| Jason Wible | ARPA-E |
| Harlan Beverly | Texas Venture Labs (TVL) |

CLEANTECH

| | |
|--------------------|------------------|
| Jonathan Blackburn | Cleantech Open |
| Kirk Coburn | SURGE Ventures |
| Bert Haskell | Pecan Street Inc |
| Steve Smaha | Angel Investor |
| Jose Beceiro | TXU, NSTXL |

RESOURCE EFFICIENCY

| | |
|-------------------|-----------------------------------|
| Katharine Beisner | SunPower |
| Bart Bohn | Austin Technology Incubator (ATI) |
| Becky Taylor | SensorRX |
| Jeff Auster | Genesis |

SOFTWARE

| | |
|--------------------|--|
| Shane Walsh | Arena Growth Partners |
| George Schaefer | Galvanize |
| Jitendra Jain | Office of Technology Commercialization (OTC) |
| Julie Goonewardene | UT Horizon Fund |
| Jeremy Adelman | Energy Foundry |

In addition to cash prizes, Texas students, faculty, and entrepreneurs who participate in the 2017 Energy Technology Open Competition will be competing for the chance to join Austin Technology Incubator's Student Entrepreneur Acceleration and Launch (SEAL) program. The intensive, mentor-driven program is designed to help student entrepreneurs tackle the most difficult questions of their new ventures and to accelerate them toward a go/no-go decision. Since 2009, 100 students have participated by taking over 50 ventures through the ATI SEAL program, and two-thirds of SEAL graduates successfully raised capital or bootstrapped the company to market.

The 2017 Energy Technology Open Competition is supported by the following sponsors:



 The University of Texas at Austin
Office of Technology Commercialization
Office of the Vice President for Research

Tuesday, February 7

Natural Resources

8:15 – 9:00 **REGISTRATION**

9:00 – 10:00 **KEYNOTE**

Robert Armstrong, *Director, MIT Energy Initiative*

10:00 – 11:15 **THE ENERGY FRONTIER:
HOW TO INVEST IN FUTURE RESOURCES?**

Peter Flemings, *Professor, UT Austin Jackson School of Geosciences*

Alan Lloyd, *Research Fellow, UT Austin Energy Institute*

Schonna Manning, *Director of R&D, UTEX Culture Collection of Algae, Co-Director, ATP3 Education and Training*

Carey King, *Assistant Director, UT Austin Energy Institute (Moderator)*

11:15 – 11:30 **BREAK**

11:30 – 12:30 **ENTREPRENEURSHIP IN OIL & GAS**

Mike Witte, *COO, RigUp*

Steve Skinner, *President & CEO, Ursa Resources*

Russell Parker, *CEO, Phoenix Natural Resources*

Allen Gilmer, *Chairman & CEO, Drillinginfo*

Mukul Sharma, *Professor, UT Austin Department of Petroleum & Geosystems Engineering (Moderator)*

12:30 – 12:45 **BREAK**

12:45 – 2:00 **LUNCH & OPEN MIC:
PRESIDENT TRUMP'S ENERGY POLICY**

Michael Webber, *Deputy Director, UT Austin Energy Institute*

2:00 – 3:30 **CHANGING SUPPLY & DEMAND
IN THE ENERGY SECTOR**

Marianne Kah, *Chief Economist, ConocoPhillips*

Todd Onderdonk, *Senior Energy Advisor, Corporate Strategic Planning, ExxonMobil*

Corey Grindal, *Vice President of Supply, Cheniere*

Gürcan Gülen, *Research Scientist, Bureau of Economic Geology, UT Austin Jackson School of Geosciences*

Richard Chuchla, *Energy and Earth Resources Graduate Program Director, UT Austin Jackson School of Geosciences (Moderator)*

3:30 – 3:45 **BREAK**

3:45 – 4:45 **ENERGY COMPANIES OF THE FUTURE:
OIL, GAS & MORE**

Michael J. Liebman, *Senior Vice President, Operations, BP Wind Energy*

Johnna Van Keuren, *VP for New Energies, Shell*

Bob Lukefahr, *Director, NG Solutions*

Russell Gold, *Senior Energy Reporter at the Wall Street Journal (Moderator)*

5:00 – 6:30 **TOURS** (see details on page 10)

5:00 – 6:00

PETROLEUM ENGINEERING TOUR

The Petroleum Engineering Department will provide you with an insider look at several key research areas including: Geomechanics laboratory which has capabilities for a wide range of rock property tests and experiments; Computerized Tomography (CT) laboratory where CAT scans are used to reconstruct data from multiple X-ray images of internal structures; and an interactive state-of-the-art 3D drilling simulator. Please join us to learn more about how the UT Petroleum Engineering Department is leading the way in addressing and solving important issues that will lead to energy security. The tour will take place in the Chemical and Petroleum Engineering Building (CPE) from 5:00-6:00 p.m. on Tuesday, February 7. Tour participants will meet in lobby 2.500 (west side of the building, nearest Speedway).

5:15 – 6:00

SCHOOL OF ARCHITECTURE ENERGY INITIATIVES TOUR

The School of Architecture (SOA) tour will include a presentation of energy-related work by the SOA students and faculty and a quick view of the facilities, including the Thermal Labs. Students and faculty will present recent projects such as the Solar Decathlon Net Zero house prototype, the Pike Powers Lab, and the Thermal Labs. Please join us for this valuable look at SOA energy initiatives! The tours will take place in Sutton Hall, room 2.112, from 5:15-6:00 p.m. on Tuesday, February 7.

5:30 – 6:30

UT AUSTIN POWER PLANT TOUR

The Carl J. Eckhardt Combined Heating and Power Complex is often described as the largest and most integrated microgrid in the U.S. The University of Texas at Austin campus features a Combined Heat and Power plant (CHP) with a 135 MW power capacity and 1.2 million lb/hr steam generation capacity. It provides 100% of the electricity and heating for the university's main campus. This includes 4 chilling stations and a 4 million gallon chilled water thermal storage tank that provides the cooling requirements for 18 million square feet. Connections to the City of Austin electrical grid exist only for emergency backup, providing the university independence in generating all utilities required for a campus the size of a small city. Please join us for this informational, behind the scenes tour of one of the largest microgrids in the nation. The tour will take place from 5:30-6:30pm on Tuesday, February 7, at the UT Power Plant Expansion Building (PPE), located at 2401 San Jacinto Boulevard, 78705.

5:30 – 7:30

TEXAS ENERGY MANAGEMENT COUNCIL (TEMC) ENERGY WEEK PANEL

Midstream 2020: How will a New Administration & Global Markets Change U.S. Infrastructure?

Darrel K Royal – Texas Memorial Stadium
Centennial Room (9th Floor West)

FRIDAY, FEBRUARY 3

HOT SCIENCE – COOL TALKS

**Climate and Faith, Money and Politics:
Can We Build a Sustainable Future?**

Dr. Katharine Hayhoe

Paramount Theatre

<http://www.esi.utexas.edu/talk/climate-faith/>

MONDAY, FEB. 6

**ENERGY TECHNOLOGY
OPEN COMPETITION**

see page 5

Tuesday, February 7

- 8:15 – 9:00 Registration
- 9:00 – 10:00 Keynote: Robert Armstrong, Director, MIT Energy Initiative
- 10:00 – 11:15 The Energy Frontier: How to Invest in Future Resources?
- 11:30 – 12:30 Entrepreneurship in Oil & Gas
- 12:45 – 2:00 Lunch & Open Mic: President Trump's Energy Policy
- 2:15 – 3:30 Changing Supply & Demand in the Energy Sector
- 3:45 – 4:45 Energy Companies of the Future: Oil, Gas & More
- 5:00 – 6:30 UT Energy Tours
- 5:30 – 7:30 TEMC Panel: Midstream 20/20

Wednesday, February 8

- 8:15 – 9:00 Registration
- 9:00 – 10:00 Keynote: Peter Muhoro, Pedernales Electric Co-op
- 10:00 – 11:15 Integrating Renewables into the Grid
- 11:30 – 12:30 Evolving ISO Market Design: TX, CA, NY & Mexico
- 12:30 – 1:00 Lunch
- 1:00 – 2:15 Smart Building Technologies
- 2:15 – 3:15 The Changing Consumer-Utility Relationship
- 3:30 – 4:30 Grid of the Future: Centralized or Distributed?
- 4:45 – 5:45 Energy Security & Resilience
- 6:00 – 7:30 Reception & Award Ceremony for Poster Competition

**Thursday – Friday,
February 9 – 10: TJOGE**

Thursday

- 8:15 – 9:00 Cybersecurity Ethics for the Oil and Gas Industry
- 9:00 – 10:00 What to Expect on Energy and Environmental Policy over the Next Four Years
- 10:00 – 11:00 Every Clause Matters
- 11:00 – 12:00 What's Old is New Again
- 12:00 – 1:00 Deep in the Heart of Texas
- 1:00 – 2:00 Liquidated Damages in Oil & Gas Producing States
- 2:00 – 3:00 Lessons from the Downturn
- 3:00 – 4:00 Civility is Not a Sign of Weakness
- 4:00 – 5:00 Allocation Wells — Three Perspectives
- Friday***
- 9:00 – 10:00 Perseverance: The Role of the General Counsel in a Distressed Company
- 10:00 – 11:00 When the Top May Not Be the Best
- 11:00 – 12:00 Texas Legislative Update
- 12:00 – 1:00 When Does a Gas Dedication Create a Real Property interest?
- 1:00 – 2:00 Ethics of Hourly Billing

**Friday, February 10:
KBH Symposium**

- 7:30 – 8:30 Continental Breakfast
- 8:30 – 9:30 There is a New Team in Washington: What Does the 115th Congress and the Trump Administration Have Planned for Energy?
- 9:30 – 10:00 Break
- 10:00 – 11:45 Segment One: Thriving in the New Commodity Price Dynamic
- 11:45 – 1:00 Lunch Keynote: Jack N. Gerard
- 1:00 – 2:30 Segment Two: Looking into the Crystal Ball: What Impact Will Geopolitical and Technology Developments have on the Oil and Gas Industry?
- 2:30 Wrap up

**SATURDAY – SUNDAY,
FEBRUARY 11 – 12, 2017**

**2017 CEC ANNUAL
WORKSHOP ON
ELECTROCHEMISTRY
WELCH HALL – ROOM 1.308
<http://cec.cm.utexas.edu/electrochemistry-workshop-2017>**

Wednesday, February 8

| | |
|----------------------|--|
| 8:15 – 9:00 | REGISTRATION |
| 9:00 – 10:00 | KEYNOTE THE ELECTRIC COOPERATIVE MODEL: THE PEC STORY AND THE FUTURE OF THE UTILITY INDUSTRY! Peter Muhoro, <i>Director of Energy Research and Strategies, Pedernales Electric Co-op</i> |
| 10:00 – 11:15 | INTEGRATING RENEWABLES INTO THE GRID Dan Smith, <i>VP, Electric Service Delivery, Austin Energy</i> Patrick Chapman, <i>Senior Director, Development, SunPower</i> Paul Wattles, <i>Senior Analyst, ERCOT</i> Bill Muston, <i>Manager of R&D, Oncor</i> Lenae Shirley, <i>Senior Director, Technology Innovation and Market Adoption, Environmental Defense Fund (Moderator)</i> |
| 11:15 – 11:30 | BREAK |
| 11:30 – 12:30 | EVOLVING ISO MARKET DESIGN: TX, CA, NY & MEXICO Cheryl Mele, <i>Sr. VP & Chief Operating Officer, ERCOT</i> Dede Hapner, <i>Vice President, FERC & ISO Relations, Pacific Gas & Electric</i> Jose Maria Lujambio, <i>CCN Law</i> Laura Manz, <i>Director, Navigant Consulting</i> Ross Baldick, <i>Professor, UT Austin Department of Electrical & Computer Engineering (Moderator)</i> |
| 12:30 – 1:00 | LUNCH |
| 1:00 – 2:15 | SMART BUILDING TECHNOLOGIES Pliny Fisk, <i>Co-Director, Center for Maximum Potential Building Systems</i> Michael Sciortino, <i>Sales Executive, View Dynamic Glass</i> Gavin Dillingham, <i>Program Director, Clean Energy Policy, Houston Advanced Research Center (HARC)</i> Doug Lewin, <i>VP, Regulatory Affairs and Market Development, CLEAResult</i> Scott Hinson, <i>Director of Engineering, Pecan Street Inc.</i> Michael Garrison, <i>Professor, UT Austin School of Architecture (Moderator)</i> |

Electricity

| | |
|--------------------|--|
| 2:15 – 3:15 | THE CHANGING CONSUMER-UTILITY RELATIONSHIP Paula Gold-Williams, <i>President & CEO, CPS Energy</i> James Faulk, <i>Director, KPMG Strategy</i> Debbie Kimberly, <i>Vice President, Customer Energy Solutions, Austin Energy</i> Dana Harmon, <i>Executive Director, Texas Energy Poverty Research Institute</i> Roger Duncan, <i>Research Fellow, UT Austin Energy Institute (Moderator)</i> |
| 3:15 – 3:30 | BREAK |
| 3:30 – 4:30 | GRID OF THE FUTURE: CENTRALIZED OR DISTRIBUTED? Jeffrey Sabins, <i>Senior Development Manager, RES America</i> Erich Schneider, <i>Associate Professor, UT Austin Department of Mechanical Engineering</i> Colin Meehan, <i>Director of Regulatory and Public Affairs, First Solar</i> Dan Seif, <i>Managing Director, Grid Economics, LLC</i> Fred Beach, <i>Assistant Director, UT Austin Energy Institute (Moderator)</i> |
| 4:30 – 4:45 | BREAK |
| 4:45 – 5:45 | ENERGY SECURITY & RESILIENCE Jimmy Glotfelty, <i>Executive Vice President, Clean Line Energy Partners</i> Lt Gen Ken Eickmann, <i>USAF (Ret)</i> Michael Goin, <i>IT Manager, Austin Energy</i> Robert Hebner, <i>Director, UT Austin Center for Electromechanics (Moderator)</i> |
| 6:00 – 7:30 | RECEPTION AND AWARD CEREMONY |

Student Research Poster Competition

The University of Texas at Austin is one of the leading universities for energy research, but beyond that it is the center for interdisciplinary research, something that is necessary to gain an accurate perspective on energy issues and which is emphasized throughout Energy Week.

Research into the development of novel energy and resource-related technologies and the affiliated policies is a vital part of addressing the key energy-related challenges facing humanity in the 21st century. To promote the development of energy research in the academic community, UT Energy Week allows for full-time undergraduate and graduate students to participate in an interdisciplinary research poster competition.

The competition is organized into four categories:

- Energy Economics, Law, Communication, and Policy
- Environmental and Sustainability
- Renewable Energy and Energy Storage
- Fossil Fuels and By-Products

A panel of judges from academia and industry will score research posters submitted by the students selected to present at the research competition.

Wednesday, February 8

Prizes will be awarded to the two highest scoring posters from each competition category and there will be one overall crowd favorite and one overall best undergraduate poster:

| | |
|--------------------|---------|
| First place | \$1,000 |
| Second place | \$500 |
| Crowd Favorite | \$250 |
| Best undergraduate | \$250 |

Prizes will be announced at the Awards Reception to be held in the Alumni Center following the Energy Week sessions on Wednesday, February 8, 2017.

Energy Economics, Law, Communication, & Policy

Category judges:

James Faulk, KPMG

Benjamin D. Leibowicz, UT Mechanical Engineering

Dan Bradley, Navigant

| <i>Student</i> | <i>Title</i> |
|------------------|---|
| Juan Andrade | <i>Electric Transmission Infrastructure Expansion Considering Property Value Impact on Routing</i> |
| Oscar Galvis | <i>Development of a world model to assess sustainability of current population growth trends</i> |
| Mohammad Majidi | <i>A generalized decomposition framework for transmission expansion planning</i> |
| Moshen Babazadeh | <i>Fluid injection and earthquake size in faulted reservoirs</i> |
| Abigail D Ondeck | <i>The Economic Impact and feasibility of centralized energy storage and integrated distributed photovoltaics with a combined heat and power system</i> |

Environmental & Sustainability

Category judges:

David Sullivan, UT Center for Energy and Environmental Resources

Cameron Freberg, Austin Energy

Addison Stark, ARPA-E Fellow, U.S. Department of Energy

| <i>Student</i> | <i>Title</i> |
|---------------------|--|
| Rakesh Ranjan | <i>Time-resolved investigation of flashback in hydrogen-powered gas turbine combustor</i> |
| Melissa Donahue | <i>Dividing Wall Columns: Reduced Energy Distillation</i> |
| Christina Rodriguez | <i>Simple, asymmetric aluminum alkoxide initiator for controlled polymerization of epoxides</i> |
| Matt Beaudry | <i>Field Measurement of Aerosol in Amine-Based CO₂ Capture</i> |
| Dongyu Wang | <i>High particulate matter formation from alkanes and alkenes</i> |
| Melissa Meyerson | <i>Selective Lithium Electrodeposition on Impurity Veins in 99.9% Metallic Lithium: A potential cause of dendrites</i> |

Renewable Energy & Energy Storage

Category judges:

Anderson Hungria, Voltabox

Bert Haskell, Pecan Street Inc.

Gyeong S. Hwang, UT Chemical Engineering

| <i>Student</i> | <i>Title</i> |
|-------------------|---|
| Drew Heilman | <i>Full Cell Design for Next-Generation Lithium Ion Battery Anodes</i> |
| Caleb Alexander | <i>Synergism and Implications of Using Carbon Supports with Perovskites for the Oxygen Evolution and Reduction Reaction</i> |
| Rodrigo Rodriguez | <i>High-Resolution Optical Study of Sodium Electrodeposition</i> |
| Sam Johnson | <i>An Evolution of Energy Storage Options for Nuclear Power</i> |
| Vikas Reddy Voggu | <i>Flexible CuInSe₂ nanocrystal solar cells on paper</i> |
| Emily Adkins | <i>Pore Formation in Silicon Nanowires with a Silicon Oxide Shell Revealed by In Situ TEM Battery Studies</i> |
| Karl Kreder | <i>Vanadium-substituted LiCoPO₄ Core with a Monolithic LiFePO₄ shell for High-voltage Lithium-ion Batteries</i> |

Fossil Fuels & Byproducts

Category judges:

Chastity Aiken, Institute for Geophysics

Masa Prodanovic, UT Petroleum & Geosystems Engineering

Patricia Bielenberg, ExxonMobil Research & Engineering Company

Quoc Nguyen, UT Petroleum & Geosystems Engineering

| <i>Student</i> | <i>Title</i> |
|-----------------|---|
| Enrique Arce | <i>Neogene Current-Modified Submarine Fans and Associated Bed Forms in Mexican Deep-water Areas</i> |
| Robin Singh | <i>Nanoparticle-Stabilized Foams for Enhanced Oil Recovery</i> |
| Mehmet Erincik | <i>A new method of reducing residual oil saturation with polymer flooding</i> |
| Deepen Gala | <i>Modeling the use of non-aqueous fracturing fluids in unconventional reservoirs</i> |
| Melissa Lee | <i>Autonomous Laboratory-Scale Drilling Rig Development for Society of Petroleum Engineer's 2017 DrillboticsTM Competition</i> |
| Pinaki Ghosh | <i>Wettability change of a carbonate rock from mixed-wet towards water wet using cationic-nonionic surfactants</i> |
| Mahmood Shakiba | <i>Detection and Characterization of Subsurface CO₂ Leakage Using Pressure Pulse Test</i> |
| Hu Xiaodong | <i>A Numerical Analysis of bottomhole velocity and pressure distributions of hydrothermal jet</i> |
| Xiaojiang Li | <i>A Unified Model for Predicting Flowing Temperature and Pressure in CO₂ Injection for EOR, Sequestration and Fracturing Operations</i> |
| Calvin Tsay | <i>Flowsheet Simulation and optimization with detailed spiral-wound multistream heat exchanger models: theory and application to the PRICO liquefaction Process</i> |
| Zhiming Chen | <i>CO₂ sequestration in new albany shale: An analytical method to estimate CO₂ storage capacity in depleted shales</i> |
| Eshan Moaseri | <i>Nanotechnology in Sub-Surface Exploration: Developing a new technique to image oil reservoirs via advanced functional iron oxide nanoparticles</i> |

Thursday – Friday,
February 9 – 10

TJOGEL Symposium

THURSDAY

- 8:15 – 9** **CYBERSECURITY ETHICS FOR THE OIL AND GAS INDUSTRY**
Will Daugherty, *BakerHostetler*
- 9 – 10** **WHAT TO EXPECT ON ENERGY AND ENVIRONMENTAL POLICY OVER THE NEXT FOUR YEARS**
Mike Nasi, *Jackson Walker*
- 10 – 11** **EVERY CLAUSE MATTERS: A LITIGATOR'S PERSPECTIVE ON O&G CONTRACTS**
Andrew Zeve, *Bracewell*
- 11 – 12** **WHAT'S OLD IS NEW AGAIN – THE 2016 DEBUT OF THE 2015 AAPL MODEL FORM JOA**
Richard Hemingway, *Thompson & Knight*
- 12 – 1** **DEEP IN THE HEART OF TEXAS: HOW COMPLEX OIL AND GAS CASES HAVE BEEN HANDLED IN THE SOUTHERN DISTRICT OF TEXAS**
The Honorable David Jones, *Chief Judge of the U.S. Bankruptcy Court for the Southern District of Texas*
John Higgins, *Porter Hedges*
Kelli Norfleet, *Haynes and Boone*
- 1 – 2** **LIQUIDATED DAMAGES IN OIL & GAS PRODUCING STATES**
Kevin Jacobs, *Baker Botts*
Cynthia Castillo, *Baker Botts*
- 2 – 3** **LESSONS FROM THE DOWNTURN: OIL AND GAS DEBT AND EQUITY FINANCE**
Michael Niebruegge, *Willkie Farr & Gallagher*
Michael Piazza, *Willkie Farr & Gallagher*
Ryan Cicero, *Willkie Farr & Gallagher*

- 3 – 4** **CIVILITY IS NOT A SIGN OF WEAKNESS**
The Honorable Royal Furgeson, *United States District Judge for the Northern District of Texas*;
Founding Dean of the UNT Dallas College of Law
- 4 – 5** **ALLOCATION WELLS – THREE PERSPECTIVES**
Dean John Beckworth, *The University of Texas School of Law*
Greg Mathews, *Chevron*
John McFarland, *Graves Dougherty Hearon & Moody*
Mark Havens, *General Land Office*

FRIDAY

- 9 – 10** **PERSEVERANCE: THE ROLE OF THE GENERAL COUNSEL IN A DISTRESSED COMPANY**
Candice Wells, *LINN Energy*
- 10 – 11** **WHEN THE TOP MAY NOT BE THE BEST: THE EVOLVING LAW OF OIL AND GAS LEASE TERMINATION**
Craig Stahl, *Andrews Kurth*
Michelle Scheffler, *Andrews Kurth Kenyon*
- 11 – 12** **TEXAS LEGISLATIVE UPDATE**
Texas State Senator Kel Seliger
- 12 – 1** **WHEN DOES A GAS DEDICATION CREATE A REAL PROPERTY INTEREST? A POST-SABINE ANALYSIS OF COVENANTS RUNNING WITH THE LAND**
Jonathan Hyman, *Gray Reed*
Philip Jordan, *Gray Reed*
- 1 – 2** **ETHICS OF HOURLY BILLING**
Susan Fortney, *Texas A&M School of Law*

Friday, February 10

KBH Symposium

THE 2ND ANNUAL KBH CENTER SYMPOSIUM: “THE FUTURE OF THE OIL AND GAS INDUSTRY”

The Symposium will be held at the Four Seasons Hotel in downtown Austin.

7:30 – 8:30 CONTINENTAL BREAKFAST

8:30 – 9:30 THERE IS A NEW TEAM IN WASHINGTON: WHAT DOES THE 115TH CONGRESS AND THE TRUMP ADMINISTRATION HAVE PLANNED FOR ENERGY?

Welcome and Overview: Dr. John Butler, *Associate Director, KBH Center*

Keynote speaker: Congressman Joe Barton

Introduction by: Senator Kay Bailey Hutchison

Implications for Texas of the New Trump Administration's Energy Agenda: Barry T. Smitherman, *Former Chairman of the Texas Railroad Commission*

9:30 – 10:00 BREAK

10:00 – 11:45 SEGMENT ONE: THRIVING IN THE NEW COMMODITY PRICE DYNAMIC

FEATURED SPEAKERS:

Mark Finley, *General Manager, Global Energy Markets & US Economics, BP America Inc.*

Scott D. Sheffield *Chairman and CEO, Pioneer Natural Resources Company*

David C. Baldwin *Co-President, SCF Partners*

Tom Petrie *Chairman, Petrie Partners, LLC*

Moderator: Dr. Sheridan Titman *Walter W. McAllister Centennial Chair in Financial Services, McCombs School of Business, The University of Texas at Austin*

11:45 – 1:00 LUNCH

Keynote speaker: Jack N. Gerard *President and CEO, American Petroleum Institute*

Introduction by Dan O. Dinges *Chairman, President and Chief Executive Officer, Cabot Oil & Gas Corporation*

1:00 – 2:30 SEGMENT TWO:

LOOKING INTO THE CRYSTAL BALL: WHAT IMPACT WILL GEOPOLITICAL AND TECHNOLOGY DEVELOPMENTS HAVE ON THE OIL AND GAS INDUSTRY?

FEATURED SPEAKERS:

Lieutenant General (Retired) Sir Simon Mayall, KBE, *CB Senior Advisor, Greenhill & Co. International LLP*

Gabriel Alonso *CEO, EDP Renewables North America*

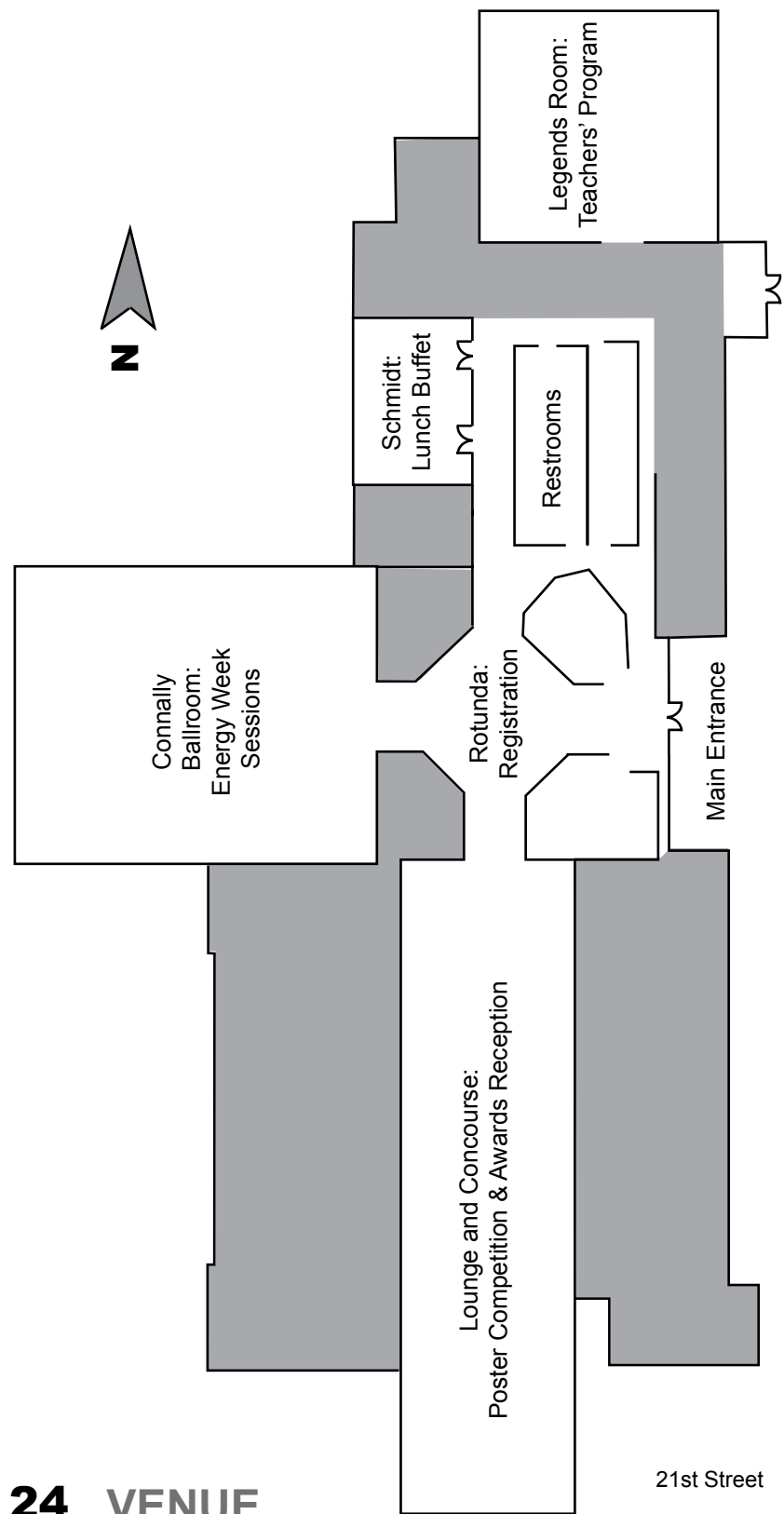
Dr. Jon Olson *Chair, Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering, The University of Texas at Austin*

Moderator: Marshall Adkins *Managing Director, Energy Equity Research, Raymond James & Associates*

2:30 WRAP UP

**2017 CEC ANNUAL WORKSHOP ON
ELECTROCHEMISTRY
AT THE UNIVERSITY OF TEXAS AT AUSTIN
FEBRUARY 11 – 12, 2017
WELCH HALL – ROOM 1.308**

<http://cec.cm.utexas.edu/electrochemistry-workshop-2017>



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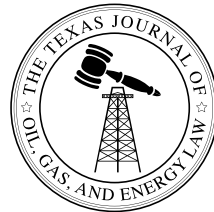
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