



CH CONNECTIONS
THE METHANE EMISSIONS
CONFERENCE

October 12-13, 2021
Fort Collins, Colorado

Accelerating Transition to a Low Carbon World

2021 PROGRAM



DIGITAL INNOVATION MEETS ENVIRONMENTAL TRANSFORMATION

Turn your emission reductions into a competitive advantage while enhancing your access to capital.

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WELCOME!

GTI and the Energy Institute at Colorado State University are proud to host the 8th annual CH4 Connections Conference, October 12–13, 2021.

CH4 Connections 2021 “*Accelerating Transition to a Low Carbon World*” will highlight stakeholders in the energy industry that are facilitating reduction in methane emissions across the energy value chain as a pathway to a low carbon world. CH4 Connections will dive into how effective regulations, scientifically sound methane accounting principles, advancing methane emission research, and leak detection technology are needed to accelerate the transition to a low carbon world.

The conference promotes the open exchange of ideas from leading thought leaders, academic researchers, industry experts, regulators, policymakers, and environmental advocates. Speakers will address current research on methane emissions, technologies to detect and mitigate emissions, policy and regulatory frameworks, and business implications and opportunities.

Join us in a conversation targeted at reducing methane emissions and carbon impacts through innovative technology solutions and methane emissions policy. We’re happy you’re here!



Ron Snedic
Senior Vice President
Corporate Development & President,
GTI International



Dr. Bryan Willson
Executive Director
Energy Institute
Colorado State University

AGENDA

Day 1
TUE 10/12

(all times in U.S. Mountain Time Zone)

7:00 AM – 6:00 PM

Registration and Information Desk, Exhibit set up starting at 7:00 AM

8:00 AM – 9:00 AM

Continental Breakfast and Networking

9:00 – 9:10 AM

Opening Remarks:

Ron Snedic, Senior Vice President of Corporate Development, GTI

Bryan Willson, Executive Director, Energy Institute, Colorado State University

SECTION 1 – Policy and Regulation

9:10 – 9:25 AM

Keynote #1: DOE's Office of Fossil Energy and Carbon Management's Efforts toward Decarbonization of the Natural Gas Stream

Ryan Peay, Acting Deputy Assistant Secretary for Office of Resource Sustainability, U.S. Department of Energy

9:25 – 9:45 AM

Fireside chat "Retrospective: what were the conversations and topics over the course of the past 5 years at this conference. Going forward: what's changed and what are we talking about this year?"

Bryan Willson, Executive Director, Energy Institute, Colorado State University

Dan Zimmerle, Director, Methane Emissions Program (METEC), Energy Institute at Colorado State University

Amanda Harmon, Manager-Projects Energy Delivery & Utilization, GTI

9:45 – 10:00 AM

BREAK

10:00 – 10:50 AM

Panel Session #1: Codes and Standards for Methane Emissions

Panelists will discuss the PIPES Act in the US and equivalent in EU, Asia, etc.

Moderator: Dan Zimmerle, Director, Methane Emissions Program (METEC), Energy Institute at Colorado State University

Panelist #1: Pam Lacey, Senior Managing Counsel, American Gas Association

Panelist #2: Chris Hoidal, Senior Technical Advisor, USDOT's Pipeline & Hazardous Materials Safety Administration (PHMSA)

Panelist #3: Steve Wheeler, Integrity Engineer, Colorado Oil & Gas Conservation Commission (COGCC)

10:50 – 11:05 AM

BREAK

11:05 – 11:25 AM

Keynote: #2 Solutions and Pathways to Mitigation

Will discuss federal programs that surround solutions and pathways to mitigation.

Jack Lewnard, Program Director, ARPA-E

11:25 – 11:45 AM

Questions and Answers with Keynote Speaker

Moderator: Amanda Harmon, Manager-Projects Energy Delivery & Utilization, GTI

11:45 – 12:45 PM

LUNCH, NETWORKING, EXHIBITS

SECTION 2 – Differentiated Gas

12:45 – 12:55 PM

Gold Sponsor Technical Presentation: "Why We Must Measure Everything: Insights from Basin-Scale Surveys"

Elena Berman, Chief Science Officer, Kairos Aerospace

(all times in U.S. Mountain Time Zone)

12:55 – 1:45 PM

Panel Session #2: Role of Methane Accounting for Low Carbon World

Moderator: Anthony Marchese, Assoc. Dean for Academic & Student Affairs, Prof of Mechanical Engineering, Colorado State University

Panelist #1: Roy Hartstein, Founder & Managing Director, Responsible Energy Solutions

Panelist #2: Tom Fox, President & Director of Innovation, Highwood Emissions Management

Panelist #3: Meg Coleman, Director of Digital Transformation, GTI

1:45 – 1:55 PM

BREAK

1:55 – 2:15 PM

Keynote #3: An Industry View of Differentiated Gas Supplies

Fiji George, Senior Director, Climate and Sustainability, Cheniere Energy

2:15 – 2:25 PM

Questions and Answers with Keynote Speaker

Moderator: Keily Miller, Manager of Energy Transitions, Program Administrator for the Collaboratory to Advance Methane Science (CAMS), GTI

SECTION 3 – Emissions Estimating

2:25 – 2:50 PM

Keynote #4: Advancing Decarbonization for the Gas Industry: The Role of Hydrogen and Low Carbon Resources

Kristine Wiley, VP Hydrogen Center, GTI

2:50 – 3:00 PM

Questions and Answers with Keynote Speaker

Moderator: Dan Zimmerle, Director of Methane Emissions Program – METEC, Energy Institute at Colorado State University

3:00 – 3:10 PM

BREAK

3:10 – 4:00 PM

Panel Session #3: Understanding Methane Emissions from NG Systems

Moderator: Kate Smits, Professor, Department of Civil Engineering, University of Texas at Arlington

Panelist #1: Ken Davis, Professor of Atmospheric & Climate Science, Pennsylvania State University

Panelist #2: Riley Duren, CEO Carbon Mapper, University of Arizona

Panelist #3: Clay Bell, Research Scientist I – Powerhouse Energy Institute, Faculty Affiliate – Department of Mechanical Engineering, Colorado State University



4:00 – 4:10 PM

Gold Sponsor Technical Presentation “Continuous VOC Monitoring for Emissions Location & Sample Acquisition”

Jacob Melby, Fixed Point Product Manager, SENSIT Technologies

4:10 – 4:20 PM

BREAK



4:20 – 5:10 PM

Panel Session #4: Sponsor Showcase Rapid-Fire Session

Moderator: Bryan Willson, Executive Director, Energy Institute, Colorado State University



5:10 – 6:30 PM

Networking Reception and Exhibits

6:30 – 8:30 PM

Speaker/Sponsor dinner (located in north ballroom, same floor as conference)

AGENDA

Day 2
WED 10/13

(all times in U.S. Mountain Time Zone)

7:30 AM – 6:00 PM

Registration and Information Desk

7:30 AM – 8:30 AM

Continental Breakfast and Networking

8:30 – 8:40 AM

Opening Remarks:

Ron Snedic, Senior Vice President of Corporate Development, GTI

Bryan Willson, Executive Director, Energy Institute, Colorado State University

SECTION 4 – Detection and Mitigation

8:40 – 9:30 AM

Panel Session #5: Tried and True Mitigation Technologies from the Field: Transmission and Distribution Sector

Moderator: Jarrod Bullen, Managing Director, Energy Delivery Group, GTI

Panelist #1: Lindsey Fitzgerald, Section Manager of Leak Survey & Corrosion Control, Con Edison

Panelist #2: Stephen Ramos, R&D and Innovation Engineer, Pacific Gas & Electric Company (PG&E)

Panelist #3: Jeff Goetzmann, Manager – Texas Technical Field Operations, CenterPointe Energy

9:30 – 9:50 AM

BREAK



9:50 – 10:00 AM

**Gold Sponsor Technical Presentation
“Discover – Advanced Mobile Leak Detection”**

Kevin Bendele, Director of Engineering, Heath Consultants



10:00 – 10:50 AM

**Panel Session #6: Sponsor Showcase
Rapid-Fire Session**

Moderator: Bryan Willson, Executive Director, Energy Institute, Colorado State University

10:50 – 11:00 AM

BREAK

11:00 – 11:50 AM

Panel Session #7: Observations, Inventories and Regulation: How Will New Tiered Observation Capabilities Impact the Future of Methane Reporting?

Moderator: Joe von Fischer, Professor, Department of Biology, Colorado State University

Panelist #1: Adam Brandt, Assoc Prof, Energy Resources Engineering, Stanford Univ.

Panelist #2: Melissa Weitz, Office of Atmospheric Programs, Climate Change Division, EPA

11:50 – Noon

Wrap up

11:50 – 12:30 PM

Lunch for those staying for METEC Tour, choice of three informal moderated breakout discussions, or exhibits

12:30 – 3:30 PM

Option #1: Extended exhibit show hours and ability to attend your choice between three informal moderated breakout discussions in smaller rooms within same building as conference.

Topic Choice 1:

What’s up with you? Share what you’re working on!

Moderator: Stuart Riddick, Research Scientist, Energy Institute, CSU

Topic Choice 2:

Group therapy session – so how bad is the news in the IPCC AR6 report? Let’s discuss.

Moderator: Amanda Harmon, Manager-Projects Energy Delivery & Utilization, GTI

Topic Choice 3:

No leak is too big or small – leak detection and quantification geeks unite. Pipeline leak detection and quantification (LDAQ)

Moderator: Kate Smits, Professor, Department of Civil Engineering, University of Texas at Arlington

Option #2: METEC TOUR

MEET OUR SPEAKERS



Clay Bell, Ph.D.

Research Scientist I – Powerhouse Energy Institute
Faculty Affiliate – Department of Mechanical Engineering
Colorado State University

Clay Bell is a Research Scientist at the Colorado State University Energy

Institute. He holds a B.S. and M.S. in Mechanical Engineering from West Virginia University, and a Ph.D. in Mechanical Engineering from CSU. Dr. Bell has led the design, construction, and operation of METEC since 2016 and has been involved in the testing of over 40 Leak Detection and Quantification (LDAQ) solutions. He is currently leading an effort to establish and demonstrate standard format single blind test protocols for LDAQ solutions under the Advancing Development of Emission Detection (ADED) project, as well as several industry-sponsored projects to improve emissions modeling softwares, Methane Emission Estimation Toolkit (MEET) and the Fugitive Emission Abatement Simulation Toolkit (FEAST).



Jarrod Bullen

Engineer
Energy Delivery & Utilization
GTI

Jarrod Bullen's current role at GTI is collaborating with utility partners and associated entities to measure, develop, and refine techniques for identifying

leaks and determining methane emissions. In a past role, he has also developed and tested methods and equipment for managing utility pipeline infrastructure. He is involved with the GTI Center for Methane Research and has participated in over 30 projects related to infrastructure and emissions in gas operations. Mr. Bullen holds a BS and a MS in Mechanical Engineering from the University of Mississippi.



Adam R. Brandt

Associate Professor
Department of Energy Resources Engineering
Stanford University

Dr. Brandt is an Associate Professor in the Department of Energy Resources Engineering, Stanford University. He

acts as director of the Natural Gas Initiative, an interdisciplinary research consortium at Stanford that focuses on improving the sustainability of the natural gas system. His research focuses on reducing the greenhouse gas impacts of energy production and consumption. Primary research interests include life cycle assessment of petroleum production and natural gas extraction. He also researches methane emissions from oil and gas systems, with an interest in field trials of advanced detection technologies and analysis of field datasets. Lastly, he works on optimization of low emissions technologies, such as carbon removal from gas and solar photovoltaic output prediction. Dr. Brandt received his PhD from the Energy and Resources Group, UC Berkeley.



Meg Coleman

Director of Digital Transformation
GTI

Dr. Meg Coleman, Director of Digital Transformation, develops and supports programs and technologies related to data and digitalization initiatives at GTI. Prior to GTI, she spent over a decade at the U.S Department of Energy, where she managed a team at the Energy Information Administration (EIA) and

led the engineering, model and software development, design, marketing, and production of domestic and international supply projections for EIA's flagship data and analytical products. Meg has 20 years of experience in the geosciences, and is an expert on energy analysis and alternatives for the future of the world's energy production and deployment. She has a PhD in Geology from MIT, and has applied her deep technical expertise to lead a variety of cross-cutting collaborations and multi-agency research programs through DOE to find long-term clean energy solutions.

MEET OUR SPEAKERS



Ken Davis
Professor of Atmospheric & Climate Science
The Pennsylvania State University

Kenneth Davis is a Professor of Atmospheric and Climate Science at The Pennsylvania State University who studies the earth's carbon and water cycles. He specializes in designing and implementing innovative methods for measuring the rates of exchange of trace gases between the earth's surface and the atmosphere, and integrating these measurements with numerical models of the atmosphere, terrestrial ecosystems and human activity to advance our understanding of the earth's climate system. He has an A.B. in Physics with a certificate in Theater and Dance from Princeton University, and a Ph.D. in Astrophysical, Planetary and Atmospheric Science from the University of Colorado. He is a past co-chair of the North American Carbon Program Science Steering Group, and past chair of the American Meteorological Society's Committee on Boundary Layers and Turbulence. His research group has conducted numerous airborne- and tower-based measurement campaigns over both natural- and human-dominated landscapes of North America. He has studied methane emissions from the Marcellus and Permian shale basins using combined tower and aircraft measurements and has ongoing efforts to conduct similar analyses at continental scale.



Riley Duren
CEO, Carbon Mapper
Research Scientist, Research, Innovation and Impact

Riley Duren recently joined the University of Arizona's Office of Research, Innovation and Impact as a Research Scientist. He also maintains a joint appointment as an Engineering Fellow at NASA's Jet Propulsion Laboratory. His NASA experience to date has included roles on nine earth and space science missions (with the Shuttle Radar Topography Mission and Kepler being personal favorites). From 2008 to 2019 he served as Chief Systems Engineer for JPL's Earth Science Directorate, supporting a wide range of satellite and airborne missions, research, and applied science programs. His own research applies multi-scale earth observations and the emerging discipline of science systems engineering to inform

societal responses to climate change. He is Principal Investigator of the California Methane Survey and Methane Source Finder projects and Program Executive for a new public-private partnership developing a constellation of small satellites to support climate and conservation action.



Lindsey Fitzgerald
Section Manager, Leak Survey and Corrosion Control
Con Edison

Lindsey Fitzgerald is the Section Manager of Leak Survey and Corrosion Control at Con Edison in New York City. At Con Edison for the last 12 years, her roles of increasing responsibility have included Gas Engineering, Gas Operations Finance and Analytics Manager, and Work and Resource Management Section Manager. Lindsey holds a bachelor's degree from Hawaii Pacific University in International Business and a master's degree from Columbia University in Negotiation and Conflict Resolution where she has lectured graduate level courses in negotiation. Lindsey is also a graduate of the American Gas Association's Next Level Leadership Program, the GTI Registered Gas Distribution Program, and the Comprehensive Project Management Program. Outside of the office, Lindsey lives in Peekskill, NY with her husband Brendon and 1 ½ year old daughter, Reagan, where she is very active in her community volunteering for Veteran causes.



Thomas Fox
President
Highwood Emissions Management

Tom is President of Highwood Emissions Management. He completed a Ph.D. at the University of Calgary, where he worked at the interface of industry, government, and academia to develop, evaluate, and deploy novel methane measurement technologies. At Highwood, Thomas works with clients from the energy sector to design and implement integrated and cost-effective emissions management strategies. His team specializes in emissions data analytics, abatement project planning & optimization, LDAR programs, methane measurement (including reconciliation), carbon markets, regulatory reporting, differentiated gas certifications, and voluntary disclosure (e.g., ESG reporting). Broadly, Highwood

combines data, analytics, knowledge, and experience to help energy companies navigate the energy transition by leveraging market opportunities, mitigating climate-related risks, and ultimately taking credit for strong performance. With expertise in methane measurement and technology evaluation, Thomas also works with innovators and solution providers to build, demonstrate, and deploy new technologies. As the lead inventor of the open-source Leak Detection and Repair Simulator (LDAR-Sim), Thomas works with both technology and energy companies across North America to achieve regulatory approval for alternative LDAR programs.



Jeff Goetzman

**Manager
Texas Technical Field Operations
CenterPoint Energy**

Mr. Goetzman has over 40 years' experience in Natural Gas Distribution. He holds the position of Manager of Technical Field Operations for

CenterPoint Energy's Texas Region. In this role he is responsible for Cathodic Protection, Leak Survey, Field Measurement and Odorization of the region.

In 2016 he became Manager of Advanced Leak Detection. In this role he is responsible for evaluating and implementing new viable technology into Leak Survey. In this role he managed an Implementation Team to integrate Picarro Surveyor™ technology in all CenterPoint Energy Regions by 2018.

In 2017 he also led an Integration Team that developed and implemented a paperless tablet-based solution for Leak Survey. This solution currently manages and tracks all leak survey activity.

From 2007 to 2016 he was Manager of Technical Field Operations for CenterPoint Energy's Texas Region.

He has been a member of the Gulf Coast Gas Measurement Society, Committee Member American School of Gas Measurement, Texas Gas Association, Southern Gas Association and Advance Leak Detection Users Group (ALDUG).



Amanda Harmon

**Manager-Projects Energy Delivery and Utilization
GTI**

Amanda Harmon, Manager—Projects Energy Delivery and Utilization at GTI—is a research scientist and project manager focusing on the research, development, and deployment

of solutions for environmental matters including emissions and renewable energy. As a microbiologist, Ms. Harmon also has a decade's worth of experience researching pipeline integrity.

Current research projects include validating methane sensor technology for transmission pipelines in hard to access areas, evaluating commercially available leak detection equipment for hydrogen/natural gas blends, and commercializing methane sensor technology developed at GTI for first responders.



Roy Hartstein

**Founder and Managing Director
Responsible Energy Solutions**

Roy Hartstein is driven to help energy companies find the value in “doing the right things”, which led him to pioneer the execution of the first U.S. “certified gas” transaction for responsible natural

gas. His work includes leading companies to establish methane management initiatives for production operations and to achieve “Freshwater Neutral”. He leads Responsible Energy Solutions in independent certification assessments for the Equitable Origin EO100 and MiQ responsible gas standards, development of ESG strategy for energy companies and has consulted with an international environmental NGO for development of an international standard for certified lower emissions natural gas.

With over 35 years in the energy industry, Hartstein has worked across the value chain from upstream to midstream operations including experience in field operations and corporate leadership. He also spent three years working with international operators as founding Chairman of the International Gas Union's Group of Experts on Methane Emissions.

Hartstein has spoken frequently on resource development including presentations on certified gas, water management and methane emissions management. Recent presentations include Louisiana Mid-Continent Oil and Gas Association – Responsibly Sourced Gas; American Council for Capital Formation – The Role of Responsibly Sourced Gas; SPE ATCE – Climate Change Strengthening Our Efforts to Cleaner Energy; Darcy Partners Trending Perspectives – Responsible Gas, Resources for the Future – Greening Gas, 2020 ADI Analytics Forum, 2019 ONE Future Climate and Methane Strategies Summit, and IGU Methane Conference at COP23 in Bonn, Germany. Responsible Energy Solutions is a rapidly growing energy consultancy and an approved assessor for the Equitable Origin EO100 and MiQ standards.

MEET OUR SPEAKERS



Chris Hoidal

Senior Technical Advisor USDOT's Pipeline and Hazardous Materials Safety Administration

Chris Hoidal is a Senior Technical Advisor for PHMSA's Policy and Programs Office. Prior to this role he served for 20 years as PHMSA's Western Region Director. He was

responsible for administering the federal pipeline safety program for the twelve (12) western states. His staff conducted safety inspections and accident investigations of Hazardous Liquid, LNG, Natural Gas, and distribution pipeline facilities. Chris has worked for the United States Department of Transportation since 1990, and the Office of Pipeline Safety since 1993. Prior to government service, Chris worked as a licensed consulting geotechnical engineer in Colorado, Maryland, DC, and Virginia. He has his BS in Geotechnical Engineering from the University of Nevada, and Masters of Business Administration from the University of Colorado.



Jack Lewnard

Program Director ARPA-E, U.S. Department of Energy

Jack Lewnard joined DOE's ARPA-E agency as a Program Director in June 2019. His interests include energy infrastructure, and low-carbon fuels, and energy processes. He is responsible

for several programs at ARPA-E. The REPAIR program seeks to rehabilitate legacy gas pipes using robots to apply novel coatings inside pipes. REUSE investigates processes to convert unrecyclable plastics to fungible liquids. REMEDY addresses abatement of methane emission from fossil energy value chains. METHANE pyrolysis focuses concurrent hydrogen and solid carbon production. Prior to joining ARPA-E Jack was the VP of Business Development for Chesapeake Utilities' Strategic Development Group, and was VP and CTO at the Gas Technology Institute, a non-profit research organization that conducts RD&D for gas utilities and energy industry. He was the active with the International Gas Union, serving as the first chair for the newly-created Research and Innovation Committee, and was involved planning and running the International Gas Research Conferences in 2011 and 2014. His background includes a diverse range of energy technologies, including Clean Coal projects, waste-to-energy, algal biofuels, and combined heat and power systems. Jack received his Bachelor degree in Chemical Engineering from the University of Cincinnati, and his PhD from Berkeley, also in Chemical Engineering.



Pam Lacey

Chief Regulatory Counsel American Gas Association

Pam Lacey is the American Gas Association's chief regulatory counsel, with 35 years of experience in energy and environmental law. She is staff executive for AGA's environmental advocacy

committee and has staffed Board-level task forces on climate, sustainability and clean energy issues. Ms. Lacey represents AGA on the International Gas Union (IGU) Group of Methane Experts. She represents AGA in environmental matters at the White House, EPA and other federal agencies, and has been actively involved in advocacy and research initiatives regarding climate issues, renewable natural gas (RNG), and methane emissions. Pam leads AGA's sustainability and environmental, social, governance (ESG) initiatives. Before joining AGA, Pam was a Partner in the Washington office of Coffield, Ungaretti & Harris, representing gas and electric utilities in a broad range of environmental matters. Pam Lacey received her J.D. from George Washington University's National Law Center and an A.B. cum laude from Bryn Mawr College in Pennsylvania.



Anthony Marchese

Associate Dean for Academic and Student Affairs Director of the Engines and Energy Conversion Laboratory Professor of Mechanical Engineering Colorado State University

Dr. Marchese is the Associate Dean for Academic and Student Affairs, Director of the Engines and Energy Conversion Laboratory and Professor of Mechanical Engineering in the Walter Scott, Jr. College of Engineering at Colorado State University. Marchese holds a Ph.D. and M.A. in Mechanical and Aerospace Engineering from Princeton University and B.S. and M.S. degrees from Rensselaer Polytechnic Institute. His research areas include internal combustion engines, alternative fuels, combustion, chemical kinetics, microgravity experiments, methane

emissions and biomass cookstoves. Current research projects include biodiesel chemical kinetics, pollutant formation from algae-based biofuels, exhaust emissions from algal methyl esters, locomotive engine emissions, ultrasonic harvesting of microalgae, dual fuel diesel/natural gas engines, biomass gasifier cookstoves and methane emissions from the natural gas supply chain. He is currently the Chair of the U.S. Western States Section of the Combustion Institute. From 2013 to 2016, he was the Principal Investigator on a \$1.9 Million study organized by the Environmental Defense Fund aimed at quantifying total methane emissions from the gathering and processing sectors of the natural gas supply chain. From 2010 to 2013, he served as the fuel conversion team leader for the National Alliance for Advanced Biofuels and Bioproducts, a \$50 Million DOE algal biofuel consortium. Marchese teaches courses in combustion, thermodynamics, heat transfer, fluid mechanics and product design. He has previously held positions at Rowan University, United Technologies Research Center in East Hartford, CT and NASA Glenn Research Center in Cleveland, OH. He is the holder of numerous United States Patents and is a member of Tau Beta Pi, Sigma Xi, Pi Tau Sigma, The Combustion Institute, AIAA, ASME, SAE and ASEE. In 2001, he was named a Carnegie Scholar by the Carnegie Foundation for the Advancement of Teaching and in 2004 he was awarded the ASEE Kauffman Outstanding Entrepreneurship Educator Award. Education: Princeton University Ph.D. and M.A.



Jacob Melby

Fixed Point Product Manager SENSIT Technologies

Jacob Melby is the Fixed Point Product Manager for SENSIT Technologies, a gas detection and monitoring company located in Valparaiso, IN. In this position he oversees the development,

deployment, and project management of several fixed point monitoring systems. Through this work he has installed fixed point monitoring systems across the globe from Rwanda to China. Prior to this he co-founded the start-up company, SenSevere, which conducted R&D on remote fixed point sensors and monitoring systems and was acquired by SENSIT in 2018. He received his Ph.D. in Materials Science and Engineering from Carnegie Mellon University and holds a B.A. in chemistry and physics from the University of MN, Morris. Jacob currently resides in Northfield, MN with his spouse and three kids.



Keily Miller

Manager of Energy Transitions Program Administrator for the Collaboratory to Advance Methane Science (CAMS) GTI

Keily Miller serves as Manager of Energy Transitions at GTI and Program

Administrator for the Collaboratory to Advance Methane Science (CAMS). She brings extensive experience at the intersection of technology, economics, and policy with previous roles in energy analysis, corporate strategy, technical marketing and innovation product development. As an oil & gas industry specialist with global management consulting firm McKinsey & Company, she served dozens of clients across the energy value chain on strategy, mergers and acquisitions, portfolio transformation and operational efficiency. Prior to joining GTI, she led research projects to advance deployment of low-carbon energy solutions including carbon capture and storage, hydrogen, and soil carbon storage at the Center for Energy Studies at Rice University's Baker Institute. Keily graduated magna cum laude from Yale University.



Ryan Peay

Acting Deputy Assistant Secretary for Office of Resource Sustainability, U.S. Department of Energy

Ryan joined the U.S. Department of Energy (DOE) in December of 2015. He sets the strategic direction for the office and administers the oil and gas programs,

including research and development, engagement, analysis, budget, and natural gas regulation. Previously, Ryan was the Director of Planning and Administration and was responsible for coordinating and integrating daily activities across the Office.

Prior to joining DOE, Ryan was a manager and consultant at Deloitte, focused on strategic planning, financial programming, and budgeting activities. From 2002 to 2007, Ryan served on active duty in the U.S. Army as a Field Artillery Officer in the 101st Airborne Division.

Ryan holds an MBA from the Darden School of Business at the University of Virginia and is a graduate of the Virginia Military Institute with a B.A. in international studies and political science.

MEET OUR SPEAKERS



Stephen Ramos

R&D and Innovation Engineer Pacific Gas & Electric Company

Stephen Ramos is a Research & Development (R&D) and Innovation Engineer in Pacific Gas & Electric's Gas Operations. He holds a BS in Civil Engineering from San Francisco State,

a Professional engineering license in the state of California, and Project Management Professional certification. His current scope of work is to operationalize and optimize compliance Greenhouse Gas (GHG) reporting and leads the R&D efforts in advancing leak detection technologies.



Kate Smits

Professor, Department of Civil Engineering University of Texas at Arlington

Kate Smits is a professor in the Department of Civil Engineering at the University of Texas at Arlington with joint appointments at Colorado State

University and the U.S. Air Force Academy. Prior to UTA, Kate was an associate professor at Colorado School of Mines from 2010-2018 and the U.S. Air Force Academy from 2004-07. She's served as a civil and environmental engineering project manager in the U.S. Air Force, including various deployments and is currently a Lieutenant Colonel in the U.S. Air Force Reserves. Kate's research interests are focused on energy and the environment with applications to natural gas leakage, the clean up of contaminated soils and waterways, and the storage of renewable energy. Much of her research looks toward the development of tools and models to better understand such systems. Kate earned her B.S. in environmental engineering from the U.S. Air Force Academy, M.S. in civil engineering from the University of Texas, Austin, and PhD in environmental science and engineering from Colorado School of Mines.



Ron Snedic

Senior Vice President Corporate Development GTI

As the Senior VP of Corporate Development at Gas Technology Institute, Ron leads the effort to expand GTI's customer base and increase revenues

from technology-based product and service offerings. Snedic is responsible for GTI's M&A activities and serves as President of GTI International, a holding company for GTI's for-profit entities including Frontier Energy and SunGas Renewables. Snedic also oversees GTI's marketing communications team, the human resources department, and a wide range of education and training programs. He is the President of Operations Technology Development, NFP and Utilization Technology Development, NFP. Both companies focus on the development of new technology for the natural gas industry. Snedic joined GTI as the Regional Manager of Customer Relations for the Southern Gas Association in April 1997. Prior to GTI Ron held various positions at Nicor Gas Distribution and UtiliCorp United. Snedic earned a B.S. in marketing and an M.B.A. from Northern Illinois University, and has completed the Stanford Executive Program at Stanford University's Graduate School of Business.



Joe von Fischer

Professor Department of Biology Colorado State University

Joe von Fischer is a professor in the Department of Biology who studies how the function of ecosystems is structured by the interactions among humans, plants,

the soil and soil microbes, with particular focus on how these factors influence the emissions of greenhouse gases like methane. Joe's research seeks to characterize the physical and biological diversity of systems that give rise to micro-sites with exceptional influence on overall system function. Joe's lab maintains two primary research areas. One is the study of how biological diversity among the bacteria that consume methane within soils leads to spatial and temporal patterns in soil methane fluxes. The other is in collaboration with the Environmental Defense Fund to use Google Streetview Cars to measure the leakage rate of natural gas from urban distribution systems around the country.



Melissa Weitz
Office of Atmospheric Programs,
Climate Change Division,
EPA

Melissa Weitz is a physical scientist in EPA's Office of Atmospheric Programs where she focuses on quantification of methane emissions from oil and gas systems for the Inventory of U.S. Greenhouse Gas Emissions and Sinks. She is a Lead Reviewer for Annex I GHG Inventories for UNFCCC and was a Coordinating Lead Author for the Energy volume of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.



Steve Wheeler
Integrity Engineer
Colorado Oil & Gas Conservation
Commission (COGCC)

Steve received a bachelor's in Civil and Environmental engineering from the Colorado School of Mines. Currently he works for the Colorado Oil and Gas Conservation Commission's Engineering Integrity group. His background prior to the COGCC is primarily in high-pressure transmission pipeline design, construction and commissioning. Those thousands of miles of pipeline range from intrastate to intercountry. The COGCC's Engineering Integrity group regulates upstream pipeline design, construction, and maintenance outside of the PUC or PHMSAA umbrellas. This group also handles of the grade 1 gas leak reporting for upstream operators. In addition, that group now regulates the upstream tank and pressure vessel construction and maintenance. He currently leads the effort to register mapping of all upstream flowlines within the state. Colorado currently maintains 50,000+ active wells and over 11,000 miles of COGCC-regulated flowlines. He also assists with the COGCC's Orphan Well Program and its internal flowline mapping and abandonment effort.

A Colorado native, he resides in Denver with his wife and three kids.



Kristine Wiley
Vice President
Hydrogen Technology Center
GTI

As the Vice President of GTI's Hydrogen Technology Center (HTC) Kristine Wiley works across the organization to synchronize deep industry knowledge and technical expertise as well as large scale labs and test facilities to integrate the use of hydrogen into the energy system. Addressing economy wide decarbonization, the HTC brings together public-private partnerships to facilitate R&D to enable clean hydrogen generation, transport, storage and utilization at scale while leveraging the existing robust energy infrastructure to facilitate the transition to a low-carbon future. Kristine's career spans nearly two decades at GTI. Prior to her current role, she served as an R&D Director responsible for GTI's Environmental, Risk, and Integrity Management programs. With a focus on reducing environmental impacts, she led collaborative research directly working with industry to develop solutions for the detection and mitigation of methane emissions from natural gas operations. At GTI she has held positions of increasing responsibility managing research addressing utility operations and environmental compliance to advancing the use of low-carbon fuels such as renewable natural gas. Kristine holds a BA in Biological Sciences from the University of Chicago as well as an MBA from the University of Chicago Booth School of Business.

MEET OUR SPEAKERS



Dr. Bryan Willson

**Executive Director
Energy Institute
Colorado State University**

Dr. Bryan Willson is Executive Director of the Energy Institute at Colorado State University, where he also occupies the Bryan Willson Presidential Chair

in Energy Innovation and serves as a Professor of Mechanical Engineering. CSU's Energy Institute comprises over 200 faculty members working in energy and works closely with the Colorado energy startup community to help grow clean energy companies. The Energy Institute is headquartered at CSU's Powerhouse Energy Campus, a 100,000 sq ft research facility that also houses over 15 early stage energy companies; it's work on cleantech commercialization has been honored by the Economist, Scientific American, the Smithsonian Institution, university technology transfer associations, and the governments of Denmark, Spain, and China. Dr. Willson served as a Program Director at ARPA-E (Advanced Research Projects Agency – Energy, from 2012-2016 and continued as a consultant / advisor to the agency until early 2019. He has worked for over 30 years to develop and deploy large-scale technology solutions related to energy, air quality, and human health. As an entrepreneur, Dr. Willson is co-founder of Envirofit International, Solix BioSystems, Factor(e) Ventures and Xpower. His research laboratory, the Engines & Energy Conversion Laboratory, has made important contributions in many areas, including: internal combustion engines, advanced vehicles, oil & gas production technology, advanced electrical grids, advanced biofuels, energy access for the developing world, and advanced building technologies. Dr. Willson is a Fellow of the Society of Automotive Engineers and has worked in over 40 countries.



Dan Zimmerle

**Director, Methane Emissions Program –
METEC
Remote and Distributed Energy Center
(RADEC)
Energy Institute, Colorado State
University**

Daniel Zimmerle is the Director of the Methane Emissions Program (METEC) at the Energy Institute at Colorado State University (CSU). Zimmerle was a principal investigator on five major studies of methane emissions in the natural gas supply chain, and for METEC, the ARPA-E MONITOR test facility at CSU. Zimmerle also leads research programs on energy access for remote communities. Prior to CSU, he served as the Chief Operating Officer at Spirae, Inc. and worked 20 years at Hewlett Packard and Agilent Technologies including experience as both a division general manager and R&D manager. He has led organizations in several business areas, including computer systems, test systems, and consumer products, including personnel in the US, Ireland, Singapore and other countries. He holds a BSME and MSME from North Dakota State University.

For more information, contact:



Kevin Trim

GTI
Senior Manager, Education & Events
ktrim@gti.energy



Myriam Mercado

GTI
Senior Marketing Specialist
mmercado@gti.energy



Maury Dobbie

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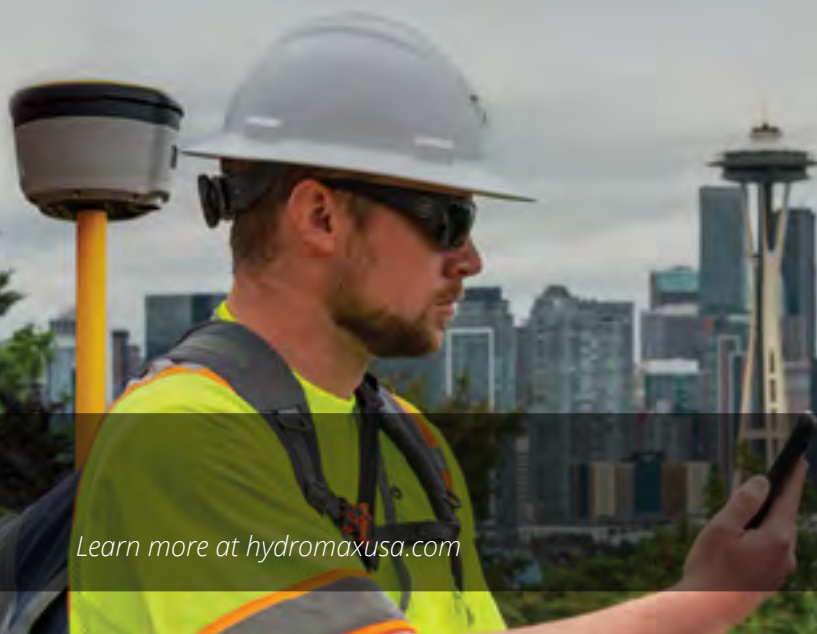
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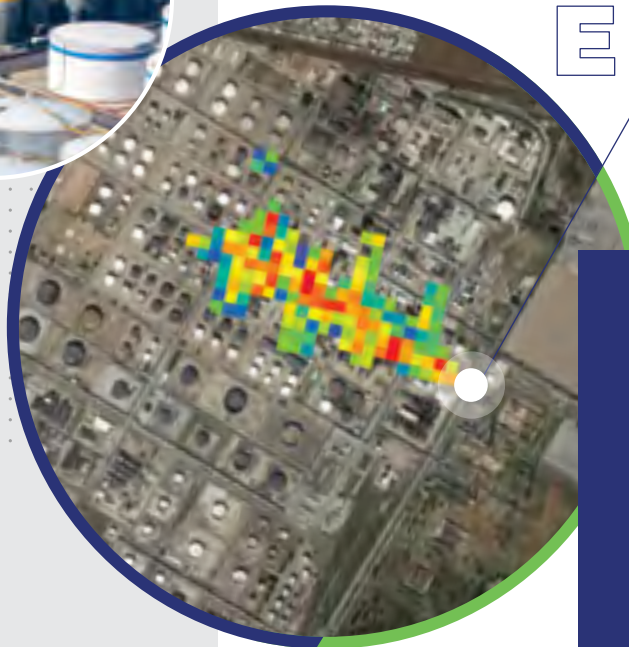
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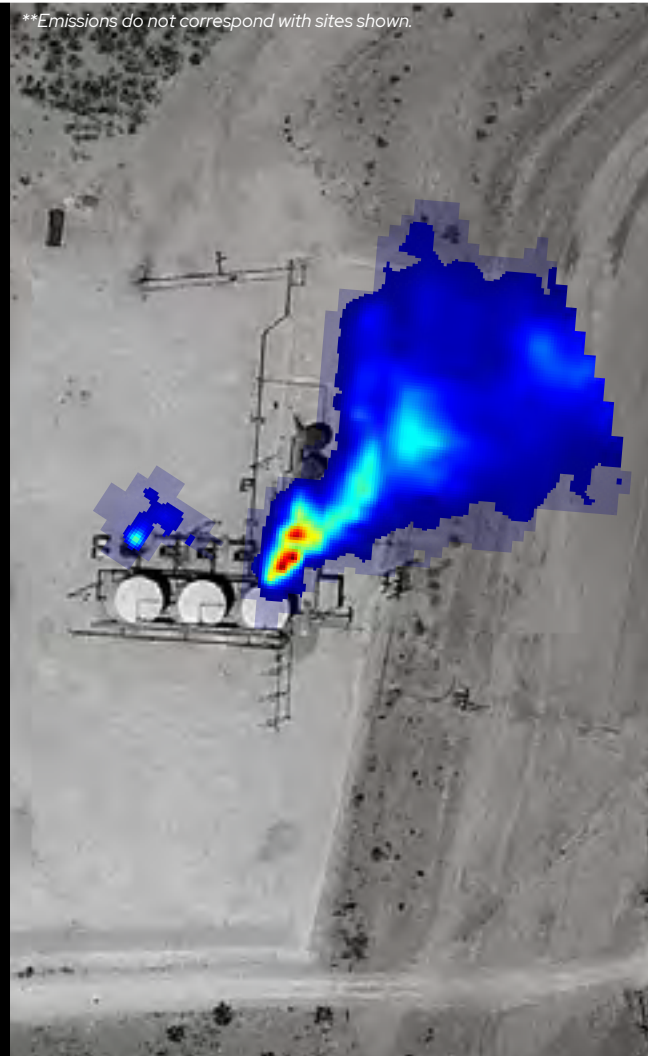
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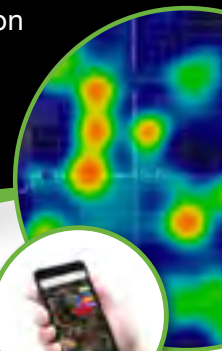


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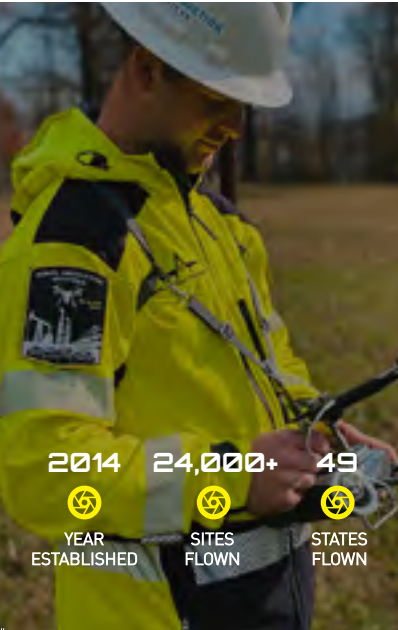


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