



CH CONNECTIONS

THE METHANE EMISSIONS
VIRTUAL CONFERENCE

November 17-19, 2020

Technology Enabling
Green Initiatives

2020 PROGRAM

gti[®]


ENERGY
INSTITUTE
Colorado State University



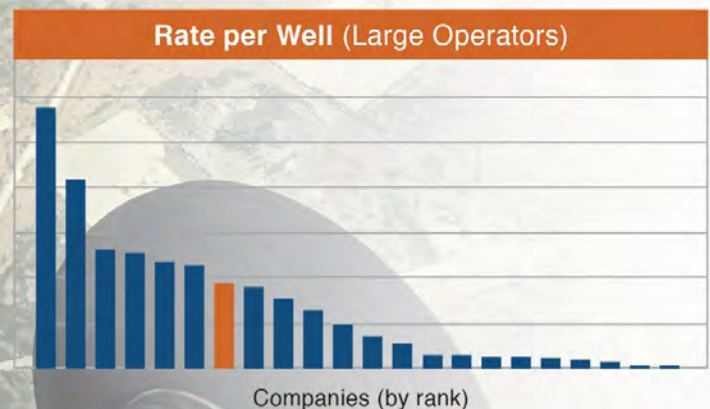
Big Leaks Are Out There.

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Fixing one malfunctioning flare can save as much gas in two days as retrofitting a compressor station from wet to dry seals saves in an entire year. You may not know where your malfunctioning equipment is leading to fugitive methane, but we do. Learn more about your operations and how you compare to competitors, find the largest leaks and fix them fast with Kairos aerial methane monitoring.

With over 136,000 facilities and 45,000 miles of pipeline surveyed since 2019, Kairos is the leading provider of airborne methane monitoring data. Learn more at www.kairosaerospace.com.

How do you rank against your industry peers?



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WELCOME!

GTI and the Energy Institute at Colorado State University are proud to host the 7th annual CH4 Connections Virtual Conference, November 17-19th, 2020.

CH4 Connections 2020, with a focus on Technology Enabling Green Initiatives, unites representatives from the natural gas industry, research organizations, regulatory agencies, and technology vendors in one setting.

The conference, which has gained the reputation as the preeminent conference on methane detection and mitigation in the US, 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 11/17

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

10:00 – 10:15 AM

Welcome Remarks

Ron Snedic, SVP, Corporate Development & President, GTI International

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

10:15 – 10:35 AM

Keynote Speaker

Senator Chris Hansen, Senate District 31, Colorado State Senate

10:35 – 10:55 AM

Questions and Answers with Keynote Speaker

Fireside Chat and Moderator: **Bill Ritter Jr.**, former Colorado Governor, Director, Center for the New Energy Economy, Colorado State University

11:00 – 11:40 AM

Panel #1: Consumer-driven environmental standards

Consumers of natural gas – particularly power generators and end consumers through their distribution companies – are increasingly interested in responsibly sourced gas. This panel will explore the current state of these efforts, the players, and possible structures for implementing these initiatives.

Moderator: **Robert LaCount**, Executive Vice President, M.J. Bradley

Panelist: **Roy Hartstein**, Founder, Managing Director, Responsible Energy Solutions

Panelist: **Cate Hight**, Principal, Rocky Mountain Institute

11:40 – 12:00 PM

Sponsor Showcase Rapid-Fire Session

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

 **12:00 – 1:00 PM**

Exhibit Hours and Lunch Break

1:00 – 1:50 PM

Panel #2: Technology – growing potential for satellites to find and measure natural gas leaks

A new generation of satellite and airplane-based technologies have generated substantial interest as a means of detecting leaks and other emissions from oil and gas sites, worldwide, with unprecedented temporal and spatial coverage. But ... what can these sensors see? And what is their likely spatial coverage and frequency of sampling? This panel will highlight the latest information on remote sensing, delivered by experts who are independent of the technology developers.

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

Panelist: **Nicole Downey**, Principal Consultant, Earth System Sciences

Panelist: **Dan Cusworth**, Data Scientist, NASA Jet Propulsion Laboratory

Panelist: **Jason McKeever**, Science and Systems Lead, GHGSat

Panelist: **Brian Jones**, Co-founder and COO, Kairos Aerospace

 **1:50 – 2:00 PM**

Technical Presentation

"Modern approach to digital leak survey,"
Andy Scott, Chief Technology Officer, Hydromax USA

AGENDA

Day 1
TUE 11/17

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

2:10 – 2:55 PM

Panel #3: Operationalization – how are operators handling information from remote sensing?

Broad-area screening for leaks is coming – from satellites, aircraft, stationary sensors, and other methods. Conducted from off-site locations, these sensing efforts do not require the site access, and are likely to be deployed by a wide range of interested parties, rather than just traditional regulators and operators. The detections are ‘about to show up in operator inboxes.’ What will that look like? How can the information be most effectively used? What are the risks? This panel will explore the latest thinking on remote sensing, inter-stakeholder communications, reporting, and related operational issues.

Moderator: **Susan Stuver**, R&D Manager, Energy Delivery & Utilization, GTI

Panelist: **David Lyon**, Scientist, Environmental Defense Fund

Panelist: **Erin Tullos**, Environmental Risk Management Team Lead, ExxonMobil

Panelist: **Howard R. Dieter**, P.E., Vice President - Environmental, Health & Safety, Jonah Energy LLC

3:00 – 3:30 PM

Birds of a Feather Sessions

(Attendees choose one)

Day 1 Session 1: Watch this! Stories from gas imaging

Hosts: **Chris Moore, Sr. Scientist Energy Group, GTI and Dan Zimmerle, Senior Research Associate, Energy Institute, CSU**

Sponsor co-hosts: **Pete Roos and Ben Losby, Bridger Photonics; Stefan Bokaemper, Kuva Systems**

A discussion among users and technology developers of gas imaging. Have there been times when users have had to use gas imaging cameras to be sneaky and scan for emissions? The discussion can also get into technology hurdles and beyond.

Day 1 Session 2: Walk a mile in my shoes – Advancements in traditional leak survey

Hosts: **Susan Stuver, R&D Manager, Energy Delivery & Utilization, GTI and Joe von Fischer, Professor, Department of Biology, CSU**

Sponsor co-hosts: **Mark Congdon, Hydromax USA and Paul Wehnert, Heath Consultants**

There are a lot of logistics involved with surveying for leaks which are not often talked about. Let’s discuss finding the leaks from the industry perspective. There are some advancements being made, what are those? Are there stresses on the surveyors?



3:30 – 4:00 PM

Virtual Social Happy Half-hour

Stop by for a trivia challenge to earn Gamification points



Digital Gas Leak Survey Software

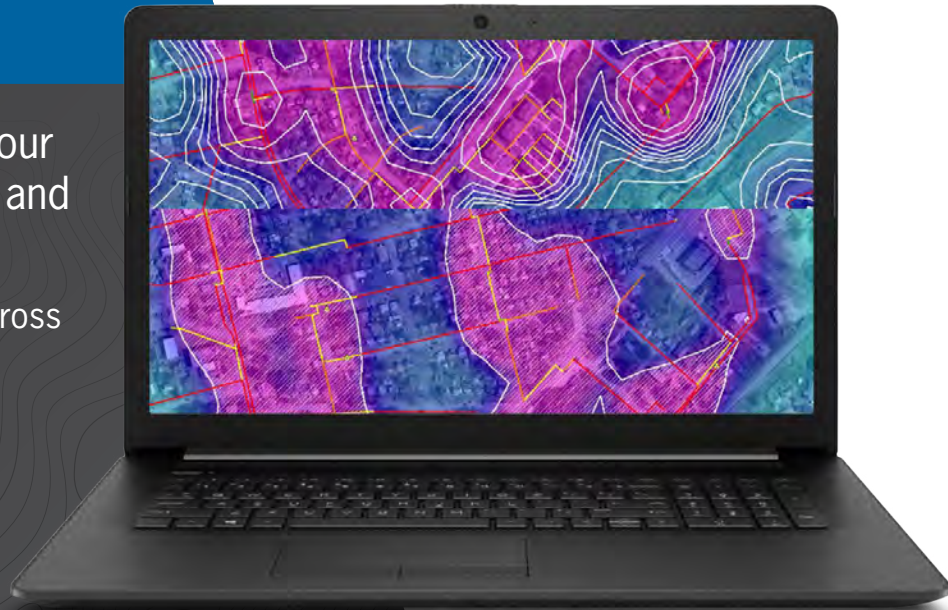
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- Utilize your existing GIS and historic cross bore data to identify areas of highest cross bore risk
- Quickly assess large regions of operations territory
- Prioritize work based on the likelihood of a cross bore
- Minimize operating expenses
- Improve public safety
- Set target risk mitigation thresholds that are achievable and truly impactful to enterprise value



AGENDA

Day 2
WED 11/18

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

10:00 – 10:15 AM

Welcome Remarks

Ron Snedic, SVP, Corporate Development & President, GTI International

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

10:15 – 11:00 AM

Panel #4: International perspectives on reducing methane emissions

The motivation to reducing methane emissions knows no boundaries. This session explores efforts outside the U.S. focused on monitoring and reducing methane emissions.

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

Panelist: Pietro Mezzano, Project Manager, Oil and Gas Climate Initiative

Panelist: Paul Cheliak, VP Regulatory Affairs, Canadian Gas Association

Panelist: Paula Gant, SVP, Strategy & Innovation, GTI

11:10 – 11:55 AM

Sponsor Showcase Rapid-Fire Session

Silver Sponsors

- **Pete Roos**, President/CEO, Bridger Photonics
- **Jean-Francois Guathier**, VP Sales and Marketing, GHGSat
- **Milton Heath III**, Heath Consultants
- **Stefan Bokaemper**, CEO, Kuva Systems
- **Aaron Van Pelt**, Vice President of Product Strategy, Picarro
- **Scott Kleppe**, President, Sensit

Bronze Sponsors

- **Brendan Smith**, COO and Co-founder, SeekOps Inc
- **Swanand Bhagwat**, Research Engineer, Southwest Research Institute

Moderator: Chris Moore, Senior Scientist, Energy Delivery Group, GTI

12:30 – 1:15 PM

Panel #5: How can we compare leak detection technologies and work practices? Update on FEAST, MEET (methane emissions evaluation tool), the Pathway to Equivalency projects.

Comparing next-generation leak detection and quantification tools requires a new generation of simulation tools. A multi-university coalition is developing a spatially and temporally resolved emission simulation software (MEET) and extending and integrating the well-known LDAR simulator (FEAST). This panel will provide a robust update on the state of these efforts, new features and applications, and how to engage.

Moderator: Dan Zimmerle, Senior Research Associate, Energy Institute, Colorado State University

Panelist: Arvind Ravikumar, Assistant Professor of Energy Engineering, Harrisburg University in Pennsylvania

Panelist: Chris Moore, Sr. Scientist, Energy Delivery & Utilization, GTI

Panelist: David Allen, Professor, McKetta Department of Chemical Engineering, University of Texas at Austin



1:15 – 1:25 PM

Technical presentation: "Beyond emissions factors: Directly measuring methane intensity to drive efficient LDAR strategies"

Elena Berman, Chief Science Officer, Kairos

AGENDA

Day 2
WED 11/18

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

1:45 – 2:30 PM

Panel #6: Net Zero Goals: A conversation about the proposed pathways

Multiple jurisdictions have announced 'net zero' carbon goals – including some with relatively high natural gas usage for space heating and electricity generation. Achieving these goals would doubtlessly impact the natural gas supply chain. This panel will explore the modeling done by these jurisdictions to develop these goals and provide insight into the pathways envisioned to achieve them.

Moderator: Pam Lacey, Chief Regulatory Counsel, American Gas Association

Panelist: Bob Kleinberg, Senior Research Scholar, Center on Global Energy Policy, Columbia University

Panelist: Zeke Hausfather, Director of Climate and Energy, The Breakthrough Institute

Panelist: Kristine Wiley, Executive Director, Hydrogen Technology Center, GTI

2:35 – 3:15 PM

Birds of a Feather Sessions

(Attendees choose one)

Day 2 Session 1: Big Brother is watching – Satellite advancements (not just for methane)

Hosts: Susan Stuver, R&D Manager, Energy Delivery & Utilization, GTI and **Dan Zimmerle**, Senior Research Associate, Energy Institute, CSU

Sponsor co-hosts: Jean-Francois Guathier, GHGSat and **Steve Deiker**, Kairos Aerospace

Satellites for methane are advancing, but also satellites in general are advancing. Let's take the time to discuss what we know about satellite developments in general. This can include launching, scanning, tracking, etc.

Day 2 Session 2: Notes from the road – Vehicle Based Leak detection

Hosts: Chris Moore, Sr. Scientist Energy Group, GTI and **Joe von Fischer**, Professor, Department of Biology, CSU

Sponsor co-hosts: Aaron Van Pelt, Picarro and **Scott Kranstuber**, Sensit Technologies

Folks can share stories about their experiences with vehicle based leak detection. There has been a lot of advancement in vehicle based leak detection which can be discussed.

LZ30

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**PROTECTING LIFE,
PROPERTY,
AND OUR ENVIRONMENT
FROM HAZARDOUS GASES**



AGENDA

Day 3
THU 11/19

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

10:00 – 10:15 AM

Welcome Remarks:

Ron Snedic, SVP, Corporate Development & President,
GTI International

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

10:15 – 10:35 AM

Keynote Speaker

Vanessa Ryan, Manager, Carbon Reduction, Chevron Corporation

10:35 – 11:00 AM

Questions and Answers with Keynote Speaker

Moderator of fireside chat: **Bryan Willson**, Executive Director,
Energy Institute at Colorado State University

11:00 – 11:10 AM

Technical Presentation

“Modular Gas Monitoring Platform for Emissions Location and
Sample Acquisition,” Dr. Jacob Melby, Sensit

11:10 AM – 12:00 PM

Exhibit Hours and Lunch Break

12:00 – 12:50 PM

Panel #7: How stakeholders are driving new state-level regulatory initiatives

In elements of natural gas operations, from safety to greenhouse gas mitigation, states – and occasional smaller – jurisdictions are playing an increasingly active role in setting the legislative agenda and regulatory approach, a substantial shift away from centralized rule development. Constituents in these jurisdictions are playing an active role in crafting these policies, leading to an unprecedented level of community engagement. This panel will explore ‘what that looks like’ – who’s driving the change, and how states and localities are reacting.

Moderator: **Bill Ritter**, Former Colorado Governor, Director, Center for the New Energy Economy, Colorado State University

Panelist: **Diane Burman**, Commissioner, New York State Public Service Commission

Panelist: **Sandra Ely**, Environmental Protection Division Director, New Mexico Environment Department

12:50 – 1:00 PM

Closing Remarks

Bill Ritter, Director, Center for the New Energy Economy, CSU

Ron Snedic, SVP, Corporate Development & President,
GTI International

Bryan Willson, Executive Director, Energy Institute, CSU

MEET OUR SPEAKERS



Senator Chris Hansen
Senate District 31
Colorado State Senate

Senator Hansen specializes in energy sector economics and data analytics, with 20 years of experience in the global energy industry. He was formerly the Representative for House District 6 from

2017-2019, representing the east-central neighborhoods of Denver. He currently serves on the Senate Finance, and Senate State, Veterans, and Military Affairs committees.

Throughout his tenure in the Colorado House of Representatives, Hansen served on the Capital Development, House Transportation & Energy, Appropriations, Agriculture, Livestock & Natural Resources, and Joint Budget committees, and as Chair on the House Appropriations Committee. Prior to his work as an elected official, he served as Senior Director at IHS Markit where he led a global portfolio of energy products, events and partnerships. He is a co-creator of the OptGen analysis, IHS CERA's unique tool for applying financial portfolio techniques to power generation.

Before joining IHS Markit, Dr. Hansen was a Research Fellow at the Oxford Institute for Energy Studies, where he analyzed electricity and gas sector reform in India and published several papers in professional journals on energy sector economics and policy analysis.

Dr. Hansen holds a BSc in Nuclear Engineering from Kansas State University; a Graduate Diploma of Civil Engineering from the University of the Witwatersrand, South Africa; a Master of Science in Technology Policy from MIT; and a PhD in Economic Geography from Oxford University.

In 2012, he was selected as a Marshall Memorial Fellow by the German Marshall Fund and in 2017 was selected as a Public Leadership Fellow at Harvard University by the Gates Family Foundation.

In 2019, he was selected as one of fifteen leaders from across the country to join the NewDEAL (Developing Exceptional American Leaders), a selective national network of rising state and local elected officials. Hansen serves as the Co-Founder and Director of Programming at the Colorado Energy & Water Institute, and as Co-Founder of the Colorado Science and Engineering Policy Fellowship.



Former Governor Bill Ritter Jr.
Director, Center for the New Energy Economy
Colorado State University

Governor Bill Ritter was elected Colorado's 41st governor in 2006 and was the District Attorney of Denver from 1993-2005. During his four-year

term as Governor, Ritter established Colorado as a national and international leader in clean energy by building a New Energy Economy.

After leaving the Governor's Office, Ritter founded the Center for the New Energy Economy at Colorado State University, which works with state and federal policy makers to create clean energy policy throughout the country. Governor Ritter has authored a book that was published in 2016 entitled, *Powering Forward – What Everyone Should Know About America's Energy Revolution*.

Gov. Ritter was formerly the chair of the Board of Directors of the Energy Foundation and currently serves on the Regis University Board of Trustees. Gov. Ritter is a member of Blackhorn Venture Capital and serves as an advisor to Green Alpha and Millennium Bridge, among others.

Ritter earned his bachelor's degree in political science from Colorado State University (1978) and his law degree from the University of Colorado (1981). With his wife Jeannie, he operated a food distribution and nutrition center in Zambia. He then served as Denver's district attorney from 1993 to January 2005.

MEET OUR SPEAKERS



Vanessa T. Ryan
**Manager, Carbon Reduction, Energy
Transition Team**
Chevron Corporation

Vanessa T. Ryan is Manager, Carbon Reduction as part of the Energy Transition Team at Chevron Corporation, responsible for supporting business unit carbon reduction initiatives, including methane strategy. She also serves as Chair of the Steering Committee of The Environmental Partnership, an industry group committed to continuously improving the industry's environmental performance. Previously, she was Senior Advisor for Shale Issues.

She also served as Chevron Asia-Pacific Exploration and Production, responsible for providing advice to Chevron's Asia-Pacific business on government and public affairs issues, including trade and community engagement. She has served as Coordinator for Policy, Government, and Public Affairs for Chevron Vietnam in Ho Chi Minh City. Ms. Ryan joined Chevron as a Public Policy Adviser at Chevron Corporation, where she was responsible for the corporate responsibility report and advised on environmental, social, and geopolitical issues.

Prior to joining Chevron she worked in social marketing firm focused on health and environment issues. She holds a Masters of Public Policy from the University of Southern California and a B.A. in Political Economy from UC Berkeley.

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MEET OUR SPEAKERS



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

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.



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.

Emissions from the natural gas distribution system declined

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MEET OUR SPEAKERS



David Allen
Professor
Melvin H. Gertz Regents Chair
Chemical Engineering
University of Texas Austin

Dr. Allen's research areas are in energy and environmental engineering. He was a lead investigator in the Texas

Air Quality Study, one of the largest air quality studies ever undertaken. His current research focuses on using the results from that study to provide a sound scientific basis for air quality management in Texas. In addition, Allen develops environmental educational materials for engineering curricula and disseminates the materials worldwide.

Dr. David Allen is the author of seven books and over 250 papers, primarily in the areas of urban air quality, the engineering of sustainable systems, and the development of materials for environmental and engineering education. He has been a lead

investigator for multiple air quality measurement studies, which have had a substantial impact on the direction of air quality policies. Allen directs the Air Quality Research Program for the State of Texas, and he is the founding Editor-in-Chief of the American Chemical Society's journal ACS Sustainable Chemistry & Engineering.

Allen has developed environmental educational materials for engineering curricula and for the University's core curriculum, as well as engineering education materials for high school students. He led the development of a year-long high school engineering course, Engineer Your World, which is used in hundreds of high schools nationwide.

Dr. Allen's Educational Qualifications: Ph.D., Chemical Engineering, California Institute of Technology (1983); M.S., Chemical Engineering, California Institute of Technology (1981); B.S., Chemical Engineering, Cornell University (1979)

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Elena Berman
Chief Science Officer
Kairos Aerospace

Elena Berman is a PhD physical chemist and spectroscopist (Stanford University) who is responsible for all Kairos research activities, development of spectrometer hardware, and advanced data analytics.

Elena collaborates with scientists across industry and academia to advance the state-of-the-art in methane emission reduction. Prior to joining Kairos, Elena was Director of Research for Los Gatos Research, producing high performance spectroscopic analyzers for measurements of trace gasses and isotopes and serving as principal investigator on a number of government funded collaborative research projects.

Swanand Bhagwat
Southwest Research Institute
Research Engineer

Dr. Bhagwat is a Research Engineer in the Fluid Dynamics Section at Southwest Research Institute. His technical expertise and research interests are in the fields of Multiphase Flows, Thermal Systems Design, Thermal Energy Transport and Processes, Energy-Water Nexus, and Data Analytics for Engineering Applications. He has experience in prototype design/testing, thermodynamic modeling, complex data analytics, flow visualization, and project management. At SwRI, Dr. Bhagwat provides engineering support to multiphase flow characterization, flow separation, custom flow loop design, and testing projects. He interfaces with multidisciplinary teams within SwRI as well as actively engages with academia and industry to develop new research and business areas. Currently, he is assisting a team of machine learning experts at SwRI to validate the Smart Leak Detection Technology (SLED) through simulated oil and gas leaks under various scenarios.



Stefan Bokaemper
Kuva Systems
CEO

Stefan is an experienced professional with 20 years of CEO, CTO, product management and R&D / engineering development experience in blue chip as well as fast growing start-up companies in

high tech and energy industries. His comprehensive understanding of product development, software engineering, business operations, quality management and team building, along with his strong business partnership skills help him repeated launch novel technologies into early and fast growth markets. He holds an MBA as well as a PhD in Computer Simulations, MS in Energy Engineering and BS in Mechanical Engineering.



Diane Burman
Commissioner
New York State Public Service
Commission

Diane X. Burman serves as a Commissioner of the New York State Public Service Commission (Commission). The Commission

regulates the state's electric, gas, steam, telecommunications, and water utilities and oversees the cable industry. In addition, the Commission exercises jurisdiction over the siting of major gas and electric transmission facilities and is responsible for ensuring the safety of natural gas and liquid petroleum pipelines. Bipartisan by law since 1970, the Commission consists of up to five members, each appointed by the Governor and confirmed by the State Senate. Ms. Burman's term runs through February 2024.



Paul Cheliak
Vice President
Public and Regulatory Affairs
Canadian Gas Association

Paul Cheliak is the Vice President of Public and Regulatory Affairs with the Canadian Gas Association in Ottawa, Ontario, Canada. The CGA is the national

voice for Canada's natural gas distribution companies who deliver natural gas to over 20 million Canadians. Paul leads CGA's public relations and political strategy to build support for sustainable gaseous energy use in Canada. Paul also works with utilities to advance their regulated business growth opportunities. Prior to joining CGA, Paul worked with Natural Resources Canada – Canada's federal resource department – providing natural gas market and policy advice to the Department's senior management. Paul lives in Ottawa with his wife and two daughters and is an avid (but not necessarily successful) fisherman.

MEET OUR SPEAKERS



Dan Cusworth
Data Scientist
NASA Jet Propulsion Laboratory

Dan Cusworth received his B.S. in Applied Math/Atmospheric Sciences at UCLA and Ph.D. in Atmospheric Chemistry at Harvard University. At JPL he works on understanding sources of anthropogenic carbon dioxide and methane emissions from regional to facility scales. He works with the Megacities Carbon Project team to assimilate tower, aircraft, mountaintop, and satellite greenhouse gas measurements into a unified framework for basin-level emissions monitoring. He provides support to several Carbon Monitoring System aircraft campaign projects aimed at quantifying point sources across emission sectors. Finally, he is helping to develop retrieval and analysis frameworks for the next generation of satellite imaging spectrometers that will have the capability of high resolution emission mapping from space.



Steve Deiker
Kairos Aerospace
President & CEO

Steve is a PhD physicist who co-founded Kairos Aerospace in 2014. Prior to founding Kairos, Steve was a research manager at the Lockheed Martin Solar and Astrophysics Laboratory. He has worked on a variety of NASA- and DARPA-funded programs, including cryogenic detector programs, solar physics experiments and radiation modeling for spacecraft.



Howard R. Dieter, P.E.
Vice President - Environmental,
Health & Safety
Jonah Energy LLC

Howard received a BS in Civil Engineering from Penn State University in 1989 and has over 30 years of experience working in a wide range of engineering, construction and government relations roles. He is a registered professional engineer in Colorado and previously in Pennsylvania. Prior to joining Jonah Energy in 2014, Howard worked as a consultant for several upstream oil and gas operators in the Marcellus and Utica shale plays and in Wyoming. Jonah Energy operates in the Jonah Field, which is ranked among the top 10 gas fields in the U.S. Jonah Energy is very proactive in evaluating and implementing new technology particularly related to emissions reductions such as drone-based LDAR inspections and continuous fixed monitoring to reduce leak cycle time. Jonah Energy has earned the IES TrustWell Gold certification and recently received the first low methane attribute certification from IES in country.

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MEET OUR SPEAKERS



Nicole Downey
Owner
Earth System Sciences

Dr. Nicole Downey is the owner of Earth System Sciences, a consulting firm specializing in oil and gas emissions and regulatory issues. Nicole received her Ph.D. in Environmental Science and

Engineering from Caltech and was later a postdoctoral scholar at the Harvard University Center for the Environment and at the University of Texas at Austin. She has worked on various remote sensing projects including satellite-based remote sensing of the earth surface and atmosphere. She has been a consultant for over 10 years and has extensive experience with modeling and understanding emissions from the oil and gas supply chain. Nicole's background in satellite-based remote sensing and oil and gas emissions gives her a unique perspective in understanding both the possible benefits and drawbacks of this emerging technology.



Sandra Ely
Director, Environmental Protection
Division
New Mexico Environment Department

Sandra has a long history with the New Mexico Environment Department. As Environmental Protection Division Director, Sandra oversees the

Department's Air Quality, Environment Health, Occupation Health and Safety and Radiation Control bureaus. She started in the Occupational Health and Safety Bureau (OHSB) in 1994 as an inspector and moved up to OHSB Program Manager before she became Air Quality Bureau Chief in 1999. In 2005, she began serving as Environment and Energy Policy Coordinator for the Department. In this role, she worked on state and regional climate change and clean energy initiatives. In 2012, she went back to the Air Quality as Compliance and Enforcement Section Chief before leaving the Department to manage the Aamodt Water Settlement in 2015 for Santa Fe County. Sandra holds a B.S. in Conservation and Resource Sciences from the University of California at Berkeley, a B.S. in Nursing from Creighton University and an M.S. in Environmental Studies from the University of Oregon. You will often see her out on the trails hiking, backpacking or running with her dog, Ali, and husband, Steve Michel.

KUVA
GAS CLOUD IMAGING

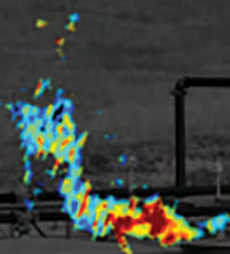


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Paula A. Gant, Ph.D.

**SVP, Strategy & Innovation
Gas Technology Institute**

Dr. Paula Gant leads strategy and planning to shape transitions to low-cost, low-carbon energy systems. In this role, Paula oversees efforts to commercialize technologies, processes, and scientific innovations needed for economy-wide, deep decarbonization post-2030, both nationally and worldwide—with a particular focus on opportunities to leverage gases, fuels, and infrastructure in these transitions. In both private and public sector leadership roles, Paula has focused on energy systems transitions and the intersection of technology, markets, and policy. At the U.S. Department of Energy, Paula administered natural gas export regulation and R&D programs executed by the National Energy Technology Lab, along with implementation of international clean energy initiatives and multilateral energy security engagements. She previously led policy and strategy at the American Gas Association and directed policy for Duke Energy. She holds a B.A. in Economics from McNeese State University in Lake Charles, Louisiana, and a Ph.D. in Economics from Auburn University in Auburn, Alabama. Paula lives in Washington, DC with her son and border collie.



Jean-Francois Gauthier

**GHGSat Inc.
VP of Sales and Marketing**

Jean-Francois Gauthier is a mechanical engineer and lifelong space geek with over 15 years of experience in various capacities with commercial satellite hardware manufacturing leader COM

DEV prior to joining GHGSat, including design and test, project management, engineering management and sales and marketing. He holds a Bachelor of Engineering from Dalhousie University and an MBA from Wilfrid Laurier University. He is also a graduate of the International Space University's Summer Session Program (2006). In October 2016, he joined GHGSat to help commercialize the products and services from their breakthrough satellites around the world. He now leads the growing Sales and Marketing team for the company.



Roy Hartstein

**Founder, Managing Director
Responsible Energy Solutions**

Roy is driven to help energy companies find the value in “doing the right things.” He has led companies to achieve “Freshwater Neutral,” offsetting their use of freshwater by improving water quality and availability, established

methane management initiatives for production operations and pioneered the execution of the first U.S. “certified gas” transaction. Building on these experiences he leads oil and gas companies in implementation of ESG initiatives focused on key areas of material value, environmental risk mitigation and development of certified gas initiatives.

Hartstein has spoken frequently on resource development including presentations on corporate responsibility, water management and methane emissions management. Recent presentations include the 2020 ADI Forum, 2019 ONE Future Climate and Methane Strategies Summit, 2018 World Gas Conference in Washington, DC; 2018 SPE Workshop on Environmental Stewardship in Unconventional Resource Development; and IGU Methane Conference at COP23 in Bonn, Germany.

Responsible Energy Solutions is an energy consultancy dedicated to helping companies create tangible value through environmental excellence. Recent work includes consultation with an international oil and gas pipeline organization on the development of a “green pipeline” program, development of ESG strategy for midstream pipeline companies and a midstream water company, consultation with an international environmental NGO and development of a draft international standard for certified low methane emissions natural gas.



Zeke Hausfather

**Director of Climate and Energy
The Breakthrough Institute**

Zeke Hausfather is a climate scientist and energy systems analyst whose research focuses on observational temperature records, climate models, and mitigation technologies. He spent 10 years working

as a data scientist and entrepreneur in the cleantech sector, where he was the lead data scientist at Essess, the chief scientist at C3.ai, and the cofounder and chief scientist of Efficiency 2.0. He also worked as a research scientist with Berkeley Earth, was the senior climate analyst at Project Drawdown, and the US analyst for Carbon Brief. He has masters degrees in environmental science from Yale University and Vrije Universiteit Amsterdam and a PhD in climate science from the University of California, Berkeley.

MEET OUR SPEAKERS



Cate Hight
Principal
Rocky Mountain Institute

Cate Hight leads Rocky Mountain Institute's efforts to elevate the importance of industrial decarbonization in the global climate action system. In collaboration

with partners in business and civil society, Cate brings leading industrial actors together to seek agreement on decarbonization pathways and take action to achieve net-zero emissions by 2050.

Cate also leads RMI's work to develop a first of its kind product standard for natural gas differentiated according to its upstream methane emissions. Leveraging her deep expertise in climate policy and market mechanisms, Cate works with oil and gas operators, regulators, purchasers and consumers to build the market for differentiated gas and improve the industry's climate performance.

Background

Cate spent ten years at the US Environmental Protection Agency where she led the agency's work on carbon market development, played lead roles in the development of key greenhouse gas regulations, and co-authored the annual US Inventory of GHG Emissions and Sinks. Before joining RMI, Cate managed the oil and gas program of the Global Methane Initiative, a public-private partnership of 45 countries and private-sector actors dedicated to methane abatement, recovery, and use.

Prior to EPA, Cate worked for the Mission Climat of the Caisse des Depots in Paris (now I4CE), where she co-authored Pricing Carbon, a book assessing the performance of the European Union Emission Trading Scheme. She has also held positions at the Center for Climate and Energy Solutions (C2ES) and as committee staff in the US House of Representatives.



Brian Jones
Co-founder and COO
Kairos Aerospace

Brian is a PhD physicist who co-founded Kairos Aerospace in 2014. After leading the development of the prototype hardware, analysis, and software, he assembled a team of engineers to

mature the product for a production environment. As COO, Brian is responsible for the market delivery of Kairos survey services. Prior to founding Kairos, Brian worked at Lockheed Martin as Chief Scientist on a number of classified and unclassified space projects as well as Lead Scientist for the Space Environmental Effects Lab.



MEET OUR SPEAKERS



Robert Kleinberg
Senior Research Scholar
Center on Global Energy Policy
Columbia University

Robert L. Kleinberg is Senior Research Scholar at the Columbia University Center on Global Energy Policy, and Senior Fellow at the Boston University Institute for Sustainable Energy. His current interests include energy technology and economics, and environmental and regulatory issues associated with the oil and gas industry. From 1980 to 2018 Dr. Kleinberg was employed by Schlumberger, the premier oilfield service company, attaining the rank of Schlumberger Fellow, one of about a dozen to have held this rank in a workforce of 100,000. From 1978 to 1980 he was a post-doctoral fellow at the Exxon Corporate Research Laboratory. Dr. Kleinberg was educated at the University of California, Berkeley (B.S. Chemistry, 1971) and the University of California, San Diego (Ph.D. Physics, 1978). Dr. Kleinberg has authored more than 100 academic and professional papers, holds 41 U.S. patents, and has invented several geophysical instruments that have been commercialized on a worldwide basis. Dr. Kleinberg is a member of the National Academy of Engineering, and serves on the Board on Earth Sciences and Resources of the National Academies of Sciences, Engineering, and Medicine.



J Scott Kleppe
President & CEO
Sensit Technologies

J. Scott Kleppe is President and Chief Executive Officer of Sensit Technologies (formally J and N Enterprises, Inc.) in Valparaiso, Indiana. He oversees all sales, design, manufacturing, service, quality, and financial operations of the organization. Sensit Technologies had been a part of the Crane Group from 2014 until February of 2020 when they were acquired by Halma PLC, a FTSE100 company.

Scott joined Sensit in 1984 after working at another unrelated business, and has spent his career working to build the family business. He started out working in packaging and shipping, moved into sales, and in 1999 was named President of the company upon his father's retirement. Today, with over 110 employees in 3 countries, global product distribution to more

than 40 countries, Sensit Technologies boasts complete sales and service capabilities, research and development, and manufacturing operations.

His affiliations include Midwest Energy Association Board of Directors (2009-2015), American Gas Association OESA Committee Chairman (elect) (2013-2015), Eastport Owners Association Board member (2011-2019), and United Way Ambassador (2015).

Awards include: Named the Indiana Small Business Exporter of the Year in 2005. In 2018 he was named CEO of the Year by Business Worldwide Magazine as most innovative in the natural gas industry. In 2019 Top 100 Registry as Professional of the Year.

Scott's education spans from Chemical Engineering at Purdue to Electrical/HVAC Systems studies at Indiana Vocational Technical College, and various business classes through University of Wisconsin Business School.

Scott and his wife, Tina, live on their small farm in Union Mills Indiana with their dozens of, mostly rescued dogs and cats, horses, rabbits and chickens.



Scott Kranstuber
Sensit Technologies
VP of Sales & Marketing

Scott Kranstuber is the Vice President of Sales and Marketing at SENSIT Technologies. Scott is responsible for managing SENSIT's sales channels in the Americas for Energy

Markets as well as the Fire Service and Industrial sectors. SENSIT Technologies designs, manufactures, and services products that protect life, property, and the environment from hazardous gases. Scott began his career in the Natural Gas Industry in 1988, including more than 10 years at SENSIT.

Active in several national and regional industry trade organizations, Scott has chaired MEA's Associate Advisory Council and served on its Measurement and Distribution committees. He is past chair of the AGA Operations and Engineering Associates Managing Committee and current member of its Field Operations Committee. Scott is also a current member of the Board of Directors of both the Midwest Energy Association and the Southern Gas Association.

Scott has a B.S. in Journalism from Kent State University. He and his wife, Nancy, live in Madison, Ohio with their three dogs and four cats.

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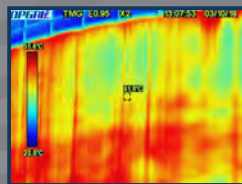


Pam Lacey
Chief Regulatory Counsel
American Gas Association

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.

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Dr. Jacob Melby
Sensit Technologies
Fixed Point Product Manager

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.



Robert LaCount
Executive Vice President
M.J. Bradley and Associates

Rob has 25 years of professional experience working at the intersection of energy and environmental issues, with deep expertise in the electric power and natural gas industries,

environmental policy, and clean energy. At MJB&A, Rob assists clients on a wide range of topics including climate and clean energy strategy, policy assessment, and market & scenario analysis. Rob leads the firm's natural gas practice and works closely with clients in MJ B&A's Natural Gas Downstream Initiative and Natural Gas Supply Collaborative.

Before joining MJB&A, Rob worked for IHS where he managed environmental, climate change, and clean energy research and launched the IHS Climate Change and Clean Energy Forum. Prior to IHS, Rob worked for PG&E National Energy Group as Director of Environmental Policy and Strategy and held senior-level positions at the US Environmental Protection Agency and the Maryland Department of the Environment. While in government, he managed the design and implementation of numerous environmental regulations and emissions trading programs.

Rob has testified before the US Congress and has worked with a wide range of stakeholders including foreign governments, US federal and state governments, industry groups, and nongovernmental organizations in the development of environmental and energy policies. He holds a BA in Chemistry from Wittenberg University, an MS in Energy Management and Policy from the University of Pennsylvania and the Institut Français du Pétrole, and an MBA from the University of Maryland.



Ben Losby
Bridger Photonics, Inc.
Key Accounts Manager

After receiving my degree in Physics, I spent 10 years in the exploration, production and refining sectors of North Dakota, Alaska, and Montana before running my own optics

company. Taking on the role of Key Accounts Manager at Bridger has allowed me to merge my oil and gas background with my optics experience. Sharing the best aerial methane detection technology in the world with Bridger's oil and gas clients is a lot of fun. Bridger's clients are blown away by the detection capabilities of Gas Mapping LiDAR. Getting feedback from field crews that can't believe we were able to detect 'that leak' from the air makes my day every time.



David Lyon
Scientist
Environmental Defense Fund

David Lyon is a scientist at Environmental Defense Fund, a nonpartisan environmental advocacy organization with over 2.5 million members and 700 staff guided by

science and economics to find solutions to urgent environmental problems. David has worked at EDF for 8 years researching methane emissions and other air pollution from the oil and gas industry. Prior to EDF, David worked at the Arkansas Department of Environmental Quality managing the state's emissions inventory program. David earned a Ph.D. in Environmental Dynamics from the University of Arkansas with dissertation research on the quantification, assessment, and mitigation of O&G methane emissions.

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Anthony Marchese
Associate Dean for Academic and Student Affairs
Director, Engines and Energy Conversion Laboratory
Director, Advanced Biofuels Combustion and Characterization Laboratory
Co-Principal Investigator, Methane Emissions Technology Evaluation Center
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.



Jason McKeever
Science and Systems Lead, GHGSat

Dr. Jason McKeever is science and systems lead for GHGSat. He has over fifteen years of postdoctoral and industry experience in experimental spectrometry and physics, and his focus since 2010 has been in the development of trace gas detectors, first with cavity ring down spectroscopy and diffusion chromatography, and now with GHGSat's WAF-P spectrometer. The WAF-P is the device that enables measurement of individual methane emitters from space on GHGSat's satellites. Jason has a Ph.D. in Physics from Caltech (2004) and a Hon.B.Sc. Physics from the University of Toronto (1998).



Pietro Mezzano
Project Manager
Oil and Gas Climate Initiative

Pietro Mezzano is an engineer holding a MSc in "Climate Change & Finance" with Distinction from Imperial College London Business School and MSc in "Civil Engineering - Structural Design" from Imperial College London. Prior to joining OGCI, Pietro worked for a major utility company developing and building hydropower plants and wind farms projects in Europe.



Chris Moore
Sr. Scientist, Energy Delivery & Utilization, GTI

Dr. Chris Moore is currently a Senior Scientist in the Energy Delivery group at GTI. In his current role he leads efforts to evaluate new technologies and study methane emissions from natural gas transmission, storage and distribution, and serves as the Principal Investigator for the GTI Center for Methane Research. Chris's research has allowed him to collaborate with different groups including natural gas utilities, state and federal funding agencies, academia, and public stakeholders. Dr. Moore's research has been published in a wide variety of scientific journals including Nature and the Proceedings of the National Academy of Science. Dr. Moore holds a BS in Chemistry from WVU Tech, an MS in Environmental Science from the University of Virginia, and a PhD in Marine, Estuarine, Environmental Science from the University of Maryland.

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Arvind Ravikumar
Assistant Professor of Energy Engineering
Harrisburg University

Dr. Arvind Ravikumar is an assistant professor of energy engineering at Harrisburg University in Pennsylvania and directs the sustainable energy development lab. His group examines the future of oil and gas resources in a carbon constrained world, and studies equitable energy transition pathways in developing countries. Specifically, Ravikumar has led several large-scale field campaigns in the US and Canada on technology assessment and methane emissions measurements and is the lead developer of the FEAST simulation software. He routinely collaborates with US and international regulatory agencies, NGOs, grassroots organizations, and businesses to advance effective methane policies.



Pete Roos
Bridger Photonics, Inc.
PRESIDENT, CEO, AND CO-FOUNDER

In 2006, Dr. Peter Roos founded Bridger Photonics with two graduate school colleagues. Dr. Roos blends a rigorous technical background in laser physics with many years of executive experience leading Bridger Photonics. As an undergraduate student at the University of Colorado, Dr. Roos researched diode lasers alongside Nobel Laureate Dr. Carl Wieman. Under Dr. Roos's leadership, Inc. Magazine ranked Bridger Photonics as 2011's fastest-growing privately held U.S. company in the engineering sector. In 2012, Bridger Photonics received the Tibbetts Award along with the Montana Governor's Innovative Business Award. And in 2019, Bridger Photonics' Gas Mapping LiDAR™ was selected for a 2019 R&D 100 award recognizing the top 100 innovations worldwide in that year.



Andy Scott
Hydromax USA
Chief Technology Officer

Andy has over 30 years of global business operations and technology leadership experience across a wide range of sectors and disciplines, with deep expertise in Oil & Gas, Drilling, Facilities & Asset Management and Distribution Utilities. Andy is integral to Hydromax USA's business growth with his ability to build and empower high performing teams and integrate digital transformation strategies.



Brendan Smith
SeekOps
COO and Co-Founder

Brendan Smith is Co-Founder and Chief Operating Officer at SeekOps. Leading up to the formation of SeekOps, Brendan conducted research at the NASA Jet Propulsion Lab where his focus was on leveraging intelligent autonomous aerial systems for detection of methane leak anomalies. Today, he leads productization and application efforts of the smallest and most efficient miniature TDLAS methane sensors in the oil & gas industry. SeekOps works with major Oil & Gas customers to provide rapid, comprehensive, and cost-effective drone-based methane emission measurements globally.

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Jon Smith
Hydromax USA
Chief Executive Officer

Jon is a retired Naval Officer with over 20 years of leadership experience throughout his service in the U.S. armed forces. His personal commendations include Meritorious Service Medal, four Navy Commendation Medals, Navy Achievement Medal and numerous unit and campaign awards. He is currently serving as national President, Board of Directors, for Veterans in Energy (VIE), and has been on the board since 2017. VIE is a national 501(c)3 organization providing guidance for Veterans to the energy industry, as well as professional development and retention guidance in support of veterans, for utilities and the supporting industry.

Jon joined Hydromax USA in 2020 as CEO. Prior to HUSA, he was President, Mobile Pipeline, for Hexagon Lincoln, LLC, Vice President & General Manager of Smart Energy Gas Americas for Honeywell International, and has held leadership roles with Ford Motor Company, Johnson Electric, Federal-Mogul, Associated Materials, Inc. Jon's experience includes both domestic and international business including Latin America, Asia, and Europe.

Jon is a Graduate of the Omaha Executive Leadership Program and sat on the North American Manufacturing Leadership Council of Frost & Sullivan.



Susan Stuver, Ph.D., BCES
R&D Manager
GTI

Dr. Stuver, leads GTI's Environmental, Risk and Integrity Management programs – with many years directing the planning, acquisition, development and technical execution of environmental programs

throughout the US and overseas. Currently, Dr. Stuver leads research focused on the detection, characterization and reduction of methane emissions from the natural gas industry and actively works with utilities and pipeline companies on collaborative research to enable the introduction of renewable natural gas with a focus on ensuring the gas quality does not impact pipeline infrastructure or end use applications. Dr. Stuver represents GTI as the administrator for the LCRI Safety and Environmental Aspects Subcommittee, the Collaboratory to Advance Methane Science, the Risk, Integrity and Environment Committee of the Operations Technology Development

Collaboration, and represents GTI as a signatory member of Project Astra.

Dr. Stuver is a Board Certified Environmental Scientist, holds a PhD in Environmental Engineering and Science from the University of Texas at San Antonio, as well as an MS in Environmental Science and Spatial Analysis and a BS in Biology. Dr. Stuver is a veteran of the USARMY.



Erin Tullos
Environmental Risk Management
Team Lead
ExxonMobil

Erin Tullos leads the methane detection and mitigation research team for the ExxonMobil Upstream Research Company. Her career has generally been

focused on air quality and greenhouse gases, though she also has experience in water sustainability, heavy metals mitigation and alternative energy. She has worked in industry for about thirteen years and has been with ExxonMobil for the last six. Previous roles include managing a portfolio of federal air regulations (advocacy and compliance support), as a refinery environmental regulatory advisor and in research.



Joe von Fischer
Professor
Department of Biology
Colorado State University

Joe von Fischer is an associate 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.

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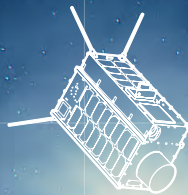


Kristine Wiley
Executive Director
GTI Hydrogen Technology Center

As the Executive Director 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.



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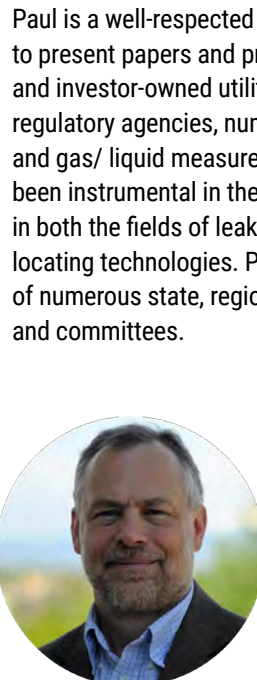
Aaron Van Pelt
Picarro
Vice President of Product Strategy

Mr. Van Pelt is currently Vice President of Product Strategy at Picarro, Inc. and received his M.S. in physics from Washington State University focusing on ultrafast laser spectroscopy and his B.S. in physics from the University of Wyoming. He has twenty years of experience in product development and marketing in the photonics field and for the past decade, he has served in various technical and management roles at Picarro Inc., focused on developing and bringing to market several gas sensing technologies. Previously, he was a Senior Research Scientist at Physical Sciences, Inc. and held marketing, product management and applications engineering positions at New Focus Inc. His career focus has been on technology/product/business development in sensing/ photonics/laser/spectroscopy and stable isotope and greenhouse gas measurement applications.



Paul Wehnert
Heath Consultants Incorporated
Executive Vice President / Chief Marketing Officer

Paul is currently the Executive Vice President / Chief Marketing Officer responsible for marketing products and field services at Heath Consultants Incorporated. His career with Heath began over 40 years ago when he graduated from the State University of New York at Syracuse with degrees in both Business and Forest Technology. Paul was initially hired as a Field Consultant to perform gas and water leak detection and line locating services for utilities and industrial plant locations throughout the World. He has held many titles including, Field Consultant, Area Operations Coordinator, Applications Engineer, Sales Consultant (Southwest), Sales Consultant (Mid-Atlantic), Territory Manager (East Coast), National Sales Manager and Vice President & Senior Vice President – Sales & Marketing. Paul's dedication and drive is to expand Heath Consultants' goal of becoming the World leader in utility protection and damage prevention.



Dan Zimmerle
Senior Research Associate
Energy Institute at Colorado State University

Daniel Zimmerle is a Senior Research Associate in the Energy Institute at Colorado State University (CSU). Zimmerle was a principal investigator on three major studies of methane emissions in the natural gas supply chain, and for METEC, the ARPA-E MONITOR test facility at CSU. Additionally, Zimmerle also has major research programs looking at microgrids for remote communities and the integration of distributed generation into power systems. Zimmerle also leads research programs for remote community microgrids and the integration of distributed generation into power systems. Zimmerle has been (or is) PI on four major studies of methane emissions in the natural gas supply chain, and leads the CSU METEC test facility for the ARPA-E MONITOR program. 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 lead organizations in several business areas, including computer systems, test systems, and consumer products. Organizations included personnel in the US, Ireland, Singapore and other countries. He holds a BSME and MSME from North Dakota State University.

MORE INFORMATION



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Executive Director

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