NEWS RELEASE
FOR IMMEDIATE RELEASE
February 7, 2024

CONTACT INFORMATION
Katerina Tsetsura
tsetsura@ou.edu

The OU Sustainability Forum brings together academics and industry leaders from around the world

NORMAN, Okla. – The 2nd annual OU Sustainability Forum focused on identifying ways in which community, industry and academia can collaborate to overcome the current technological, socioecnomic and scientific hurdles at the intersection between energy and materials science.

The two-day research forum on Jan. 26-27, 2024 featured three panels with leading industry and academia experts, one keynote presentation, and one research poster session, sponsored by the OU NSF Growing Convergence Research (GCR) project *t**RAN**sition to **G**reen **E**nergy in gas-producing regions (RANGE)*. The Forum offered unique perspectives on economic challenges, pathways to an equitable future, and robust discussions of environmental constraints and contingencies. Participants highlighted interdisciplinary sustainability approaches and pointed out the value of the event that brought together over 80 participants, including tribal representatives, industry leaders, and researchers based in the USA, the Netherlands, Oman, and Singapore.

Marilyn Korhonen, Director of Strategic Research Initiatives at the Gallogly College of Engineering, said the forum's uniqueness isn't just bringing renowned scientists and expert engineers from around the world under one roof but rather the valuable connections and potential projects that are discussed between ambitious students, faculty members, and industry leaders.

"Having the chance to see, hear, and experience the work I am supporting in a lot of different ways and a variety of different contexts is great because it gives us the chance to see how it can be applied," Korhonen said. "So often we have separate academic and industry meetings, and so having the chance to combine the two is a great way to facilitate collaboration and understand the issues we have at hand."

The forum highlighted key components of OU's sustainability research initiatives as well as industry efforts within and across the state of Oklahoma and beyond. Framed within the United Nations Sustainable Development Goals, the Forum's many discussions focused on synergy-centered opportunities to work across disciplines to transform not only the way sustainability is achieved but also the way the local and global communities perceive and understand the need for sustainability. Students of all levels, from undergraduates to graduates, as well as post-doctoral researchers, contributed to the forum and exchanged their ideas. The event offered an opportunity for online MS students in the "Sustainability: Energy & Materials Management" program to visit the OU campus for the first time in-person and meet their peers and instructors. The role of convergence research was discussed throughout the meeting. Every speaker stressed the importance of focusing on the human element of innovative technologies. Dimitrios

Papavassiliou, OU CBME Director and C. M Sliepcevich Professor of Chemical Engineering said, ”As one industry expert pointed out, without sustainability, there is no future, and without future -- there are no profits. The only way for us humans to be around for many years and for the companies to make profits is to think about sustainability in the long term. And this is the message the forum was able to highlight.”

Addressing Economic Obstacles

The first panel titled *Economic Challenges and Opportunities,* was moderated by John Antonio, the Interim Dean of the Mewbourn College of Earth and Energy at OU. It addressed the challenges faced by industry leaders within the sectors of chemical, mechanical, and material science. Presenters included, Giulio Lolli, Head of Global Energy Procurement – Covestro; Marvi Matos, Director of Systems Engineering, Integration and Tests at Boeing; KaLeigh Long, Chief Executive Officer of Westwin Elements; and Dr. Jimmy Faria Albanese, professor of Engineering and Materials Science at the University of Twente. Aiming to communicate the challenges and progressions made within their company’s sustainability attempts, students and faculty members received first-hand accounts of how academic research can assist national and global initiatives and investor buy-in.

Panelist Dr. Jimmy Faria Albanese, professor at the Department of Chemical Engineering at University of Twente, The Netherlands, and OU alumnus, described the importance of addressing sustainability because it highlights the real-life challenges. Though projects to harness energy are innovative and exceptional on paper, they need to be scalable, long-lasting, profitable, environmentally friendly, and socially responsible.

“What I see as the critical component [for the next five years] is the energy consumption,” Faria said. “How can we de-carbonize production goods and how can we de-carbonize the energy that we need. For me, the de-carbonization of chemicals and energy is really the most critical thing we need to pay attention to.”

Dozens of students, from undergraduate to post-doctoral, attended the forum. They had the chance to interact with leading experts in a friendly and open setting. Many were inspired to hear from leaders about what and where the future research should be going within energy, economics, sustainability, and trans-global agency efforts. Laura Sarmiento, a chemical engineering doctoral student within the OU Gallogly College of Engineering, said she was excited to hear from executive leaders about their research and development and what the future holds for global companies looking to make a difference.

“Right now, our world is facing so many challenges when it comes to energy and sustainability. So, forums like this have been great because it allows us to see how different departments across campus are coming together alongside these big companies to answer some of those challenges from a research perspective,” Sarmiento said.

Alberto Fidi, a prospective doctoral student from the University of Florence in Italy, appreciated the transparency of discussions about obstacles faculty members face when they introduce sustainability programs.

“I think the people that work in this field aren’t aware of everything that could be happening on the academic and industry side of things when it comes to research and sustainability,” Fidi said. “So, it’s been really great and an honor to be invited and hear from people who are doing the work and vision right now.”

Inclusivity Within Sustainability Research

The second panel titled *Pathways to an Equitable, Diverse, and Inclusive Future* addressed the dilemmas and latest information within energy justice. It was moderated by Dr. Shane Connely, Director of the Institute for Community and Society Transformation at OU. Energy justice is primarily focused on how energy is distributed, regulated, and utilized around the world. Energy justice is a distinctly new area of convergence research within sectors of business, engineering, communications, policy, and sociology.

Panel presenters included: Carla Consoloni, Specialist Production in Chemistry at ENI; Dr. Lilo Pozzo, Boeing-Roundhill Professor of Chemical Engineering at the University of Washington, Seattle; Dr. Emily Grubert, Professor of Sustainability and Energy Policy within the Keough School of Global Affairs at University of Notre Dame; and Dr. James Collard, Director of Planning and Economic Development for the Citizen Potawatomi Nation. Highlighting the divisions and gaps within energy development networks and academia, the panelists suggested various factors that could assist in gaining the trust and attention of college students interested in learning more about sustainability research, achieving government support, and approaching tribal nations living in nature-centric communities.

Dr. James Collard, Director of Planning and Economic Development for the Citizen Potawatomi Nation, focused on the uniqueness of states like Oklahoma that have Native American Nations. Oklahoma is an ideal space to educate others on how any initiative must remain inclusive and cooperative, according to Collard.

“These events are crucial,” Collard said. “If we don’t communicate with each other and share information, we aren’t going to get very far in anything. Being able to air-out our differences and knowledge is super important because no one knows everything. This is a gathering of people who have one thing in common: a thirst for knowledge. We all come from diverse backgrounds and perspectives, but our goal is still the same: enhance the human condition.”

A former OU student Yousuf Al-Siybi, who traveled to OU from the Oman Hydrogen Center, noted how progressive panelists were about introducing other fields like sociology and psychology into the world of sustainability and resiliency research.

“One thing that was addressed here was the sociological impacts that are involved in sustainability research related to gender, race and other factors,” Al-Siybi said. “And I think

when it comes to buying into these kinds of transformations, we have to address the issues that are related to people and society, not only those related to the science, engineering, and financial aspects."

Global Efforts and Environmental Impact

The third panel titled *Environmental Constraints and Contingencies* included, Timothy Myers, principal engineer and office director from Exponent; Dr. Hai M. Duong, Professor of Mechanical Engineering at the National University of Singapore; Sausan Al Riyami, Director of Oman Hydrogen Centre; and Scot Bodnar, Global Innovation Manager at Clariant. Harnessing the environmental challenges faced by chemical invocation centers and academic labs, the panel discussed the need for biodiversity and renewable resources at all levels of production in order to reduce the global carbon footprint. Prof. Tim Filley, Director of IREES, moderated the panel.

Panelist, and former post-doctoral fellow of the University of Oklahoma, Dr. Duong emphasized the high level of intentionality and expertise of panelists as they reinforced different aspects of recycling and proposed innovations to limit our environmental carbon footprint. Duong said he is excited to see how OU has progressed in sustainability research and in developing community-industry partnerships.

Remembering his time as a former student and scholar at OU, Duong described the importance of such forums as vital to the success and expansion of building new initiatives, funding, and attracting up-incoming scholars who seek to find solutions to our world's energy endeavors.

"I was very lucky to work under Dr. Dimitrios Papavassiliou," Duong said. "He and the faculty taught me all about research methodology and writing proposals and grants. And those are the skills that really helped me launch my career as a scientist. I was very fortunate to be part of OU."

Prof. Bhavik Bakshi, the Wrigley Professor at Arizona State University and author of the book "Sustainable Engineering" delivered a concluding keynote presentation. Bakshi offered an upbeat perspective on the future of sustainability research. According to Bakshi, as academia, industry, and government organizations start working together, new approaches develop, including investigations of how it might be possible to work *together* with nature to achieve sustainable development at the intersection between energy and materials.

OU Sustainability Forum organizers agreed to continue working together on connecting scholars, community advocates, and innovative leaders to increase sustainability, energy, and environmental research.

The Forum was sponsored by the OU Mewbourne College of Earth and Energy, OU Institute for Resilient Environmental and Energy Systems (IREES), OU Institute for Community and Society Transformation (ICAST), OU Gallogly College of Engineering School of Sustainable Chemical, Biological, and Materials Engineering, and the Asahi Glass Chair.

###