POWER APPLIED R&D 2023

ASME Power Division Conference

Responsible. Reliable. Power for All.

CONFERENCE
August 6–8, 2023

Hilton Long Beach,
Long Beach, CA

Program

https://event.asme.org/POWER

The American Society of Mechanical Engineers®
ASME®

ASME
SETTING THE STANDARD

Welcome

ASME 2023 POWER CONFERENCE

Conference Chair
Navid Goudarzi
Cleveland State University

Technical Program Chair
André Teixeira
EDP

Student Programs Chair
Sarvenaz Sobhansarbandi
University of Missouri-Kansas City

ASME 2023 NUCLEAR FORUM

Conference Chair
Jovica Riznic
Canadian Nuclear Safety Commission

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Conference Chair
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Technical Program Chair
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Student Programs Chair
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Jason Lee, P.E.
Riley Power Inc.

Frank Michell
Power Industry Consulting, LLC

Mike Smiarowski
Siemens Energy, Inc.

FROM THE CONFERENCE CHAIRS & EXECUTIVE COMMITTEE

Dear Colleagues:

Welcome to the ASME 2023 Power R&D Conference!

The ASME Power Conference is an annual event brought to you by the Power Division, one of ASME's largest and oldest technical divisions. For 2023, the Conference Organizing Committee has put together a program packed with peer-reviewed technical presentations, expert panels on today's hot topics in the power industry, networking opportunities, roundtable discussions, as well as professional communication and leadership skills workshops. This year, the Division decided to modify the structure of the technical program by introducing five major topics and hybrid industry- and academic-driven sub-topics to lead attendees into the exploration of technologies applicable to reliable, efficient, and economically viable electricity generation.

In support of providing a broader power industry status to our audience, there will be keynote and plenary talks from industry and national lab representatives. The Monday keynote by Siemens Advanta North America CEO will highlight the role of digital twins in the power industry, and the Tuesday plenary by the National Energy Technology Laboratory Acting Senior Fellow will discuss current and future areas of interest and funding opportunities at the U.S. Department of Energy. There will be four panels/forums with representatives from academia, industry, and national labs with topics on a journey to sustainability, digital twins and cyber-physical systems for energy system design and performance monitoring, energy storage, and computer modeling and simulation in nuclear engineering. We are excited about three new additions to our conference workshops. The technical workshop on ASME B31.1 will provide you with an introduction to piping system requirements. The "storytelling and emotional intelligence" workshops will provide you with interactive sessions taught by leaders of the field to take your communication skills to the next level and learn about critical skills of emotional intelligence in leadership.

A diverse set of professional networking opportunities at the opening reception, networking breaks between technical sessions, roundtables, and technical committee meetings can serve not just for exchanging ideas but also as an avenue to establish long-term relationships with mutual benefits. The roundtable discussion sessions with topics on energy storage, diversity in power, and early career development will serve as focused discussions for our valued attendees. If you are interested in learning more about the ASME Power Division or getting engaged, please do not hesitate to talk to any of the Division ExCom or conference organizing committee members. The Power Division always welcomes new members and new minds.

This conference would never have happened without an incredible effort from ASME staff and wonderful volunteers. On behalf of the ASME 2023 Power Applied R&D Organizing Committee, we wish to acknowledge the dedicated service of the Power Division ExCom members. Special thanks to the keynote and plenary speakers and panelists who volunteered their time and contributed to the technical and professional discussions at the conference. The ASME Power Conference would not be one of the oldest ASME conferences without the dedicated time and effort given by the authors, reviewers, session chairs, track chairs, technical committee chairs, and staff. Thank you so much for your continued presence and support.

We are excited about this conference and look forward to meeting you all face-to-face at the conference.

Navid Goudarzi, Ph.D.
Conference Chair, ASME Power Applied R&D

Contents

THANK YOU!

Thank you to our volunteers!

Without their dedication and time commitment, Power could not be a successful conference.

TOPIC CHAIRS

Topic 1.1: Fuels, Combustion, & Material Handling

Chair: Ashwani Gupta, *University of Maryland*

Co-Chair: Jeongmin Ahn, *Syracuse University*

Topic 1.2: Combustion Turbine Combined Cycles

Chair: Jeffrey Cobb, *Sargent Lundy*

Co-Chair: Amanda Kilby, *Sargent Lundy*

Topic 2.2: Power Plant Heat Exchangers & Cooling Technologies

Chair: Andrew Rister, Duke Energy

Topic 2.3: Steam Turbines, Generators, and Auxiliaries

Chair: Steve Radke, *Siemens Energy, Inc.*

Co-Chair: Davi Squaiella, *Black & Veatch*

Co-Chair: Mike Smiarowski, *Siemens Energy, Inc.*

Topic 3.2: Plant Construction, Supply Chain Management, & Economics

Chair: Frank Michell, *Power Industry Consulting, LLC*

Topic 3.5: Experimental and Computational Fluid Dynamics and Thermal Hydraulics and Data Analytics

Chair: Donna Guillen, *Idaho National Laboratory*

Co-Chair: George Mesina, *Idaho National Laboratory*

General Information

Topic 4.1: Renewable Energy Systems

Chair: Gopal Singh, *Siemens Gamesa Renewable Energy/University of Central Florida*

Co-Chair: Anthony DiCarlo, *MITRE Corporation*

Co-Chair: Navid Goudarzi, *Cleveland State University*

Topic 4.2: Water Management, Beneficial Reuse, & Environmental Issues

Chair: Nick Siefert, *U.S. Department of Energy, National Energy Technology Laboratory*

Co-Chair: Heather Hunter, *U.S. Department of Energy, National Energy Technology Laboratory*

Co-Chair: Jessica Mullen, *U.S. Department of Energy, National Energy Technology Laboratory*

Co-Chair: Joshua Brooks, *Georgia Institute of Technology*

Topic 4.3: Nuclear Forum

Chair: Jovica Riznic, *Canadian Nuclear Safety Commission*

Topic 4.4: Integrated Energy Systems & Micro-grids

Co-Chair: Biao Zhang, *U.S. Department of Energy, National Energy Technology Laboratory*

Topic 5.1: Advanced Tools for Cyber-Physical Systems and Digital Twins

Chair: Paolo Pezzini, *Ames Laboratory, Department of Energy*

Co-Chair: Biao Zhang, *U.S. Department of Energy, National Energy Technology Laboratory*

Topic 6.1: Student Competition

Chair: Sarvenaz Sobhansarbandi, *University of Missouri-Kansas City*

Co-Chair: André Teixeira, *EDP*

Co-Chair: Steven Greco, *Lectrodryer*

General Information

Registration Hours and Location

Registration will be located on the second level of the Long Beach Hilton.

Sunday, August 6	**1:00PM–5:00PM**
Monday, August 7	**8:00AM–5:00PM**
Tuesday, August 8	**8:00AM–4:00PM**

ON-SITE REGISTRATION FEES

Registration Type	On-Site Registration
ASME Member	$975
Track Chair/Session Chair	$975
Non-Member	$1,175
ASME Student Member	$525
Student Non-Member	$575
One-Day Member	$450
One-Day Non-Member	$475
ASME Life Member	$525
Guest Ticket to Reception	$50

REGISTRATION POLICIES

1. Conference registration fees include admission to all technical sessions, reception, keynote, plenary, refreshment breaks, plenary lunches, and electronic access to technical presentations. Tickets to the workshops, and for reception guests are an additional fee.
2. All attendees, including members, non-members, authors, panelists, chairs, and co-chairs, must pay the appropriate registration fee.
3. One-day registration allows access to the conference activities only on that particular day.
4. No one will be allowed to attend the technical sessions or exhibits without first registering and obtaining the official **POWER APPLIED R&D 2023** Conference badge.

ASME COMPLIMENTARY MEMBERSHIP

Any attendee that pays a non-member conference registration fee will receive a 4-month ASME membership free of charge. ASME will activate this complimentary membership for qualified attendees approximately four weeks after the conclusion of the conference.

PHEEDLOOP APP

Download the ASME Pheedloop App and hold the entire program in the palm of your hand! The ASME Pheedloop App allows you to easily look up sessions, search for papers or people, message with other attendees, and create your own schedule. Be sure to download the app for the latest information.

AUTHORS SPEAKERS' PRACTICE ROOM:

The speaker ready room is located in the Gallerie Board Room of the hotel.

The room will be equipped with a LCD projector, computer, and screen, Sunday through Tuesday. Authors are encouraged to use this facility to meet with their co-authors and review presentations.

It will be available as follows:

Sunday, August 6	**1:00PM–5:00PM**
Monday, August 7	**8:00AM–5:00PM**
Tuesday, August 8	**8:00AM–4:00PM**

SESSION ROOM EQUIPMENT

Each session room is equipped with a screen and LCD projector. There will be a laptop computer in each room. Speakers should have a copy of their presentation to load onto this computer on a memory stick. It is recommended that authors/speakers bring all visual aids with them.

CONFERENCE PAPERS ELECTRONIC ACCESS

All Full Conference Registrants will receive online access to papers and presentations made at the 2023 Power Conference & Nuclear Forum. Access will be granted using your registration email address. Papers that were not presented on site in Snowbird will not be published in the conference proceedings and cannot be cited or indexed.

WI-FI

Free Wi-Fi access is provided to **POWER Conference** attendees throughout the Hilton Long Beach. Free Wi-Fi access is also provided in the hotel rooms at the Hilton Hotel.

To access the Wi-Fi use these credentials.

Hilton Long Beach

Network: ASME
Password: Power2023

LUNCH

Lunch will be served in the International IV & V on:

Monday, August 7	**12:15PM–12:45PM**
Tuesday, August 8	**12:45PM–1:15PM**

Refreshment Breaks

Morning Break - Registration Area

Monday, August 7	**10:00AM–10:30AM**
Tuesday, August 8	**10:30AM–11:00AM**

Afternoon Break - Registration Area

Monday, August 7	**3:15PM–3:45PM**
Tuesday, August 8	**4:00PM–4:30PM**

NAME BADGES

Please wear your name badge at ALL times during the conference. Your name bade is required in order for you to attend the sessions and/or the exhibition. If you misplaced your badge, please go to the ASME registration desk and ask for a replacement.

OPENING RECEPTION

Monday, August 7 **5:30PM–7:00PM**

All registrants are invited to this special event to celebrate the opening of the exhibits. Come grab a drink and some food.

SPECIAL NEEDS & HANDICAPPED ATTENDEES

Whenever possible, we are pleased to make arrangements for special needs or handicapped registrants. Advance notice may be required for certain requests. For on-site assistance, please visit the ASME registration area at the hotel and ask to speak to a staff member.

KEYNOTE

Monday, August 7 9:00AM–10:00AM

Rani Shea
Chief Executive Officer
Siemens Advanta
North America

Keynote Title: Innovate at Speed: The Power of Digital Twins

Biography: Rani Russell Shea is CEO of Siemens Advanta North America, the team of experts in the global technology powerhouse that focuses solely on digital transformation services. She leads an organization that offers advisory, implementation and custom development services in order to meet the individual needs of each client. Rani's team leverages its deep domain knowledge, technical expertise, and end-to-end capability to enable clients to unlock the digital future.

Rani's commitment to a pragmatic, client-focused approach was developed over the course of her career. She previously served as the General Counsel for Siemens Advanta worldwide and also served on the global Legal and Compliance Management team for Siemens AG, where she drove the creation of innovative new templates and processes for seamless contracting. Additional roles include Head of Global Contracts and Integration for Siemens Digital Industries Software, the sole legal counsel in a tech start-up, and a commercial contracts litigator.

Rani is deeply passionate about gender equality, the opportunity to be yourself at work, and the transformative power of leadership. Rani is also committed to the core values of Siemens Advanta: Dare to Dream, Love our Clients, Team Wins and Enjoy the Ride. She is a graduate of the University of Virginia and the William and Mary Marshall-Wythe School of Law, and the proud mom of two amazing adults. When she has a little free time, she enjoys tennis and hiking.

PLENARY

Tuesday, August 8 12:45PM–2:15PM

Dr. Sydni Credle
Acting Senior Fellow

National Energy Technology Laboratory

Biography: Dr. Sydni Credle is currently Acting Senior Fellow for Computational Science & Engineering at the Department of Energy's National Energy Technology Laboratory (NETL) within the Office of Fossil Energy and Carbon Management. In this role, Dr. Credle provides technical and strategic leadership to help ensure high-level quality and relevancy of computational programs within NETL. Previously, Sydni served as Technology Manager and portfolio lead for three (3) research and development programs within the Crosscutting Research Program, including i) Sensors, Controls, and Novel Concepts; ii) Simulation-Based Engineering; and iii) University Training and Research. These programs, comprised of both in-house and extramural R&D efforts, combined for a total of 60+ active projects valued at over $50 million dollars. Dr. Credle holds a B.S. and M.S. degree from Florida A&M University in Mechanical Engineering as well as a Ph.D. from University Professional Engineer (P.E.) with a specialization in thermal and fluid systems for the state of West Virginia.

SPECIAL SESSIONS

Workshops

Sunday, August 6, 3:00PM–5:30PM

Room: Catalina
Cost: $25 for both workshops

Dr. Columbia Mishra
Systems Engineering Manager, Maxar Technologies

Mastering the Art of Storytelling: A Soft Skill Workshop for the Power Industry

Description: Join us for a dynamic and engaging workshop that will help you unlock the power of storytelling in technical settings. Storytelling is an essential soft skill that can enhance your ability to communicate complex ideas, build relationships, and inspire action. Through a combination of expert instruction and hands-on practice, you'll learn how to craft compelling stories that capture your audience's attention and leave a lasting impact.

This interactive session will include a presentation on the characteristics of effective storytelling in technical settings, techniques for engaging your audience, and tips for using body language and visual aids to enhance your message. You'll also have the opportunity to practice your storytelling skills in a supportive environment, receive feedback from peers, and gain valuable insights for continued learning and development.

Whether you're a seasoned professional or just starting out in the power industry, this workshop is designed to help you take your communication skills to the next level. Don't miss this opportunity to master the art of storytelling and make a lasting impression in your professional and personal life.

Workshop Leader

Simon Pun, FE, MS,
Director of Materials and Process Engineering, Divergent Technologies

The Power of Emotional Intelligence: Essential Skills for Effective Leadership

Description: Join us for a transformative workshop focused on the critical skill of emotional intelligence in leadership. In this session, you'll learn about the key components of emotional intelligence, including self-awareness, self-regulation, motivation, and empathy, and how to apply these skills in your role as a leader in the power industry.

Through a combination of expert instruction and interactive exercises, you'll gain valuable insights into how to lead with empathy and inspire your team to achieve their full potential. You'll also learn strategies for managing your own emotions and responding effectively to the emotions of others, enabling you to navigate complex challenges with greater confidence and success.

Whether you're a seasoned executive or just starting out in a leadership role, this workshop will provide you with the tools and techniques you need to become a more effective and emotionally intelligent leader in the power industry. Don't miss this opportunity to enhance your leadership skills and make a positive impact on your team and your organization.

Monday, August 7 10:30AM–12:00PM

Room: Catalina

Nuclear Panel

Panelist: George Mesina, *Idaho National Laboratory*

Panelist: Michael W. Smiarowski, *Siemens Energy, Inc*

Panelist: Jovica Riznic, *Canadian Nuclear Safety Commission*

Panelist: George Mesina, *Idaho National Laboratory*

Panelist: Michael W. Smiarowski, *Siemens Energy, Inc*

Panelist: Jovica Riznic, *Canadian Nuclear Safety Commission*

Description: As the nuclear industry continues to advance to meet the United States government plans for reducing emissions of greenhouse gases by American utility companies and others, its existing reactors are being improved, having their lives extended; meanwhile new research, development, and design efforts are leading to the creation of many new reactor designs. Some are cooled by water, high-temperature gases, liquid metals, molten salts, and other fluids. To aid the analysis and design of these reactors, nuclear plant modeling programs must advance with the nuclear and computer industries. RELAP5-3D is continually upgraded to serve the needs of the nuclear industry. Some uses for RELAP5-3D include aid in the design of new experiments and new reactor designs, commercial grade dedications for licensing submittals to the U.S. Nuclear Regulatory Commission, serving as the thermal hydraulic engine for new and existing nuclear power plant operator training simulators, and application to margin reduction for utilities.

Moreover, the computer industry continues to advance and puts pressure on computer codes to adapt continually. Whether it be computer architecture, operating systems, system software, compilers, data post-processors, or other advancements. Computer codes that do not keep abreast of changes in the computer industry will typically become unusable in two to three computer generations. RELAP5 has been upgraded in numerous ways in order to continue to build and run correctly on new computer architectures, and a variety of compilers and operating systems.

Monday, August 7 1:45PM–3:15PM

Room: Catalina

Computational Modeling and Simulation in Nuclear Engineering Panel

Panelist: Matthew Anderson, *Idaho National Laboratory*

Panelist: Mauricio E. Tano Retamales, *Idaho National Laboratory*

Panelist: Donna Post Guillen, *Idaho National Laboratory*

Panelist: Matthew Anderson, *Idaho National Laboratory*

Panelist: Mauricio E. Tano Retamales, *Idaho National Laboratory*

Panelist: Donna Post Guillen, *Idaho National Laboratory*

Description: These topics highlight the application of computational modeling and simulation techniques in different aspects of nuclear engineering, aiming to improve the design, safety, and performance of nuclear reactors and waste treatment processes.

Tuesday, August 8 9:00AM–10:30AM

Room: Catalina

Digital Twin and Cyber-Physical Systems for Energy System Design and Performance Monitoring Panel:

Moderator: Paolo Pezzini, *Ph.D., EPRI*
Panelist: Rick Kephart, *Emerson Electric Co.*
Panelist: Dr. David Tucker, *National Energy Technology Laboratory, U.S. Department of Energy*
Panelist: Kalyan Sharma, *ANSYS, Inc.*

Moderator: **Paolo Pezzini,** *Ph.D., EPRI*

Panelist: **Rick Kephart,** *Emerson Electric Co.*

Panelist: **Dr. David Tucker,** *National Energy Technology Laboratory, U.S. Department of Energy*

Panelist: **Kalyan Sharma,** *ANSYS, Inc.*

Description: This panel session will discuss the development of digital twin and cyber-physical systems used to monitor dynamic performance operation of existing power plants and how those tools can also support the design of new integrated energy systems. The fundamental change of operating nuclear and fossil-based power plants due to the penetration of non-dispatchable resources exposed traditional power plants to aggressive electric load following operations and required the design of novel low/zero carbon technologies that can achieve a high efficiency target at part-load condition. Real time models and digital twin environments with the support of cyber-physical methodologies are becoming powerful tools used to monitor performance of existing power plants but they have been also extended to design new integrated energy systems that can achieve near-zero emission targets. Regarding the monitoring of existing power plants, a digital twin model supports the prompt detection of abnormal operations and the optimization of scheduled maintenance and repair services of operators, which will avoid costly forced shutdowns, thereby increasing plant availability. Regarding the design of new energy systems, digital twin and cyber-physical environments can reduce the risk of failures in the design and development of new low/zero carbon technologies. The panelists in this session will cover the state-of-the-art of digital twin systems in both areas, existing power plants and innovative cycles.

Tuesday, August 8 2:30PM–4:00PM

Room: Catalina

A Journey to Sustainability Panel

Panelist: **Dr. Hamid Rahai**

Panelist: **Dr. Raúl Bayoán Cal**

Roundtables

Monday, August 7 3:45PM–5:00PM

Room: International 4/5

The Power conference will offer several informal discussions on topics important to the power industry led by a Moderator/Leader. Each Roundtable will be organized into two 25-minute discussions during the scheduled hour, which will provide the audience with the opportunity to participate in a couple of different discussions. You are encouraged to spend time on multiple topics. The Roundtable topics include:

a. **ESS** – An open discussion on the need to develop high capacity, long duration, energy storage technologies to maintain a reliable and resilient electric grid as more non-dispatchable renewable wind and solar generation is brought online and coal plants are shut down. Also, how to maintain a stable electric grid until high capacity, long duration, energy storage facilities are developed and ready for deployment.

b. **Diversity in Power** – An open discussion on how to develop, encourage, and support personnel diversity within the power industry, including some voices from successful women working in the industry.

c. **Early Career Development** – An open discussion on available career pathways within power, resources ASME can provide, education and licensing options, and how best to position yourself to move along your chosen path and attain your professional goals.

Energy Storage Symposium - Clean Energy Technology Group (CETG)

Organized by: **Frank Michell,** *ASME CETG Chair, Hebab Quazi, Martech International, Inc., George Nelson, UAH /University of Alabama, Sean Bradshaw (Pratt & Whitney), Justin Raade, EPRI*

Sessions and roundtables will include topics surrounding Energy Storage Challenges: ***Environmental/Safety Management and Energy Storage Technologies: Transformational Tools/Technique.***

Monday, August 7

3:45PM–5:00PM: Roundtable

Tuesday, August 8

11:00AM–2:30PM: Energy Storage Symposium – Session 1

4:30PM–6:00PM: Energy Storage Symposium – Session 2

Special Lecture

Monday, August 6 **12:15PM–1:30PM**

Panelist: **Peter Marino**

Peter Marino
Principal, Strategy & Special Projects

ASME
Title: Digital Twins: Towards Standards for Success

Description: Digital twin technology has the potential to be revolutionary for the energy sector. When we view the growth potential for what it is and work together in good faith to capitalize on it, we have the capacity to change a uniquely asset-heavy field into something more flexible, intelligent, and clean.

As a member of the ASME family of companies, Twinify inherits and benefits from an institutional history of consensus standards for broad commercial success and engineering rigor. From the steam boiler to the combustion turbine to the USB, modern history is replete with examples of astounding achievements that grew out of collective effort for shared benefit in an open and collaborative way.

This talk will discuss the opportunities and potential for digitized standards in view of the immense strengths of digital twins, and through the historical development of these approaches, and explore why and we should all think seriously about working together on imaginative approaches to standards in the digital century.

Biography: Peter Marino is Principal for Strategy and Special Projects in ASME. He was the project lead in launching Twinify Technologies, a performance and operational intent digital software company, and a joint venture with Black and Veatch of Kansas City. He joined ASME in 2020. He holds an MSc from the London School of Economics and an MA from NSSR in New York City.

ASME POWER CONFERENCE

Schedule at a Glance

Schedule at a Glance

PACIFIC TIME	SUNDAY, AUGUST 6	ROOM
1:00PM-5:00PM	Registration Open	Second Floor
3:00PM-4:00PM	Workshop: Mastering the Art of Storytelling: A Soft Skill Workshop for the Power Industry	Catalina
4:30PM-5:30PM	Workshop: The Power of Emotional Intelligence: Essential Skills for Effective Leadership	Catalina

PACIFIC TIME	MONDAY, AUGUST 7	ROOM
8:00AM-5:00PM	Registration Open	Second Floor
9:00AM-10:00AM	Welcome and Keynote	International 4/5
10:00AM-10:30AM	Networking Break	Registration Area
10:30AM-12:00PM	Nuclear Panel	Catalina
10:30AM-12:00PM	1.1.1 - Fuels, Combustion & Material Handling	Pacific 1
10:30AM-12:00PM	4.1.4 - Renewable Energy Systems	Pacific 2
10:30AM-12:00PM	6.1.1 - Student Competition	Atlantic 1/2
10:30AM-12:00PM	3.2 - Plant Construction, Supply Chain Mgmt. & Economics & 4.4 - Integrated Energy Systems & Micro-grids	Caribbean
12:15PM-1:30PM	Lunch & Special Lecture	International 4/5
1:45PM-3:15PM	Computational Modeling and Simulation in Nuclear Engineering Panel	Catalina
1:45PM-3:15PM	4.3 - Nuclear Power	Pacific 1
1:45PM-3:15PM	1.1.2 - Fuels, Combustion & Material Handling	Pacific 2
1:45PM-3:15PM	6.1.2 - Student Competition	Atlantic 1/2

Schedule at a Glance

PACIFIC TIME	MONDAY, AUGUST 7	ROOM
1:45PM-3:15PM	4.1.1 - Renewable Energy Systems	Caribbean
3:15PM-3:45PM	Networking Break	Registration Area
3:45PM-5:00PM	Roundtables (Early Career, Energy Storage, DEI)	International 4/5
4:30PM-5:30PM	FACT Technical Committee Meeting	Coral
4:30PM-5:30PM	Renewable Technical Committee Meeting	Atlantic 1/2
5:30PM to 7:00PM	Opening Reception	Pool

PACIFIC TIME	TUESDAY, AUGUST 8	ROOM
8:00AM-4:00PM	Registration Open	Second Floor
9:00AM-10:30AM	Digital Twin Panel	Catalina
10:30AM-11:00AM	Networking Break	Registration Area
11:00AM-12:30PM	Energy Storage Symposium – Session 1	Catalina
11:00AM-12:30PM	2.2 - Power Plant Heat Exchangers & Cooling Technologies	Pacific 1
11:00AM-12:30PM	4.2 - Water Management, Beneficial Reuse, & Environmental Issues	Pacific 2
11:00AM-12:30PM	4.1.2 - Renewable Energy Systems	Atlantic 1/2
11:00AM-12:30PM	5.1 - Advanced Tools for Cyber-Physical Systems and Digital Twins	Caribbean
12:45PM-2:15PM	Plenary Lunch & Student Awards	International 4/5
2:30PM-4:00PM	A Journey to Sustainability Panel	Catalina
2:30PM-4:30PM	4.1.3 - Renewable Energy Systems	Pacific 1
2:30PM-4:30PM	3.5 - Experimental and Computational Fluid Dynamics and Thermal Hydraulics and Data Analytics	Pacific 2
2:30PM-4:30PM	1.2 - Combustion Turbine Combined Cycles & 2.3 - Steam Turbines, Generators, and Auxiliaries	Atlantic 1/2
4:00PM-4:30PM	Networking Break	Registration Area
4:30PM-6:00PM	Energy Storage Symposium – Session 2	Catalina
4:30PM-6:00PM	Digital Twin Technical Committee Meeting	Coral

ASME POWER CONFERENCE

Technical Program

MONDAY, AUGUST 7, 2023

10:30AM–12:00PM

1.1.1 - Fuels, Combustion & Material Handling

Room: Pacific 1

Chair: Ashwani Gupta - *University of Maryland*
Co-Chair: Jeongmin Ahn - *Syracuse University*

10:30AM–10:48AM

Opportunities and Challenges for Co-Firing Ammonia in Coal-Fired Boilers

Technical Paper Publication: POWER2023-107257

Stan Rosinski - *EPRI*

Kent Coleman - *EPRI*

10:48AM–11:06AM

Thermochemical Conversion of Cow Manure With Different Heating Rates

Technical Paper Publication: POWER2023-108750

Osama Selim - *University of Wisconsin-Milwaukee*

Mohamed Maache - *University of Wisconsin-Milwaukee*

Cheikh Kada - *University of Wisconsin-Milwaukee*

Hiroyuki Kumano - *University of Wisconsin-Milwaukee*

Ryoichi S. Amano - *University of Wisconsin-Milwaukee*

11:06AM–11:24AM

Co-Gasification of Gypsum and Municipal Solid Waste Components in CO2 Atmosphere

Technical Paper Publication: POWER2023-108770

Athi-Enkosi Mavukwana - *University of South Africa*

Kiran Raj Goud Burra - *University of Maryland*

Baraka Celestin Sempuga - *University of South Africa*

Ashwani Gupta - *University of Maryland*

11:24AM–11:42AM

Using Simulation and Experiment to Develop a Design Methodology for Self-Shaping Solid Oxide Fuel Cell Multilayer Ceramic Composites

Technical Paper Publication: POWER2023-108848

Alexander R. Hartwell - *Western New England University*

Saifeldeen K. Elsayed - *Syracuse University*

Zhao Qin - *Syracuse University*

Jeongmin Ahn - *Syracuse University*

3.2 - Plant Construction, Supply Chain Mgmt. & Economics & 4.4 - Integrated Energy Systems & Micro-grids

Room: Caribbean

Chair: Frank Michell - *Power Industry Consulting LLC*

Co-Chair: Biao Zhang - *U.S. Department of Energy National Energy Technology Laboratory*

10:30AM–10:48AM

Energy Mix Forecasting: A Techno-Economic Analysis to Guide U.S. Power Production Decisions Through 2100

Technical Paper Publication: POWER2023-108763

Michael Keenan - *Georgia Institute of Technology*

Joshua Brooks - *Georgia Institute of Technology*

Scott Duncan - *Georgia Institute of Technology*

10:48AM–11:06AM

Trigeneration System Replacement for a University Central Plant Boiler Facility

Technical Paper Publication: POWER2023-108708

Frederick B. Mitri - *California State Polytechnic University at Pomona*

Emily Mukai - *California State Polytechnic University at Pomona*

Genesis Ponce - *California State Polytechnic University at Pomona*

Kevin R. Anderson - *California State Polytechnic University at Pomona*

11:06AM–11:24AM

A New Method for Valuing Nontraditional Stakeholder Parameters in Novel Power Systems Analysis

Technical Paper Publication: POWER2023-108956

D.A. Nagy - *Analytic Advancements*

Lawrence J. Shadle - *National Energy Technology Laboratory*

Rob Hovsapian - *National Renewable Energy Laboratory*

Manish Mohanpurkar - *National Renewable Energy Laboratory*

D. Tucker - *U.S. Department of Energy, National Renewable Energy Laboratory*

6.1.1 - Student Competition

Room: Atlantic 1/2

Chair: Sarvenaz Sobhansarbandi - *University of Missouri-Kansas City*

10:30AM–10:48AM

Comparative Analysis of Mechanical Energy Storage Systems

Technical Paper Publication: POWER2023-108530

Javier Sandoval Bustamante - *University of Cambridge*

Aanya Singh - *University of Cambridge*

Magali Itzai Soto Crisanto - *University of Cambridge*

Imerson Joao - *University of Cambridge*

Batool Mohsin - *University of Cambridge*

10:48AM–11:06AM

Investigation of Melting of PCM Dispersed With Nanoparticles in a Square Enclosure Integrated With Fins Subjected to a Uniform Magnetic Field: A Numerical Study

Technical Paper Publication: POWER2023-108746

Akhalesh Sharma - *Indian Institute of Technology Indore*

Vivek Saxena - *Indian Institute of Technology Indore*

Jaykumar Joshi - *Indian Institute of Technology Indore*

Santosh Kumar Sahu - Indian Institute of Technology Indore

11:06AM–11:24AM

An Innovative Seal Concept for Aircraft Engines

Technical Paper Publication: POWER2023-108776

Md. Wasif Hasan - *Georgia Southern University*

Sevki Cesmeci - *Georgia Southern University*

Mohammad Fuad Hassan - *Georgia Southern University*

Matthew Demond - *Georgia Southern University*

Hanping Xu - *Ultool, LLC*

11:24AM–11:42AM

Experimental Analysis of an Elastohydrodynamic Seal for Supercritical Carbon Dioxide Turbomachinery

Technical Paper Publication: POWER2023-108781

Jonah Henry - *Georgia Southern University*

Hanping Xu - *Ultool, LLC*

Mohammad Fuad Hassan - *Georgia Southern University*

Sevki Cesmeci - *Georgia Southern University*

Mohammad Towhidul Islam Rimon - *Georgia Southern University*

Shuangbiao Liu - *Ultool, LLC*

Jing Tang - *Ultool, LLC*

4.1.4 - Renewable Energy Systems

Room: Pacific 2

Chair: Gopal Singh - *Siemens Gamesa Renewable Energy/University of Central Florida*

10:30AM–10:48AM

Start-Up Operation Strategy Optimization of the Solar Field for a Parabolic Trough Concentrated Solar Power Plant

Technical Paper Publication: POWER2023-108839

Shunqi Zhang - *Xi'an Jiaotong University*

Haiyu Tang - *Xi'an Jiaotong University*

Ming Liu - *Xi'an Jiaotong University*

Jiping Liu - *Xi'an Jiaotong University*

Junjie Yan - *Xi'an Jiaotong University*

10:48AM–11:06AM

Proposal and Investigation of a New Tower Solar Collector Based Trigeneration Energy System

Technical Presentation Only: POWER2023-110208

Eydhah Almatrafi - *King Abdulaziz University*

11:06AM–11:24AM

The Journey to Carbon Neutrality: A Case Study Through China and the United States

Technical Paper Publication: POWER2023-117882

Jasmine Barrett - *University of Central Florida*

Alexis Gyselinck - *University of Central Florida*

Gopal Singh - *University of Central Florida*

11:24AM–11:42AM

Design and Analysis of a CSP Plant and Pumped Hydro Storage Facility

Technical Paper Publication: POWER2023-108709

Frederick B. Mitri - *California State Polytechnic University*

Kevin R. Anderson - *California State Polytechnic University*

4.1.1 - Renewable Energy Systems

Room: Caribbean

Chair: Gopal Singh - *Siemens Gamesa Renewable Energy/University of Central Florida*

1:45PM–2:03PM

Urban Airflow Analysis Using Reduced-Order Modeling

Technical Paper Publication: POWER2023-101973

Shivesh N. Sharma - *Cleveland State University*

Navid Goudarzi - *CSU Ohio*

2:03PM–2:21PM

Performance of Biomass and Waste Coal Co-Fired Power Generation

Technical Paper Publication: POWER2023-108621

Prakash Bhoi - *Georgia Southern University*

Surja Sarkar - *Georgia Southern University*

Jordan Klinger - *Idaho National Laboratory*

2:21PM–2:39PM

Employing Variable Current/Voltage Control Schemes to Develop Carnot-Analogous Mixing Engines for Salinity Gradient Energy Extraction

Technical Paper Publication: POWER2023-108772

Daniel Moreno - *Missouri State University*

2:39PM–2:57PM

Design and Performance Analysis of 1-kW Microturbine of Organic Rankine Cycle Applied for Solar Heat Collector

Technical Presentation Only: POWER2023-118655

Woong Jun Ko - *Korea Institute of Industrial Technology*

Da-I Jung - *Korea Institute of Industrial Technology*

Young Won Kim - *Korea Institute of Industrial Technology*

1:45PM–3:15PM

4.3 - Nuclear Power

Room: Pacific 1

Chair: Jovica Riznic - *Canadian Nuclear Safety Commission*

1:45PM–2:03PM

Numerical Modeling of an Elastohydrodynamic Seal Design for Supercritical CO2 Power Cycles

Technical Paper Publication: POWER2023-108959

Sevki Cesmeci - *Georgia Southern University*

Ikenna Ejiogu - *Georgia Southern University*

Md. Mahmudur Rahman - *Georgia Southern University*

Mohammad Fuad Hassan - *Georgia Southern University*

Hanping Xu - *Ultool, LLC*

Jing Tang - *Ultool, LLC*

2:03PM–2:21PM

CODAP Programme: Twenty Years of International Collaboration in Collecting Operating Experience

Technical Presentation Only: POWER2023-118881

Jovica Riznic - *Canadian Nuclear Safety Commission*

2:21PM–2:39PM

Decarbonizing Industrial Heat and Electricity Applications Using Advanced Nuclear Energy

Technical Presentation Only: POWER2023-117778

Chandrakanth. Bolisetti - *Idaho National Laboratory*

Elizabeth Worsham - *Idaho National Laboratory*

Daniel Mikkelson - *Idaho National Laboratory*

Frederick Joseck - *Idaho National Laboratory*

Jakub Toman - *Idaho National Laboratory*

Rami Saeed - *Idaho National Laboratory*

Byung-Hee Choi - *Idaho National Laboratory*

George Griffith - *Idaho National Laboratory*

Nipun Popli - *Idaho National Laboratory*

1.1.2 - Fuels, Combustion & Material Handling

Room: Pacific 2

Chair: Jeongmin Ahn - *Syracuse University*

Chair: Ashwani Gupta - *University of Maryland*

1:45PM–2:03PM

Metals Recovery and Syngas Evolution During Co-Gasification of Municipal Solid Waste and Gypsum

Technical Paper Publication: POWER2023-108773

Athi-Enkosi Mavukwana - *University of South Africa*

Kiran Raj Goud Burra - *University of Maryland*

Baraka Celestin Sempuga - *University of South Africa*

Ashwani Gupta - UMD

2:03PM–2:21PM

Development of an Optimal Nitric Oxide Reduction System via Solid Oxide Fuel Cells

Technical Paper Publication: POWER2023-108914

Aliza M. Willsey - *Syracuse University*

Thomas S. Welles - *Syracuse University*

Jeongmin Ahn - *Syracuse University*

2:21PM–2:39PM

Investigation of Ammonia as a Fuel for Solid Oxide Fuel Cells

Technical Paper Publication: POWER2023-108936

Cole Wilhelm - *Syracuse University*

Kenta Tamaoki - *Tohoku University*

Hisashi Nakamura - *Tohoku University*

Jeongmin Ahn - *Syracuse University*

2:39PM–2:57PM

Failure Analysis of OTSG Tube in a Cogeneration Power Plant

Technical Paper Publication: POWER2023-110584

Wahida Tina - *Lansing Board of Water & Light*

Elizabeth Donaldson - *Lansing Board of Water & Light*

Thomas E. Dickinson - *Lansing Board of Water & Light*

6.1.2 - Student Competition

Room: Atlantic 1/2

Chair: Sarvenaz Sobhansarbandi - *University of Missouri-Kansas City*

1:45PM–2:03PM

A Design Study of an Elasto-Hydrodynamic Seal for sCO2 Power Cycle by Using Physics Informed Neural Network

Technical Paper Publication: POWER2023-108802

Mohammad Towhidul Islam Rimon - *Georgia Southern University*

Mohammad Fuad Hassan - *Georgia Southern University*

Karthik Reddy Lyathakula - *North Carolina State University*

Sevki Cesmeci - *Georgia Southern University*

Hanping Xu - *Ultool, LLC*

Jing Tang - *Ultool, LLC*

2:03PM–2:21PM

Evaluating Critical Weather Parameters Using Machine Learning Models

Technical Paper Publication: POWER2023-108893

Maede Najian - *Cleveland State University*

Navid Goudarzi - *Cleveland State University*

2:21PM–2:39PM

Design/Development of an Ultra-Compact Jet Impingement Thermal Management System Integrated With Micro-Fins for High Power Applications: A CFD Modeling

Technical Paper Publication: POWER2023-108951

Samual Sisk - *University of Missouri-Kansas City*

Feyza Berber Halmen - *University of Missouri-Kansas City*

Sarvenaz Sobhansarbandi - *University of Missouri-Kansas City*

2:39PM–2:57PM

Audio-Based Classification of Swirl Combustion Regimes Using Deep Learning

Technical Paper Publication: POWER2023-109005

Rishi Roy - *University of Maryland*

Ashwani K. Gupta - *University of Maryland*

TUESDAY, AUGUST 8, 2023

11:00AM–12:30PM

2.2 - Power Plant Heat Exchangers & Cooling Technologies

Room: Pacific 1

Chair: Andrew Rister - *Duke Energy*

11:00AM–11:18AM

Design and Performance Evaluation of an Industrial Combined Heat and Power Plant Integrated With Molten Salt Heat Storage System

Technical Paper Publication: POWER2023-108826

Haiyu Tang - *Xi'an Jiaotong University*

Ming Liu - *Xi'an Jiaotong University*

Shunqi Zhang - *Xi'an Jiaotong Univeristy*

Chaoyang Wang - *Xi'an Jiaotong University*

Junjie Yan - *Xi'an Jiaotong University*

11:18AM–11:36AM

Thermal-Economic Feasibility of Coal-Fired Power Plant Integrated With Power-to-Heat Thermal Energy Storage System

Technical Paper Publication: POWER2023-108837

Lin Miao - *Xi'an Jiaotong University*

MING Liu - *Xi'an Jiaotong University*

Kezhen Zhang - *Xi'an Jiaotong University*

Yongliang Zhao - *Xi'an Jiaotong University*

Junjie Yan - *Xi'an Jiaotong University*

11:36AM–11:54AM

Renewable Power Recovery System Using Main Steam Condenser,

Technical Paper Publication: POWER2023-108949

Tom Muldoon - *American Exchanger Services, Inc*

4.2 - Water Management, Beneficial Reuse, & Environmental Issues

Room: Pacific 2

Chair: Nicholas Siefert - *U.S. Department of Energy National Energy Technology Laboratory*

Opportunities for Integrating Particle-Based Concentrated Solar Power Generation With a Fluidized Desalinating Heat Exchanger: A Technoeconomic Analysis

11:00AM–11:18AM

Design of Solar Powered Desalination System for Residential Applications

Technical Paper Publication: POWER2023-108480

Joshua D. Brooks - Georgia Institute of Technology

11:18AM–11:36AM

National Energy Water Treatment and Speciation (NEWTS): A Water and Critical Minerals Database and Dashboard

Technical Paper Publication: POWER2023-108939

Siren Khuri - *Heriot Watt University*

Fadi A. Ghaith - *Heriot Watt University*

11:36AM–11:54AM

Technical Presentation Only: POWER2023-119098

Nicholas Siefert - *U.S. Department of Energy National Energy Technology Laboratory*

Madison Wenzlick - *U.S. Department of Energy National Energy Technology Laboratory*

Randall Burt Thomas - *U.S. Department of Energy National Energy Technology Laboratory*

5.1 - Advanced Tools for Cyber-Physical Systems and Digital Twins

Room: Caribbean

Chair: Biao Zhang - *U.S. Department of Energy National Energy Technology Laboratory*

11:00AM–11:18AM

Development of Multiphysics Dynamic Solid Oxide Electrolysis Cell (SOEC) Models for Hybrid Energy Systems

Technical Presentation Only: POWER2023-108548

Biao Zhang - *Leidos Research Support Team, National Energy Technology Laboratory*

Nana Zhou - *Leidos Research Support Team, National Energy Technology Laboratory*

Nor Farida Harun - *Leidos Research Support Team, National Energy Technology Laboratory*

Jose Colon-Rodriguez - *Leidos Research Support Team, National Energy Technology Laboratory*

Danylo Oryshchyn - *U.S. Department of Energy National Energy Technology Laboratory*

David Tucker - *U.S. Department of Energy National Energy Technology Laboratory*

Samuel Bayham - *U.S. Department of Energy National Energy Technology Laboratory*

11:18AM–11:36AM

Gas Turbine Digital Twin and Use Cases

Technical Presentation Only: POWER2023-118651

David Noble - *EPRI*

Chris Perullo - *Turbine Logic*

Lea Boche - *EPRI*

Woosung Choi - *EPRI/KEPCO*

11:36AM–11:54AM

Hybrid Digital Twins Technology for Energy Industry

Technical Presentation Only: POWER2023-118908

Kalyan Chakravarthy Sharna – *ANSYS, Inc.*

11:54AM–12:12PM

A Simulation Environment to Develop Control Strategies for Hybrid Energy Systems

Technical Presentation Only: POWER2023-118917

Paolo Pezzini - *EPRI*

Steve Seachman - *EPRI*

4.1.2 - Renewable Energy Systems

Room: Atlantic 1/2

Chair: Anthony Di Carlo - *Merrimack College*

11:00AM–11:18AM

Optimization Design of a 50 kW Organic Rankine Cycle System Utilizing Low-Temperature Heat Source

Technical Presentation Only: POWER2023-118864

Ja Woon Park - *Korea Institute of Industrial Technology*

Young Won Kim - *Korea Institute of Industrial Technology*

11:18AM–11:36AM

A Holistic Design Approach for a Micro Wind Turbine Powertrain

Technical Paper Publication: POWER2023-108753

Idalina L. Claudio Rodriguez - *Universidad Ana G. Mendez*

Alex D. Santiago-Vargas - *Purdue University*

Albert A. Espinoza - *Universidad Ana G. Mendez*

Diego A. Aponte-Roa - *Universidad Ana G. Mendez*

11:36AM–11:54AM

Pore-Scale Simulation of a Tubular Solar Absorber Partially Filled With Raschig Ring Porous Medium for Efficiency Enhancement Purposes

Technical Paper Publication: POWER2023-108768

Hossein Ebadi - *Politecnico di Torino*

Antonio Cammi - *Politecnico di Milano*

Nima Fathi - *Texas A&M University*

Laura Savoldi - *Politecnico di Torino*

11:54AM–12:12PM

The Feasibility of Silica-Sand for Manufacturing of Photovoltaic Solar Cells

Technical Presentation Only: POWER2023-108999

Nagwa Ibrahim Mohamed - *Qassim University*

1.2 - Combustion Turbine Combined Cycles & 2.3 - Steam Turbines, Generators, and Auxiliaries

Room: Atlantic 1/2

Chair: Amanda Kilby - *Sargent & Lundy*

Co-Chair: Michael Smiarowski - *Siemens Energy*

2:30PM–2:48PM

A Novel Approach to Integrating Photovoltaic Technology With Wastewater Treatment Plants (WWTPS)

Technical Paper Publication: POWER2023-108833

Hamza Al Alnawafah - *University of Wisconsin-Milwaukee*

Ryoichi S. Amano - *University of Wisconsin-Milwaukee*

2:48PM–3:06PM

Novel Dilution Zone Jet Modifiers: an Experimental and Numerical Study of Combustor Temperature Uniformity

Technical Paper Publication: POWER2023-108979

Ibrahim Soliman - *University of Wisconsin-Milwaukee*

Abdel Rahman Salem - *University of Wisconsin-Milwaukee*

Ryoichi Amano - *University of Wisconsin-Milwaukee*

3:06PM–3:24PM

System Design and Thermodynamic Analysis on a Coal Supercritical Water Gasification Power Generation System Integrated With Supercritical Carbon Dioxide Cycle

Technical Paper Publication: POWER2023-108843

Ruiqi Mu - *Xi'an Jiaotong University*

Ming Liu - *Xi'an Jiaotong University*

Junjie Yan - *Xi'an Jiaotong University*

3:24PM–3:42PM

Steam Turbine Modernizations Options for Combined Cycle and Nuclear Power Plants

Technical Presentation Only: POWER2023-118633

Michael Smiarowski - *Siemens Energy*

3:42PM–4:00PM

Techno-Economic Assessment of Waste Coal and Biomass Co-Fired Power Plant With Carbon Capture and Storage Technologies

Technical Presentation Only: POWER2023-118686

Surja Sarkar - *Georgia Southern University*

Prakash Bhoi - *Georgia Southern University*

Anoop Desai - *Georgia Southern University*

3.5 - Experimental and Computational Fluid Dynamics and Thermal Hydraulics and Data Analytics

Room: Pacific 2

Chair: George Mesina - *Idaho National Laboratory*

2:30PM–2:48PM

Study on the Standby Characteristics of a Packed Bed Thermal Energy Storage: Experimental Results and Model Based Parameter Optimization

Technical Paper Publication: POWER2023-108578

Paul Schwarzmayr - *Technische Universität Wien*

Felix Birkelbach - *T Technische Universität Wien*

Heimo Walter - *Technische Universität Wien*

René Hofmann - *Technische Universität Wien*

2:48PM–3:06PM

Transient Multi-Fuel Performance Modelling of a Utility Scale Boiler

Technical Paper Publication: POWER2023-108946

Michael D. Johnson - *Babcock Power*

Moritz Hübel - *Modelon*

3:06PM–3:24PM

Machine Learning Predictions of Waste Glass Melter Off-Gas

Technical Presentation Only: POWER2023-108803

Donna Guillen - *Idaho National Laboratory*

Zherui Guo - *Idaho National Laboratory*

Alexander Abboud - *Idaho National Laboratory*

Pavel Hrma - *AttainX*

Richard Pokorny - *University of Chemistry and Technology Prague*

Albert Kruger - *U.S. Department of Energy, Office of River Protection*

4.1.3 - Renewable Energy Systems

Room: Pacific 1

Chair: Mustafa Erguvan - *The University of Alabama*

2:30PM–2:48PM

Window and Shading Design for Office Buildings in Humid Subtropical Climate: An Energy Efficient Solution for New and Existing Buildings

Technical Paper Publication: POWER2023-118960

Sarah Nazari - *University of Tehran*

Payam Keshavarz Mirza Mohammadi - *University of Tehran*

Navid Goudarzi - *Cleveland State University*

2:48PM–3:06PM

Techno-Economic Analysis of Wind- and Solar-Based Steel Production

Technical Presentation Only: POWER2023-118125

Fabian Rosner - *Lawrence Berkeley National Laboratory*

Peter Valdez - *Pacific Northwest National Laboratory*

Dionissios Papadias - *Argonne National Laboratory*

Kriston Brooks - *Pacific Northwest National Laboratory*

Rajesh Ahluwalia - *Argonne National Laboratory*

Tom Autrey - *Pacific Northwest National Laboratory*

Jennifer King - *National Renewable Energy Laboratory*

Steve Hammond - *National Renewable Energy Laboratory*

Hanna Breunig - *Lawrence Berkeley National Laboratory*

3:06PM–3:24PM

Investigations of End Plates of Various Widths on the Performance of an Optimized Airfoil

Technical Paper Publication: POWER2023-108771

Leovigildo Torres - *California State University*

Hamid Rahai - *California State University*

3:24PM–3:42PM

Nano Fabricated Electrostatic Cleaning Technique for Dust Control for Solar Power Efficiency on Lunar Surface

Technical Paper Publication: POWER2023-108823

Voss Harrigan - *University of the District of Columbia*

Korey Carter - *University of the District of Columbia*

Marcus Gilmore - *University of the District of Columbia*

Jiajun Xu - *University of the District of Columbia*

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HOTEL OVERVIEW

LOCATION

- Central location between Los Angeles and Orange County
- Situated in Downtown Long Beach, within easy walking distance to restaurants, nightlife, shopping, and local attractions
- Just four blocks from the Long Beach Convention Center
- Easily accessible from three airports, all within one hour from the hotel: LAX, LGB, and SNA
- Adjacent to the World Trade Center, the Federal Building, and only minutes from the Port of Long Beach, Catalina Landing, and Carnival Cruise Port

ACCOMMODATIONS

- 399 renovated non-smoking guestrooms
- 248 king rooms, 151 queen/queen rooms
- 1 Presidential Suite, 4 Junior Suites, and 20 Corner King Room with Balcony
- High-speed wireless internet in all guestrooms
- Mini refrigerators in all rooms

TRANSPORTATION & AMENITIES

- Complimentary outdoor heated pool and 24-hour Fitness Center
- Business Center and free Wi-Fi in public areas
- Hotel courtesy van with downtown Long Beach service
- Served by the city's complimentary Passport Bus system

DINING OPTIONS

- The Café in the lobby, serving Starbucks beverages
- Sleek, new Enclave Kitchen and Bar with a Media Wall, available for drinks, lunch, or dinner
- The Loft – our sunlit breakfast dining room; available for private afternoon and evening events for up to 100 people
- In-room dining
- Over 100 various cafés, restaurants, and bars within walking distance

MEETINGS & EVENTS

- Ideal group size: 200-250 rooms on peak; 300-350 people for meet & feed
- A total of 30,000 sq. ft. of flexible meeting space
- 19 individual renovated meeting rooms
- International Ballroom with 9,730 sq. ft. of flexible space and 14' ceilings with no columns or obstructions (max capacity is 600 classroom-style/700 in rounds)
- Over 25,000 sq. ft. Fountain Courtyard and a spacious surface parking lot available for outdoor events and activities, bus staging, or production crew parking
- State-of-the-art meeting space: Gallerie with 4,238 sq. ft. of space
- and 15' ceilings, Gallerie Foyer, and the turnkey Gallerie Boardroom
- High speed internet access in meeting rooms (can dedicate up to 150 Mbps)
- Onsite AV provider: Presentation Services (PSAV)
- Meeting packages available
- Very low service charge rate– currently only 18%! (subject to change)

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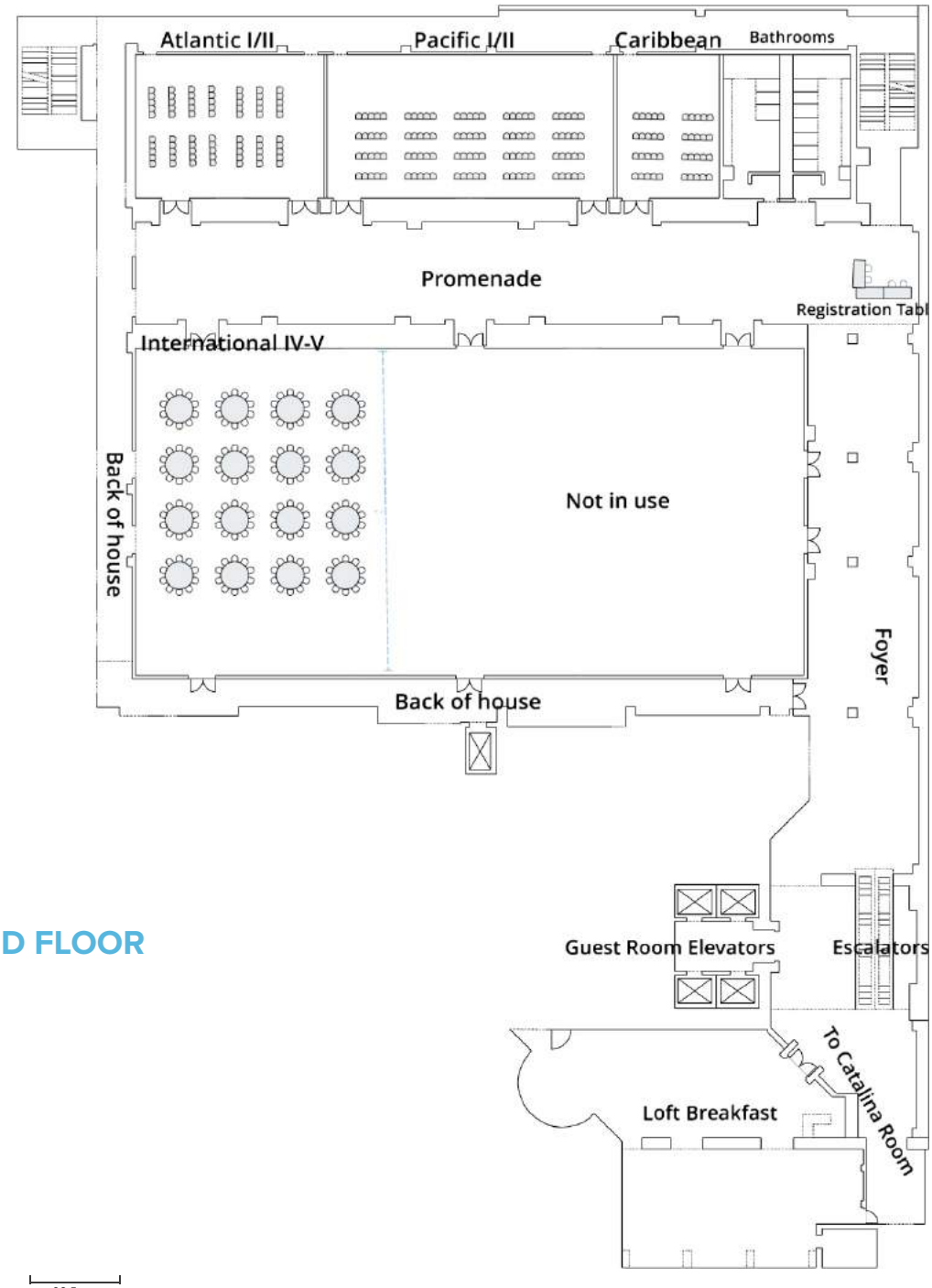

Hotel Floor Plan

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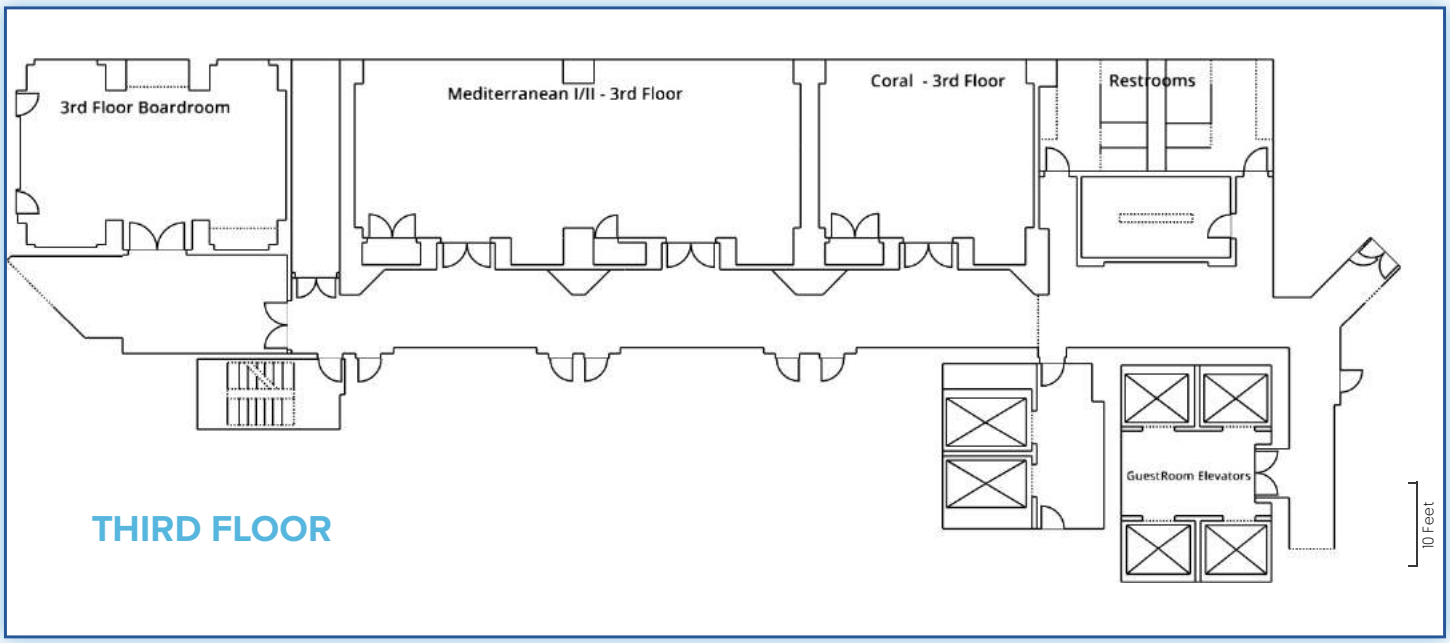
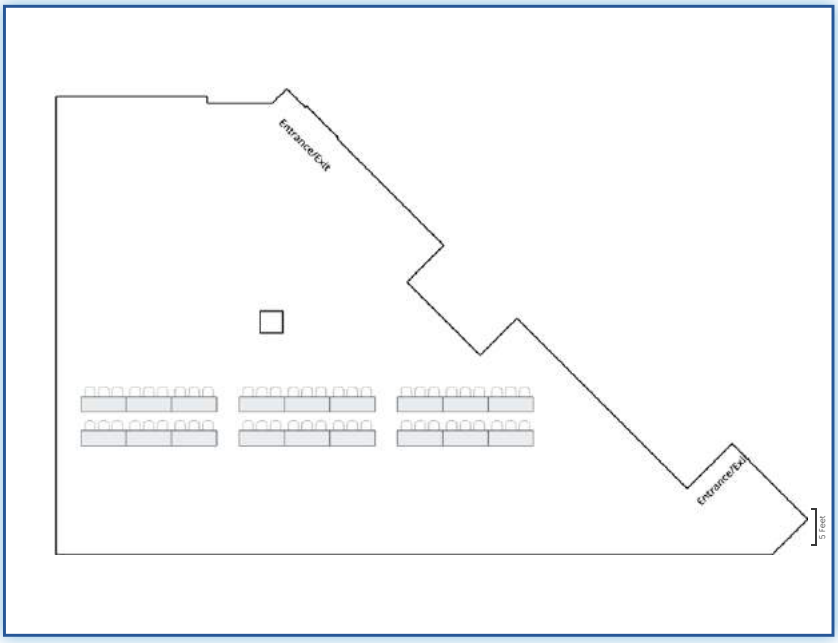
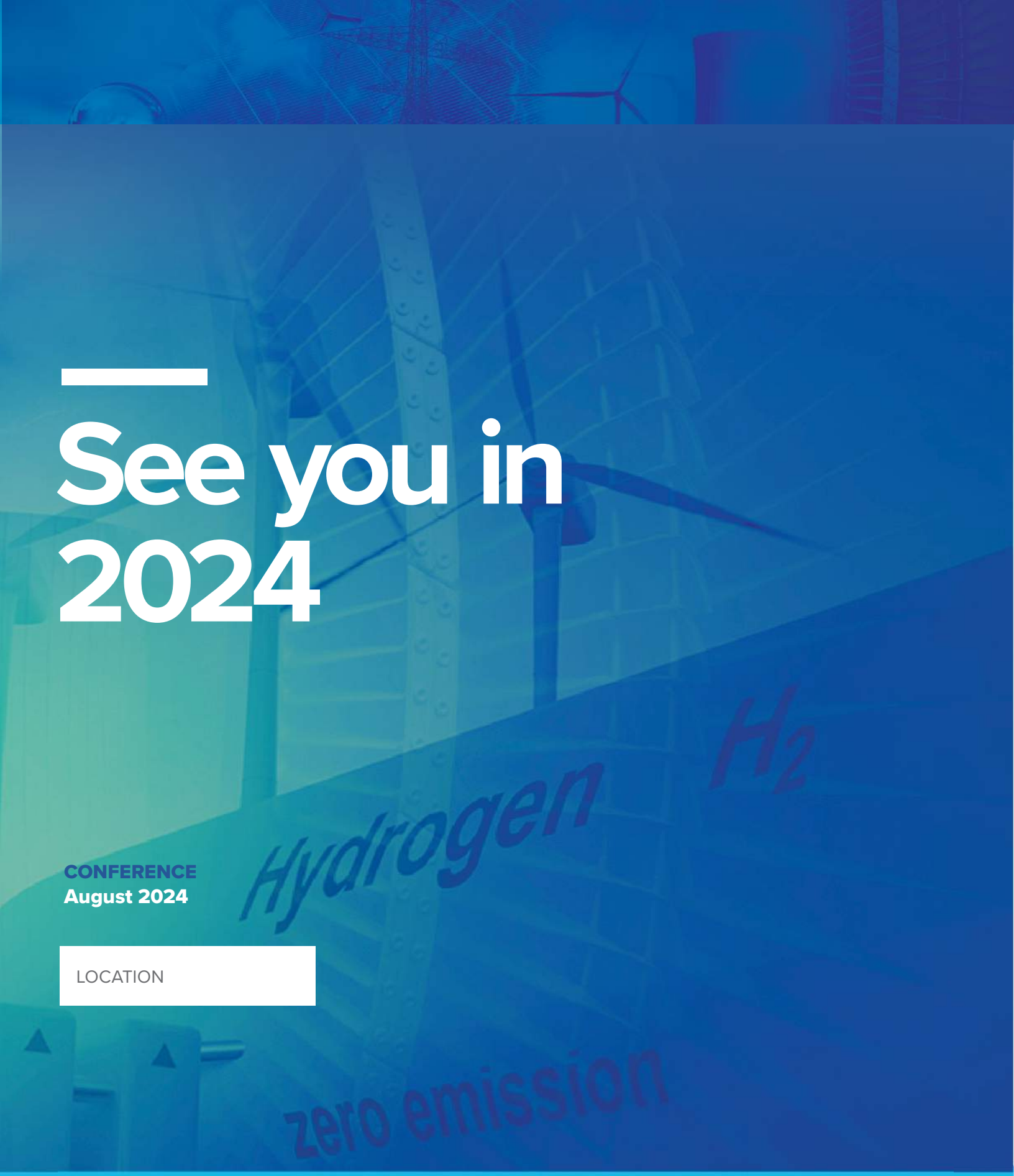


THIRD FLOOR



CATALINA ROOM



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August 2024

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