

ASME ICE DIVISION NEWS

JULY 2023



INTERNAL
COMBUSTION ENGINE
DIVISION

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Message from the Division Chair

Sibendu Som



It is an honor and pleasure for me to be serving as the chair for this incredible Internal Combustion Engine (ICE) Division. As we stand on the shoulders of giants, we celebrated 100 years for the division in 2021 with our fall conference in October 2022, and are gearing up for the next conference in October 2023. We sincerely

hope that you will support us by joining our upcoming conference. Dr. Sundar Krishnan and Mr. Dustin Osborne are leading the planning for this exciting conference. For our division, the conference is our marquee offering. Given the climate around engines, we are extremely proud to be the premier engine conference.

We have pivoted our division and conference to focus more on low-carbon, no-carbon fuels and heavy duty sectors, and hence continue to attract lot of academics, industry, and national labs. We promote an environment in which participants can discuss and exchange information related to the science and engineering of internal combustion engines and net-zero carbon fuels. The executive committee of the division remains committed to increasing diversity of gender, race, and thoughts within the division leadership and associates. Our division and conference provides a forum for experts from industry, academia, and governmental agencies from all over the world to share the latest developments. We envision that in order to achieve the decarbonization goals set forward by different nations, we would accelerate the pace of innovation and promote international conferences, moving forward, in Europe and Asia.

I am excited to report that our division and associates list continues to grow, in spite of the noise around us about combustion engines. We are also excited to bring back our newsletters after several years. We wish to publish two per year, one each in summer and winter.

Our sincere gratitude to Chris Stoos and Charles Finney for leading this effort, and many other colleagues for contributing and volunteering. We have reorganized our tracks to focus more on medium duty and heavy duty large bore engines. Moving forward, we are excited to welcome the Cross-Cut Lean Exhaust Emission Reduction Simulations (CLEERS) community into the conference, with a dedicated track on emission and after-treatment systems. As a division, we have several other exciting projects in 2023, such as the webinar series, and we will highlight them in the next sections of the newsletter.

We have reinvigorated the division level awards with a new award called “Engine Impact” award to honor ICE related research and development that has been put into practice towards a commercial product developed by industry. This award is specifically created to recognize researchers in industry who have made tremendous contributions to the ICE community. Since industry researchers may not be able to publish their work, this award is designed to acknowledge their achievements. Meritorious service award honors loyal service, guidance, leadership and worthy contributions to the progress of the ICE Division. The recipient must be member of the Internal Combustion Engine Division, maintain good attendance, and exhibit guidance and leadership in Division activities.

Internal combustion engines and net-zero Carbon fuels will continue to shape our future, not only for transportation, but also for stationary power generation sector. Improved efficiency, cleaner fuels, hybridization, smart controls, advanced designs, heat management, and advanced aftertreatment technologies are all areas of significant research for on-road and off-road engines, and our division will continue to provide a platform to showcase such research. I urge all of you to continue to participate with our division activities and invite you to volunteer your time, as your schedule permits. I am very grateful for the opportunity to serve on the Executive Committee of the ICE Division for the past several years. It has been a wonderful learning experience and a lot of fun too!



Message from the Conference Chairs

Sundar Krishnan and Dustin Osborne



Following an exceptional ASME ICE Forward 2022 conference at which we celebrated the 100th year anniversary of the ASME Internal Combustion Engine Division (ICED), we are excited to build on that momentum at the ASME ICE Forward 2023 conference to be held October 8 through 11, 2023 in Pittsburgh, Pennsylvania, USA. The ICED Executive Committee, along with ASME staff and our local host (Wabtec), is preparing for what promises to be an engaging and exciting event.



ASME ICE Forward 2023 will begin with our traditional Sunday evening

welcome reception, featuring a poster session and natural networking opportunities on October 8. The next two days are packed with keynote lectures, technical presentations, a special panel session, and a Distinguished Invited Lecture. On Monday, October 9, Mr. James Gamble of Wabtec will get things started with a keynote lecture. Following technical presentations, we will welcome our Undergraduate Research Competition winners for lunchtime talks. The afternoon sessions will be anchored by another keynote by Mr. Mike Rochford of Caterpillar. The Annual Honors and Awards Banquet will be held on Monday evening. The 4th Annual Early Career Networking Breakfast will kick off events on Tuesday, October 10. Prof. Dave Foster (Professor Emeritus at The University of Wisconsin) will deliver the Distinguished Invited Lecture on Tuesday and share his views on the future of IC engines. Dr. Carlo Bussi of Ferrari will deliver the Tuesday Luncheon Keynote Lecture. A special technical panel, organized by Aramco, is planned for Tuesday afternoon. Technical committee meetings and the ICED Associates Meeting will also be held during the conference. Finally, on Wednesday morning, conference attendees may participate in technical tour(s) of Wabtec's facilities near Pittsburgh on a first-come first-served

basis.

The ASME ICE Forward 2023 technical program is distributed into seven technical tracks with multiple concurrent sessions, covering a wide range of topics: (1) Off-Road Systems; (2) Fuels and Carbon Management; (3) Advanced Combustion; (4) Powertrains and Hybridization; (5) Emissions Control (CLEERS at ICE Forward); (6) Modeling and Simulation; and (7) Design, Lubrication, and Thermal Management. We are excited to note that, starting from ASME ICE Forward 2023, a new technical track (Track 5) has been planned with emissions control as the primary focus. This track will feature technical presentations from the CLEERS (Cross-Cut Lean Exhaust Emissions Reductions Simulations) research community, along with those of other emissions control researchers.

As always, we are grateful to the volunteers of the ASME ICE Forward conference who ensure the conference's high technical standards and engaging program. This conference is being made possible by the contributions of our track and session chairs and organizers, technical reviewers, paper authors, attendees, and sponsors. We are thankful to all the speakers for participating and sharing their expertise and knowledge with the ICE community.

The ASME ICE Forward conference has historically been a collegial forum for participants to discuss current and future trends, and to exchange information related to the science and engineering of IC engines. This event is tailored to provide opportunities for experts and early-career researchers alike from industry, academia, and governmental agencies worldwide to share the latest technological developments and to network with peers and future collaborators. We are convinced that the IC engine will have a strong, continuing presence as part of the future global energy and transportation portfolio. With increasing focus on higher efficiencies, cleaner fuels, hybridization, and advanced aftertreatment technologies for both on-road and off-road engines, these are exciting times for everyone in the ICE community.

We hope to see many of the readers as an author, speaker, sponsor, or attendee at the ASME ICE Forward 2023 conference, which will be singularly focused on moving the ICE forward!



ICEF 2023

The only technical conference focused exclusively on internal combustion engines.

Pittsburgh, Pennsylvania

October 8–11, 2023

Pittsburgh Marriott City Center

112 Washington Place, Pittsburgh, PA 15219

ASME's [ICE Forward](#) conference brings together internal combustion engine researchers from industry, academia, and government agencies to discuss technical advancements in engines for all applications, including automotive, on- and off-road, rail, marine, and stationary power.

Registration opens July 17.

Register by September 22 for early registration discount!

**Register for
ICEF 2023 here!**

**Book your room here by
9/13 to receive ASME
Group Rate**



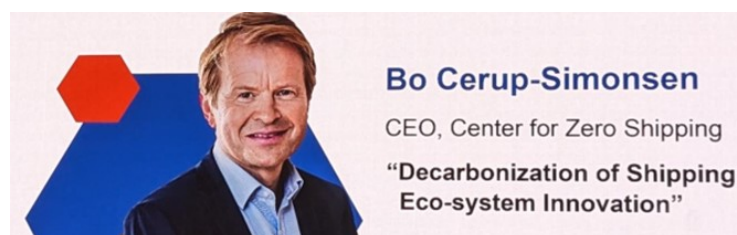
CIMAC Congress Recap

Chris Stoos



After a slight delay due to the Covid pandemic, the 30th CIMAC World Congress was recently held at BEXCO in Busan, South Korea. The congress opened Monday, June 12 with an opening ceremony that featured a demonstration of historical Korean fighting techniques and traditional Korean string instruments. The opening ceremony was highlighted by welcoming remarks from CIMAC President Donghan Jin, Congress President Kwang Hean Ahn, and Busan Vice Mayor Seong Kweun Lee. The opening Keynote *“Decarbonization of shipping: Eco-system innovation”* was delivered by Bo Cerup-Simonsen, the CEO for the Center for Zero Carbon Shipping, which set the tone for congress. The technical program spanned four days and contained 193 technical presentations.

The technical program opened up Monday afternoon with eight sessions, covering gas engine developments, fuels, exhaust aftertreatment systems, and vehicle hybridization topics. New gas engine offerings were covered from Daihatsu (Kaji), Hanshin (Higashikawa), Jenbacher (Gutierrez), and Guascor (Iruretagoyena). Erik-Jan Boonen (DAMEN) gave a presentation on the impact of alternative fuel choice on ship design, focusing on the



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Conference photographs by Chris Stoos



packing requirements for various lower carbon fuels. Sara Rezaee (Viswa Group) presented on fuel characteristics and properties on multiple Very Low Sulfur Fuel Oil (VLSFO) and biodiesel blends and how they can impact marine operations.



Monday's technical presentations also started what would become an overriding theme of the Congress, with multiple presentations covering ammonia and methanol fuels (Takasaki, Pu, Ryser, Hermann, and Peters). While drop in fuels such as Renewable/HVO seemed to be preferred by the marine industry, the reality of availability of similar fuels for ocean going vessels in the short term is severely limited. As such, the use of more widely available fuels such as ammonia and methanol based on their availability and lower carbon intensities was seen as the likely path forward for larger marine vessels. The Welcome Reception was held Monday evening, at the Paradise Hotel, near Haeundae Beach.

Tuesday's technical sessions saw more focus on low

carbon alternative fuels, with new alternative fuel engine offerings being presented from ABC (Mattheeuws), MAN (Pang, Aabo), Yanmar (Higa), and Hyundai Heavy Industries (Lee). Magnus Svensson (Lund University) gave an update on the methanol powered Pilot boat currently in operation in Sweden through project FASTWATER, which is an EU funded project involving multiple partner organizations that is looking at alternative fueled marine technologies. Adam Klingbeil (Wabtec) presented on a novel "cooled spray" cylinder head insert that allows for combustion to start later in the fuel injection process, which has showed promise in PM reduction ability.

After the technical sessions on Tuesday, the evening reception was hosted by Acceleron at the Park Cultural Center on Yeongdo Island and featured a display of traditional Korean dress and music, a youth Taekwondo demonstration, and a K-Pop dance group.



The sessions on Wednesday saw many interesting papers presented. Raphael Ryser (Acceleron) presented on his paper covering various decarbonization paths for IC engines, and the impacts that turbocharger design and strategy face with those various fuel choices. Dr. Yi Han (Woodward) showed how precision in control strategies

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on gaseous fueled engines can greatly reduce the cost requirements of aftertreatment systems. Kar Mun Pan (MAN) presented an advanced CFD chemical model used for modelling dual-fuel combustion systems.

Wednesday's Keynote "Perspectives on Powering Shipping Through Sustainable Energy" was presented by Dr. Martin Tuner from Lund University. The keynote was followed by a panel discussion on decarbonization of the maritime industry, which featured Dr. Tuner as a panelist, as well as Dr. Daniel Chatterjee from Rolls Royce Solutions, Phillippe Renaud from CMA CGM Group, Kjeld Aabo from MAN Energy Solutions, Dr. Dirk Bergmann from Accelleron, and Dr. Koji Takasaki from the National Maritime Research Institute of Japan. Both the keynote and the panel discussion focused on decarbonizing the maritime industry, including challenges, barriers, and the most likely paths moving forward.



Thursday was the final day of the technical presentations, and featured the first look of the congress at fuel cell technologies with fuel cell papers presented by Winterthur (Schneider), Ricardo (Dalton), AVL (Mair), and Freudenberg Fuel Cell (Damerow). Hiromichi Oba (Japan

Engine Corporation) presented on a detailed paper over in-cylinder NOx control on diesel piloted Ammonia dual-fuel combustion. The CIMAC awards Gala was held Thursday evening at the Ananti Hilton Busan.



In addition to the 193 full presentations that highlighted the technical portion, the CIMAC Congress also featured 42 posters and an additional 17 "Pecha Kucha" presentations. The Pecha Kucha presentations were a novel approach, with each presentation consisting of 20 slides at exactly 20 seconds each. This allowed for multiple streamlined presentations to be packed in a session, giving more opportunities for authors to present.

Friday featured optional tours of Hyundai Heavy Industries, Korea Maritime and Ocean University, or the Korea Marine Equipment Research Institute.

The 31st CIMAC World Congress will be held May 19–25, 2025 in Zurich, Switzerland.

Upcoming ASME Events



[Pressure Vessel and Piping Conference \(PVP\)](#)

July 16 – 21
Atlanta, GA USA



[50th Annual Review of Progress in Quantitative Nondestructive Evaluation \(QNDE\)](#)

July 24 – 27
Austin, TX USA



[Power Applied R&D 2023](#)

August 6 – 9
Long Beach, CA USA



[International Design Engineering Technical Conferences & Computers and Information in Engineering Conference](#)

August 20 – 23
Boston, MA USA



[32nd ASME Annual Conference on Information Storage and Processing Systems](#)

August 28 – 29
Milpitas, CA USA



[Smart Materials Adaptive Structures and Intelligent Systems \(SMASIS\)](#)

September 11 – 13
Austin, TX USA



[International Conference on Environmental Remediation and Radioactive Waste Management \(ICEM\)](#)

October 3 – 6
Stuttgart, Germany



[The Internal Combustion Engine Forward Conference \(ICEF\)](#)

October 8 – 11
Pittsburgh, PA USA



[Fluid Power and Motion Control Conference \(FPMC\)](#)

October 16 – 18
Sarasota, FL USA



[Offshore Technology Conference \(OTC\) Brazil](#)

October 24 – 26
Rio de Janeiro, Brazil



[International Mechanical Engineering Congress & Exposition \(IMECE\)](#)

October 29 – November 2
New Orleans, LA USA



[Asset Integrity Management of Critical Infrastructure \(AIM-CI\)](#)

January 29 – 31
Orlando, FL USA

IMECE “Engines Day” Event

At IMECE 2022 in Cleveland, the Internal Combustion Engine Division (ICED) hosted a panel entitled “Is There a Future for Engines?” The panel was moderated by Dr. **Andrea Strzelec** (UW-Madison) and panelists included Dr. **Kelly Senecal** (Convergent Science), **Brian West** (West Energy & Environment Associates, ORNL ret.), **Michelle Dunlap** (Cummins), and **Jim Gamble** (Wabtec). This panel was held in the 8am timeslot, but the lively discussion and Q&A had a nearly full room. The panel was rated the best of the IMECE, and this led to an invitation for the ICED to return with a full day of programming in 2023.

For IMECE 2023 in New Orleans, the ICED is proud to announce that Wednesday, November 1 will be “Engines Day” at IMECE. Dr. **Andrea Strzelec**, Incoming Member of the Executive Committee, is organizing the event. The schedule of engine-focused events is:

08:00–09:30 Plenary Lecture by Dr. **Kelly Senecal** (Convergent Science, ICED Vice Chair)

10:45–12:30 Panel: Mapping Out the Road Ahead for Internal Combustion Engines (moderated by Dr. **Andrea Strzelec**)

14:00–15:45 Panel: Engines Drive Motorsports (moderated by Dr. **Emily Bierman**)

We hope to see you at the event!



ICED Webinar Series

Characterization of Fuel Injector Dynamics through Advanced Measurement and Control Strategies

July 27, 2023

1:00 – 2:00 PM Eastern Time

Significant reductions in net carbon engine emissions are possible through the combination of improved fuel economy and the use of sustainable fuels. Gasoline direct injection fuel systems provide the means for improved combustion efficiency, but a key technology is the use of multiple injection events to achieve better mixture preparation and atomization. Understanding and controlling injector dynamics such as opening and closing time and transient needle lift is necessary when subjected to different fuel type, pressure, and temperature, as well as different injector build variation and age. A novel approach for injector control is to apply machine learning via artificial neural network fitting to learn injector dynamics over the life of the injector.

In this webinar, we will demonstrate how multiple injections can be used to tailor spray penetration and atomization dynamics for better fuel-air mixing, particularly for the renewable/sustainable fuels ethanol and methanol. We will explore how advanced optical diagnostics such as transparent nozzle visualization and high-speed extinction tomography lead to a more complete understanding of fuel delivery and droplet evaporation and provide valuable datasets for spray modeling. For control of the injection events, we will explain how measured differential voltage signals are used to create neural network training sets that encompass data under numerous operating conditions along with a wide range of injector hardware variations including parts toward the end of useful life. The predicted injector dynamics from the neural network are compared to measured data to evaluate the performance of the algorithms. Furthermore, multiple injector designs are evaluated to assess the robustness of the techniques across platforms.

Webinar Registration Link: https://asme.zoom.us/webinar/register/WN_EL8tvaMpQiSBk8y8FBI6iQ

Guest Speakers



Dr. Lyle Pickett
Sandia National Labs



Michael Lucido
General Motors

Moderator



Dr. Ronald Grover
General Motors



ICED Webinar Series

The Future of the Internal Combustion Engine

The ASME Internal Combustion Engine (ICE) Division Executive Committee has been holding a complimentary webinar series titled “The Future of the Internal Combustion Engine”. The goal of this series is to communicate the role of the ICE in our decarbonized society.

Topics include

- Light Duty
- Heavy Duty
- Combustion
- Hybridization
- Alternative Fuels
- Computer Simulations
- AI, and much more!



Watch the on-demand webinars!

TEC Sector News and ICED Updates

The ASME Technical and Engineering Communities (TEC) sector is comprised of a diverse volunteer community representing technologies and ideas through technology groups, technical divisions, and research committees. TEC engages the extraordinary talents of its members to deliver content through existing and new conferences and events, as well as provide resources and subject matter expertise to create new opportunities, for the spread of engineering knowledge. Through these efforts, members grow and develop personally and professionally.

ICEF in Bologna, Italy!

The ASME ICED Executive Committee is considering organizing an ICE Forward conference in Bologna, Italy in the Spring of 2025 and values your feedback in the decision-making procedure. Bologna, Italy is commonly known as "The Italian Motor Valley" due to its abundance of industrial enterprises and noteworthy attractions. These include such companies as Ferrari, Ducati, Maserati, Lamborghini, Marelli, Kohler, Dallara, and Scuderia Alpitauri, along with the Imola F1 Circuit which are all located in the region.

We would appreciate you completing the [survey](#). Feel free to contact us if you have any questions.

Webtool Feedback

ASME values your feedback for the peer review management system aka the ASME webtool. Please complete the air table [form](#) to provide constructive feedback on existing features or to request a new feature. All submissions will be reviewed in the Summer and viable requests will be scheduled for development in the Fall of 2023.

TEC Sector Volunteer Spotlight

The purpose of the volunteer spotlight is to recognize volunteers who have contributed to the success of an ASME group. The spotlight volunteers will be published in the quarterly TEC Newsletter. Any TEC volunteer can nominate.

[Nominate a peer today!](#)

Code of Conduct

Review the ASME code of conduct/anti-harassment [here](#).

DEI Toolkit

ASME seeks to ensure all members feel welcomed and included in the ASME community, to include ASME members of all backgrounds in all volunteer roles, and to provide a culture of respect and courtesy. We encourage ongoing dialogue that will inspire all members to bring these values to their personal and professional interactions. Review the ASME DEI Toolkit [here](#).

ICED Award Nomination Deadlines!

Award Name	Nomination
Meritorious Service Award	August 1, 2023
Engine Impact Award	August 1, 2023
Soichiro Honda Medal	October 1, 2023
Dedicated Service Award	December 1, 2023
Internal Combustion Engine	February 1, 2024
George Westinghouse Medal	February 1, 2024
Richard J. Goldstein Energy Lecture Award	February 1, 2024
James Harry Potter Gold Medal	February 1, 2024
Calvin W. Rice Lecture Award	February 1, 2024
Robert Henry Thurston Lecture Award	February 15, 2024

How to Conduct Effective Meetings

Holding effective meetings is crucial to utilizing the aggregated knowledge of the meeting participants. This [document](#) will provide guidance on achieving this important goal of every meeting.

This [slide](#) suggests some ground rules for inclusive meetings. If you would like the PowerPoint slide, please contact [Laura Herrera](#), ASME Senior TEC Operations Manager.





ICEF 2024

ICE Forward Conference

Fall 2024

San Antonio, Texas USA



Meet the newest Executive Committee members



New Incoming Member, Dr. Andrea Strzelec, is the Program Director for and faculty in the Master of Engineering in Engine Systems online degree program in the College of Engineering at the University of Wisconsin–Madison. She is also appointed as an Associate Research Scientist in the Departments of Mechanical Engineering and Nuclear & Engineering Physics.

Dr. Strzelec is the current Chair for Energy & Propulsion Activity for the Society of Automotive Engineers and was elected SAE Fellow in 2022. She is a passionate advocate for science outreach – specifically for thermodynamic and life cycle analysis of transportation energy. Andrea’s research interests are in chemical reaction characterization for combustion, exhaust aftertreatment, and sustainable energy and is an Associate Editor for the Journal of Emissions Control Science & Technology

“I got into ICE research almost by accident — a combination of my interest in catalysis and my sister, Susie, working as a student hourly in the Engine Research Center at UW–Madison. These things combined meant that Prof. Chris Rutland recruited me to work on a MS project with him and Prof. Dave Foster on automotive catalysis. When I first started, I didn't even realize that diesel engines didn't have a spark plug! Over the course of my work on that first project — I was drawn in and found my passion in combustion. I was extremely fortunate to do a summer internship at ORNL, working with Dr. Stuart Daw — which also led to my PhD work on biofuel effects on diesel particulate oxidation in residence at ORNL, working with Stuart and Dr. Todd Toops. I may not have started off in this field, but once I found it, it became my passion. I've spent 20 years working on cleaning up the emissions associated with combustion — so I know we can do it! This is why I am passionate about life-cycle analysis being part of the regulatory process — and strongly support tying mobile and stationary source emissions — this way, we can make wise decisions (rather than convenient ones) on how to achieve the goal of reducing CO₂ emissions.”



Member, Dr. Scott Curran, leads the Fuel Science and Engine Technologies Research Group at Oak Ridge National Laboratory (ORNL). His research areas include advanced compression ignition experimental engine research including the development of advanced combustion concepts, investigating fuel effects on advanced combustion modes and low-lifecycle carbon fuel utilization.

He is involved with low-lifecycle carbon fuels analysis research including well-to-wheels analysis and biomass resource assessments. He is also involved in vehicle systems research projects, well-to-wheels analysis for mobile and stationary power sources and is an active collaborator with DOE Clean Cities for

alternative fuels and advanced vehicle technology outreach. Scott is an elected distinguished associate of the ASME Internal Combustion Engine Division (ICED), the former chair of ICED Undergraduate Research Competition and is currently serving on the ICED Executive Committee.

Scott has been a member of ASME since 2005 as a student and was a runner up for the ASME Old Guard Presentation Competition as an undergraduate. He received the 2nd place award for the 2013 Old Guard Early Career Award and received a best presentation award from the 2012 ASME ICEF conference. Scott has been an active ASME author and paper reviewer starting with 2011 ICEF conference held in Morgantown, WV. He has authored or co-authored more than 11 papers with ASME and in 2023 led an article for ASME’s *Mechanical Engineering* magazine on “Collaborations that Forge the Future”. He received his BS and MS in mechanical engineering from the University of Tennessee – Knoxville (UT). He completed his PhD degree in Energy Science and Engineering within the UT/ORNL Bredesen Center.

From the Archives

Charles Finney

Notes on our founder, Charles Edward Lucke

In 1947, the inaugural Oil and Gas Power Division Citation was bestowed upon Charles Edward Lucke: "For his pioneering part in initiating the Professional Division idea, which has been so fruitful to the Society's growth and progress, and in founding the first of these now known as the Oil and Gas Power Division, which held its initial meeting February 11, 1908." [1]

Upon completing his Ph.D. at Columbia University in 1902, Lucke joined the faculty of the Department of Mechanical Engineering. His department head was Frederick Remsen Hutton, who had been serving as the secretary of the ASME since 1883. Lucke was very interested in the nascent field of internal combustion engines, and he — having enlisted the help of Henry L. Doherty — was granted permission to organize a special session at the 1907 ASME Annual Meeting on internal combustion engines (gas power). This session of four papers was highly successful and generated great excitement, with some observers noting that the session overshadowed the rest of the national meeting [2].

At the end of the meeting, Lucke, with 27 other signatories, submitted a petition to the ASME Council to form ASME's first professional section — the Gas Power Section — a technical-interest grouping akin to local sections based on geography. While the constitutional mechanism for sections had been in place for a while, no one had placed the idea into practice for technical divisions. Lucke's vision was the impetus for the system of technical divisions which later, in 1920, became the standard in ASME. The Gas Power Section was very active in the pre-World War I years and was cited for its innovations and as a model for ASME [2,3].

Lucke was elected as the first president (chairman) of the Gas Power Section, a role he held for only the first year. However, he thereafter served on several ASME committees over his career, including as chairman of the Internal Combustion Engines power test codes subcommittee.

Professionally, Lucke maintained interest in internal combustion engines, authoring works such as **Gas Engine Design** (1905) and **Power** (1911). He also served as the



Charles Edward Lucke (circa 1906)
1876–1951

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Columbia mechanical engineering department head from 1907 to 1941 and was appointed to the Stevens chair in 1929.

Lucke served the U.S. Navy 1918–1919 as director of its Gas Engine School, later being the first civilian to be commissioned with rank of commander [4], and throughout his career he consulted for government agencies and industry. He held 120 patents, many focused on ICEs [5].

Lucke's later interests led him to work in heat transfer. He was honored at the 1946 ASME Annual Meeting as one of the founders of and for his long-time service to the Heat Transfer Division [6,7]. Curiously, neither his *New York Times* [5] nor *Mechanical Engineering* [7] obituary mentioned his pivotal work in founding the Gas Power Section and its lasting impact on the ASME.

References

- [1] Oil and Gas Power Division Citations (1966), *Proceedings of the 38th Diesel and Gas Engine Power Division Conference*.
- [2] J. Calvin Brown (1951), "The History of the Oil and Gas Power Division", *Lectures and Proceedings of the 23rd Oil and Gas Power Division Conference*.
- [3] Robert B. Rice (1953), "An Early History of the Oil and Gas Power Activities of the American Society of Mechanical Engineers", *Proceedings of the 25th Oil and Gas Power Division Conference*.
- [4] *The New York Times*, 1919-07-20.
- [5] Obituary, *The New York Times*, 1951-03-27.
- [6] *Mechanical Engineering* 69(4): 339, April 1947.
- [7] *Mechanical Engineering* 73(6): 540, June 1951.



2022–2023 Executive Committee

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Argonne National Laboratory

Conference Co-Chair



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Southwest Research Institute

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Dr. Sundar Krishnan
University of Alabama

Incoming Member



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Dr. William Northrop
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