



Welcome

**Catalina Tech Conference
and Expo**

May 19, 2026, 8 am

Mike Brisbois, PE

708.668.5488

mike.brisbois@ieee.org

Speaker Line up

Clément Cid
Brandi Sanders
Darryl Palmer
Mike Brisbois, PE
Rupesh Kutte
Emmanuel Akpan
Bryan Clay
Gary Gluck
Karim Dasuki
Cody Nowak
Stephen Kane
Renee Schneider
Donna Fluss
Ismar Enriquez, AIA
Nihar Trivedi
Evan Walls
John Drayton
Johnathan Humphries
Jonathan Reichental, Ph.D
M. Hanan Daudpota
Michael Loggins, CSM
Shahid Jamil
James Riley
Pat Hohl, PE
Collin McGee
Lucretia Lee Arceneaux
John Gomes, Jr. CCT
Hal (Harold) Herrington
Justin Darnall
Mithil Bangera
Aparna PN
Cameron Aljilani
Karen Cahn
Breeja Larson, OLY
Mehernosh Pithawalla
Anand Prakash Arya
Daniel Salinas
Esteve Mede, CEO
Keerthi Vadhani Malarvannan
Andrew Bui
Eltijani (Osman) Elrayah

Improving Electric Vehicle Battery Lifespan with Active Cell Balancing

As the automotive industry transitions from fossil fuels to electric mobility, improving the efficiency, safety, and reliability of lithium-ion battery systems has become increasingly important. Electric vehicle battery packs consist of multiple cells connected in series and parallel, making uniform cell operation critical for optimal performance and longevity. Due to chemical and operational variations, differences in cell voltage and capacity naturally arise, leading to uneven charging and discharging that reduces usable energy and overall efficiency. This presentation explores the significance of active cell balancing, where battery monitoring systems and control algorithms redistribute energy from higher-voltage cells to lower-voltage cells to maintain voltage uniformity. By ensuring all cells operate at similar levels, active balancing improves energy utilization, reduces stress on individual cells, extends battery life, and enhances the overall performance and reliability of EV battery packs.



Keerthi Vadhani Malarvannan

Keerthi Vadhani Malarvannan, recently graduated with a master's degree in electrical engineering, with thesis research focused on "**Active Cell Balancing in Lithium-Ion Batteries**". I have worked as an Embedded Engineer at Caterpillar, contributing to machine software development at the application layer. I completed my bachelor's degree in electrical and Electronics Engineering through a sandwich program in 2022. My technical interests include battery management systems, embedded systems, and electric vehicle energy storage technologies.

<https://www.linkedin.com/in/keerthivadhani/>



Andrew Bui

Mobility lead for AECOM Ventures, focused on emerging mobility technologies and how they will impact the planning, design, and construction of transportation infrastructure. Led technology initiatives involving Smart Cities, Connected and Automated Vehicles, Electric Vehicles and Charging Infrastructure, and Hyperloop technologies.

<https://www.linkedin.com/in/andrewqbui/>

8:55 am Eltijani (Osman) Elrayah Regional Engineering & Training Manager for Bosch
Video Systems | PgD, SMIEEE, MIET, MISSA, MBCS



Eltijani (Osman) Elrayah

Senior Presales Engineer, Data Scientist, Technical Trainer & ICT Consultant for Systems Integrators, Consultants and End-Users. Member of Microsoft Partner Research panel (MSPRP), ISSA, ISSA Egypt (Co-Founder), IEEE (Senior Member), IEEE Sub Section Africa Council, IEEE Standards Group, IEEE Smart Cities, IEEE CS, Professional Member of British Computer Society, MIET, SIRA Specialties: Video Surveillance, Physical security systems, Low current systems, Computer Networks, Artificial Intelligence (AI), Machine Learning (ML), Deep Learning, Data Science, Project management, Video Management Systems, Cyber Security, IoT, Cloud computing, Voice Over Internet Protocol.

<https://www.linkedin.com/in/eltijani/>



Mark Lipps

Mark has spent almost 30 years in the TV business starting out in news, then station mgmt., pitching TV shows for MTM and later Rysher Ent., and then early retirement after 18-years at the Fox Broadcasting Network managing the relationships with his network affiliated TV stations. In retirement he rebranded and re-energized our Manhattan Beach, CA, Chamber of Commerce. Currently, my wonderful wife and I purchased a farm in Northern CA that has a vineyard, orchard, event space, commercial kitchen and most recently rescued two mini pigs and a very large tortoise. His business strengths are developing creative growth strategies; connecting and negotiating to establish a mutual benefit between all parties; interpersonal communication skills and putting out positive energy.

<https://www.linkedin.com/in/marklipps/>



Mark Robinson

Mr. Robinson helps companies grow through strategic partnerships, field marketing, media, and experiences that drive real adoption. He is at his best where people, creativity, and emerging technology intersect. Former founder. Mr. Robinson built and sold a marketing agency serving 100+ brands, produced sold-out technology conferences and advised startups on go-to-market strategy and brand positioning. He drove 180% market share growth through consultative sales and curated executive experiences at Capital One. Mark is now focused on the AI ecosystem. After 15+ years turning innovation and emerging technology into revenue through trust, clarity, and follow-through he prevails.

<https://www.linkedin.com/in/markrobinsonllc/>



Cid Clemente

Mr. Clemente is an experienced scientist and engineer who has 14 peer-reviewed articles, 3 pending patents, 2 patents with strong management experience and business acumen. He established and led international collaborations with NGOs, small and large companies, and universities to determine and conduct technology analysis metrics, FMEAs, field testing oversight, and implementation plans of environmental engineering technologies in India, China, South Africa, France, and the US.

<https://www.linkedin.com/in/clementcid/>



Sweta Gupta

Gridless global.

<https://www.linkedin.com/in/sgupt025/>



Brandi Sanders

Brandi is a data center infrastructure sales project manager supporting custom, concise and confidential manufacturing on demand to meet AI and Hyperscale client demands.

<https://www.linkedin.com/in/b-randi/>



Eric Moala-Liava'a

Business owner and Entrepreneur. Trilingual CEO of AKANA LLC specializing in luxury outdoor living, Utah's leading paver company! Refinery operator at HF Sinclair Oil Refinery. Linebacker/running backs football coach at Layton Christian Academy. Oregon State University Alumni, Hawthorne High School Alumni.

<https://www.linkedin.com/in/eric-moala-liava%E2%80%99a-4922311a1/>



Darryl Palmer

Mr. Palmer operates at the exact intersection of theoretical engineering and factory-floor reality. Throughout his career in heavy industrial automation—currently serving as a Control Systems Team Lead at Caterpillar and a systems consultant—Darryl specialized in bridging legacy mechanical systems with modern, data-driven IoT networks, PLCs, and embedded systems. He knows what it takes to keep global supply chains moving and what Fortune 100 manufacturers actually need from their technology. However, as the industry rapidly modernizes with Edge AI and collaborative

robotics, a massive "abstraction gap" has formed. We have incredible technology, but a

critical shortage of resilient, highly trained technicians and engineers who can physically deploy it. To solve this, he founded two sister organizations designed to engineer the future of the American workforce and global infrastructure: Cultivation Workforce Development His group is building the Midwest's premier talent pipeline for advanced manufacturing. Through his Mobile Innovation Lab and stationary training hubs, his group deploys industry-standard hardware (Edge AI, PLCs, and machine vision) directly to transition military veterans and underserved youth. His group does not just teach theory. They credential the next generation of technologists to modernize legacy assembly lines and secure domestic supply chains. The Cultivation Institute (The Think Tank) Technology moves faster than policy. The Institute is a 501(c)(3) research and policy think tank dedicated to addressing complex global challenges. From partnering with academic leaders to scaling public-imperative activities, working alongside IEEE to draft open, ethical engineering standards, the Institute ensures that our technological leaps are mathematically sound, ethically grounded, and publicly beneficial. Mr. Palmer's leadership philosophy: As an active leader in IEEE, he believes that engineering theory must be translated into physical reality. Whether he is upskilled in a team of incumbent mechanical engineers, mentoring university students, or organizing a standards committee, his goal remains the same: advancing technology for humanity by building the people behind the machines. Specialties: Industrial Control Systems (PLC/HMI) Edge AI & Machine Vision Non-Profit Leadership Workforce Development IEEE Standards & Ethics Embedded Systems (C++/Linux/ARM) Veteran Career Transition Let's build the next generation of technologists. Connect with me to discuss corporate upskilling partnerships, STEM volunteer opportunities, or infrastructure resilience research.

<https://www.linkedin.com/in/darrylpalmer/>



Sanya Mathura MLE

Sanya is the Founder of Strategic Reliability Solutions Ltd based in Trinidad & Tobago and operates in the capacity of CEO and Senior Consultant. She works with global affiliates in the areas of Reliability and Asset Management to bring these specialty niches to her clients. Sanya possesses a strong engineering background with a BSc in Electrical & Computer Engineering and MSc in Engineering Asset Management. She has attained her MLE (Machinery Lubrication Engineer) certification from ICML (International Council of Machinery Lubrication) and is the first in her country to secure this certification albeit

the first female as well. She was also the first female in the world to earn the ICML VPR & VIM badges. No stranger to being the first, she is the first registered Machinery Lubricant Engineer with the Board of Engineering in Trinidad & Tobago as well as the only female instructor globally for Mobius Institute's Field Lubrication CAT I course. Sanya is an active member of several professional organizations, including ICML & STLE and writes technical papers for several organizations including Precision Lubrication Magazine & Reliable. She is also a sought-after speaker and has been presented at various conferences and seminars globally. She is an avid advocate for women in STEM. She has published books including, "Lubrication Degradation Mechanisms; A Complete Guide", "Lubrication Degradation; Getting into the Root Causes" co-authored with Bob Latino (both published by Taylor & Francis), "Machinery Lubrication Technician (MLT) I and II Certification Exam Guide First Edition" coauthored with Michael Holloway and "Preventing Turbomachinery Cholesterol - The Story of Varnish" coauthored with Greg Livingstone (both published by Industrial Press Inc.). She is also the series editor for the "Empowering Women in STEM" series published by CRC Press. The first book was launched in Dec 2022, "Empowering Women in STEM - Personal Stories and Career Journeys from around the world". The second, "Empowering Women in STEM - Working together to inspire the future" in March 2024. The third, in June 2025, "Empowering Women in STEM - Pioneering Paths to Shape the Future". Sanya's passion for excellence, coupled with her expertise in the field of engineering and reliability, has made her a respected and highly sought-after professional in the industry. Her dedication to providing exceptional service to clients and her commitment to staying up to date with the latest industry trends has earned her the respect of her peers and the admiration of her clients.

<https://www.linkedin.com/in/sanya-mathura-mle-362438129/>



Taisha Bezzo

Ms Bezzo is a sales executive with over 15 years of experience driving clean energy growth across the U.S. specializing in Battery Energy Storage Systems (BESS) for the C&I and utility-scale markets. Taisha is known for building strong national rep networks, leading high-performing sales teams, and accelerating revenue across new and emerging markets. She has worked alongside developers, EPCs, OEMs, ports, and utilities to bring advanced energy solutions to life and is always focused on market traction, technical credibility, and long-term partnerships.

<https://www.linkedin.com/in/taisha-bezzo-52270538/>



Thank You!

for joining us in
Catalina Island

**We look forward to seeing you next time at our
Coeur d'Alene Tech Conference and Expo**