

CalPlug's 10th Anniversary Celebration

Climate Resilient Solutions
Together at the Intersection of Infrastructures,
Community and People



CALPLUG AGENDA
MAY 10TH, 2022 | 10AM - 5PM

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CALPLUG
California Plug Load Research Center
University of California, Irvine

CalPlug 10th Anniversary Tuesday, May 10, 2022

This event is to recognize a decade of energy efficiency research and to welcome our next ten years working together for our planet. Our theme for this occasion is Climate Resilient Solutions to continue improving energy efficiency and productivity as well as lowering GHGs to mitigate climate change for the good and inclusivity of all. Our speakers are experts in their respective fields and are excited to share their knowledge with everyone. Please join us on the 10th of May for this all day in person celebration!

- 9:30 AM** Check-in/on-site registration
- 10:00 AM** Welcome GP Li, Director of CalPlug
- 10:10 AM** Opening remarks from CalPlug Advisory Board co-chairs
Doug Johnson, Vice President, Consumer Technology Association (CTA)
Kim Trenbath, Innovation Lead, National Renewable Energy Laboratory (NREL)
- 10:30 AM** KEYNOTE: Benjamin Park, Founder & CTO, Enevatē
Solving Difficult Problems Together to Help Mitigate Climate Change
- 11:00 AM** Matthias Kurwig, CEO, Enervee
People Power: Massively Scaling Energy Efficiency
- 11:30 AM** Amy LeBar, Researcher, National Renewable Energy Laboratory (NREL)
Automatic Type and Location Identification System
- NOON** LUNCH
- 1:00 PM** Ammi Amarnath, Senior Technical Executive, Electric Power Research Institute (EPRI)
Industrial Load Flexibility – An Opportunity for Decarbonization in California
- 1:30 PM** John Woolsey, Principal Engineer, U.S. Department of Energy Western CHP TAP
Combined Heat & Power – Resiliency And Reliability
- 2:00 PM** Li Zhao, Technical Director of CalPlug
Plug and Process Loads: Roles and Opportunities in Energy Resiliency
- 2:30 PM** Jay Seidel, Professor, Fullerton Drone Lab at Fullerton College
Drones for Efficient Energy and Infrastructure Inspection
- 3:00 PM** PANEL: Climate Resiliency Solutions
- 4:00 PM** Break
- 4:10 PM** DEMO - Drone
- 4:30 PM** Wrap up – GP Li
- 4:45 PM** Networking Reception

Ammi Amarnath

**Electric Power
Research Institute
(EPRI)**
Project Manager

Ammi Amarnath is the Program Manager of the Energy Efficiency & Demand Response program area at the Electric Power Research Institute (EPRI). He leads a team of engineers and scientists with focus on the development, demonstration and deployment of smart and efficient end-use technologies while ensuring their interoperability with the electric grid. Some of the technologies demonstrated include: advanced space conditioning and lighting systems for residential and commercial buildings, next-generation heat pump water heaters, high performance/low energy buildings, advanced end-use smart and demand responsive technologies that integrate with the smart grid, industrial process efficiency improvements, and advances in motor and drive technologies. Amarnath received a Bachelor of Engineering degree in chemical engineering from India and a Master of Science degree in chemical engineering from the University of California, Santa Barbara. He holds a Master of Business Administration degree from the University of Houston.

Doug Johnson

**Consumer
Technology
Association (CTA)**
Vice President

Doug Johnson is vice president of emerging technology for the Consumer Technology Association (CTA), North America's largest technology trade association. CTA's members are the world's leading innovators - from startups to global brands. CTA owns and produces CES® - the most influential tech event in the world. Doug is responsible for public policy issues affecting product development, operations, sales and marketing across the consumer technology industry. He serves as an advocate for the industry before regulators and legislators at the local, national and international levels on policy matters concerning emerging technology, artificial intelligence, drones, energy efficiency, regulatory reform, voluntary agreements, policy alignment, and non-tariff barriers to trade.

Matthias Kurwig

Enervee
Co-Founder

Mattias Kurwig is the co-founder and CEO of Enervee, a company that drives energy efficiency and consumer engagement through innovative SaaS products. This company that rates products, enabling consumers, businesses and governments to buy products based on the personal cost of owning things, including energy efficiency, rather than just the purchase price. It allows for a real time comparison of how a product ranks compared to others on the market. Kurwig obtained his education at Wener-Jaeger Gymnasium for his Abitur and at Albrecht-Dürer-Schule, Berufskolleg Düsseldorf. Before Enervee, Kurwig founded Planetactive, one of the leading full-service digital agencies in Europe that was acquired by WPP. Also, Matthias was the global COO of Neo@Ogilvy, the digital media and marketing arm of WPP's Ogilby Group, where he was able to head operations of over 30 offices around the world.

Meet the Speakers

In Alphabetical Order

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Amy LeBar



National Renewable
Energy Laboratory
(NREL)
Research Engineer

Amy LeBar is research engineer at the National Renewable Energy Laboratory. She specializes in commercial building plug load efficiency and controls, and energy modeling of the U.S. building stock. Her work seeks to inform industry on trends and opportunities in energy-efficient technology development, and to promote adoption of such technologies within commercial buildings. Amy received a Bachelor of Science in Mechanical Engineering from the University of Portland, and a Master of Science in Mechanical Engineering from Colorado School of Mines.

G.P. Li



CalPlug - UCI Irvine
Director

G. P. Li is a professor at the University of California, Irvine, with appointments in two departments: Electrical Engineering and Computer Science and Biomedical Engineering, and Materials and Manufacturing Technology program. Dr. Li serves as director of California Institute for Telecommunications and Information Technology (Calit2), which develops solutions for digital transformation of energy and environmental industrial sectors. Dr. Li also serves as director of the Integrated Nanosystems Research Facility (INRF) in The Henry Samueli School of Engineering, which researches and develops sensors and actuators for industry 4.0 applications. Furthermore, he serves as director of California Plug Load Research Center (CalPlug), which research and develop solutions for improving flexible demand plug loads' energy efficiency and their active management.

Benjamin Park



Enevate
Founder & CTO

Dr. Park founded Enevate (originally Carbon Micro Battery) in 2005 and, as CTO, leads the battery research, development, and engineering efforts. With more than 18 years of experience, he is an expert in surface and bulk chemistries, novel battery manufacturing techniques, battery materials screening and development, and battery chemistry. Ben has authored more than 45 book chapters, technical journals, talks and conference publications and has more than 100 patents issued or filed. He holds a doctorate in mechanical and aerospace engineering from the University of California, Irvine, a master's degree in electrical engineering from Purdue University, and a bachelor's degree in electrical engineering from Seoul National University in Korea. Dr. Park is also the recipient of several awards, including the Orange County Business Journal Innovator of the Year and the Estus H. and Vashti L. Magoon Award for Excellence in Teaching.

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Meet the Speakers

In Alphabetical Order

Jay Seidel



Fullerton College –
Drone/UAS
Technology Program
Coordinator

Jay Seidel has been working in or teaching journalism for over 20 years. His passion and interest are in multimedia storytelling and utilizing emerging technologies (like drones and virtual reality) to tell stories. Seidel has developed curriculum in 360-degree video, immersive storytelling, and drone technology. He is a certificated drone pilot who is also skilled in journalism, photography, mapping, imaging, inspection, video production and editing, and VR and Mixed reality production. As the Drone/UAS Technology Program Coordinator, he oversees the growing media program and ensures student success at Fullerton College. He is an AUVSI TOP UAV Instructor and is the FAA's Safety Team's Drone Pro for Orange and Los Angeles counties. He regularly speaks across Southern California communities about drone safety and drone education. Seidel served 12 years in the U.S. Army and California Army National Guard where he worked and helped lead troops as a combat engineer and photojournalist.

Kim Trenbath



National Renewable
Energy Laboratory
Innovation Lead

Dr. Kim Trenbath is the acting innovation lead for systems technology research and development in the Buildings and Thermal Sciences Center at NREL. She oversees projects related to plug and process load efficiency, commercial building heating, ventilating, and air conditioning, automated fault detection and diagnostics, and advanced technologies that will make buildings more grid interactive. She leads the U.S. Department of Energy (DOE) Better Buildings Alliance Plug and Process Loads Technical Team. She also serves as the NREL lead for the DOE-funded JUMP into STEM building science competition for university students. In addition to her work at NREL, Dr. Trenbath is an adjunct professor at the Colorado School of Mines.

John Woolsey



U.S. Department of
Energy Western CHP
TAP
Principal Engineer

John Woolsey is a professional mechanical engineer in California and New York specializing in energy efficiency and distributed energy resources such as solar, energy storage, and combined heat and power. At the Center for Sustainable Energy, he leads a diverse team of engineers and technical specialists with specialties in mechanical and energy engineering, electrical engineering, and energy efficiency building codes and standards. Woolsey provides key support through consulting business development as a subject matter expert and as a technical writer. Over his 20-year career, he has assisted government and commercial customers in designing, evaluating, and verifying energy efficiency and resiliency demonstrations and projects. Woolsey obtained his Mechanical Engineering B.S. at San Diego State University.

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Li Zhao



CalPlug - UC Irvine
Technical Director

Dr. Li Zhao earned his Ph.D. from Dept. Mechanical and Aerospace Engineering at UC Irvine in 2011, focused on high temperature fuel cell and distributed power generation. He then worked as Research Scientist and Associate Manager in the Advanced Power and Energy Program in UCI. He is an engineer experienced in designing, evaluating, modeling and integrating emerging power and clean energy technologies and integrated systems. Before join CalPlug, he found and built an energy-monitoring-IoT startup, developed cloud-based solutions for customer-side energy sensing, monitoring, and auditing, to increase the energy efficiency and lower the energy cost for residential and industrial users.

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NATIONAL LABORATORY

AMMI AMARNATH
SENIOR TECHNICAL EXECUTIVE
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COMMISSION

KIM TRENBATH
(CO-CHAIR)
SYSTEMS ENGINEERING
RESEARCHER
NREL

LINDA R. COHEN
PROF. ECONOMICS & LAW
UC IRVINE

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