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November 19, 2020

VENKAT SRINIVASAN

Director of the Argonne Collaborative Center for Energy Storage Science (ACCESS), Deputy Director, Joint Center for Energy Storage Research (JCESR) at Argonne National Laboratory (Moderator)

Venkat Srinivasan is the director of the Argonne Collaborative Center for Energy Storage Science (ACCESS). ACCESS provides the vision and coordinates the energy storage programs at Argonne and serves as a point of entry for industry to take advantage of the unique capabilities and facilities at Argonne to solve their problems in energy storage. He is also the deputy director of the Joint Center for Energy Storage Research (JCESR), a national program led by Argonne that focuses on next-generation energy storage research that goes beyond lithium-ion technology.

He is a former staff scientist at Lawrence Berkeley National Laboratory (LBNL). His research interest is in developing next-generation batteries for use in vehicle and grid applications, among other things. Dr. Srinivasan and his research group develop continuum-based models for battery materials and combine them with experimental characterization to help design new materials, electrodes, and devices.

Dr. Srinivasan has previously served as the technical manager of the Batteries for Advanced Transportation Technologies (BATT) Program, as the acting director of the BATT program, as department head of the Energy Storage and Distributed Resources (ESDR) department at LBNL, and the interim director of the ESDR Division at LBNL. Dr. Srinivasan joined the scientific staff at LBNL in 2003 after postdoctoral studies at the University of California, Berkeley and Pennsylvania State University. He received his Ph.D. from the University of South Carolina in 2000.

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SUSAN BABINEC

Program Lead, Stationary Storage, Argonne National Laboratory (Moderator)

Susan Babinec leads a comprehensive strategy that expands the U.S. Department of Energy (DOE) vision for a future electric grid that includes a range of optimized energy storage capabilities.

Babinec previously served six years as senior commercialization advisor for both transportation and grid energy storage at the Advanced Research Projects Agency – Energy (ARPA-E). Prior to ARPA-E, she led several research groups as a technical director for A123 Systems, Inc. at its Ann Arbor, Michigan, site. Babinec spent the first two decades of her career at Dow Chemical Corp., where she was awarded the Inventor of the Year Award, was senior advisor to the Venture Capital group, and was the company's first woman Corporate Fellow. She was co-inventor of a low-cost display technology that was spun out as the venture-funded start-up, holds more than 45 patents, and has authored or co-authored dozens of journal articles and book chapters.

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YET-MING CHIANG

Co-Founder, Form Energy, and Kyocera Professor of Materials Science and Engineering, Massachusetts Institute of Technology

Yet-Ming Chiang is the Kyocera Professor in the Department of Materials Science and Engineering at the Massachusetts Institute of Technology (MIT). For the past 28 years he has managed a multidisciplinary research team focused on energy science and technology; electrochemical energy storage; processing and physical properties of advanced materials; surfaces and interfaces in solids; and electron microscopy of materials.

Chiang's research ranges from fundamental materials phenomena to milestone-driven technology development programs. He is a member of the National Academy of Engineering and a Fellow of the Materials Research Society and American Ceramic Society. He has brought new technology through the innovation pipeline from basic research to technology startup, four times to date.

Chiang brought his MIT research on nanoscale olivine cathodes to commercial impact by co-founding A123 Systems in 2001. The company pioneered a new category of rechargeable lithium-ion batteries with improved power, safety, and life compared with previous technology. This technology is now produced in large volume for applications ranging from cordless power tools, to HEVs and PHEVs, to grid-scale storage systems of many-MW scale.

Chiang was elected to the U.S. National Academy of Engineering in 2009, and is a Fellow of the Electrochemical Society, the Materials Research Society, the American Ceramic Society, and the National Academy of Inventors. He has published more than 300 scientific articles and holds more than 80 U.S. patents. Chiang earned his Bachelor of Science in materials science and engineering and his Doctor of Science in ceramics from MIT.

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MEGAN CLIFFORD

Associate Laboratory Director for Science and Technology Partnerships and Outreach, Argonne National Laboratory

Megan Clifford is responsible for maximizing outcomes of Argonne's existing collaborations and partnerships; supporting the creation of new collaborations and partnerships; and support of Lab-wide strategy and program development — all with the goal of increasing the impact of the Laboratory's work.

Prior to serving in her current role, Clifford served as Argonne's Chief of Staff. Working with leaders across the Laboratory, Clifford stewarded Argonne's change initiative to deliver lasting impact through science and technology leadership, research and operations excellence, and people development. She promotes a culture of diversity and inclusion within the Laboratory through values-based leadership.

Clifford joined Argonne in November 2013. Prior to becoming Chief of Staff, she served as Director of Strategy and Innovation for the Global Security Sciences division. In this role, she developed strategies and programs with multidisciplinary teams to address a range of energy and global security challenges.

Clifford's career of more than 20 years has focused on national security and resilience policy and analysis, strategic planning, and program design. Her involvement in the national security mission dates back to the establishment of the U.S. Department of Homeland Security, where she helped to create the foremost national preparedness doctrine.

Clifford previously held a senior executive position at Booz Allen Hamilton Inc. in Washington, D.C., where she served on the leadership team responsible for performance of the firm's Justice and Homeland Security business.

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JOE CRESKO

Chief Engineer, Advanced Manufacturing Office, U.S. Department of Energy

Joe Cresko is the Chief Engineer and Strategic Analysis Lead in DOE's Advanced Manufacturing Office (AMO), where he leads AMO's efforts to assess the life cycle and cross-sector impacts of advanced manufacturing technologies. Cresko has also served at DOE as an Engineering Sciences Fellow for the Industrial Technologies Program, and a Science & Technology Policy Fellow in the Office of Energy Efficiency & Renewable Energy.

Prior to joining DOE, Cresko was the Director of the Emerging Technology Applications Center in Bethlehem, PA, where he helped manufacturers to improve their energy efficiency and environmental footprint through industrial energy efficiency assessments and applied R&D. He is an expert in the application of electrotechnologies for materials processing and manufacturing innovations, including the use of microwave, radio-frequency, induction, UV and electron beam technologies. Cresko has performed research, analysis and technology transfer for the aerospace, ceramics, polymer, composites, foundry and food manufacturing industries.

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TIM ELLIS

President, RSR Technologies

Dr. Timothy W. Ellis was appointed as an associate scientist at the Ames Laboratory, USDOE at ISU from 1992 – 1996 where he performed research on Ni-MH battery materials and rare earth alloys. In 1996 he moved to Kulicke and Soffa Industries (K&S) in Willow Grove, PA, as director of corporate research and development. He has attended the University of Pennsylvania receiving a master's degree in Technology Management, a joint program between the Wharton Business and Moore Engineering Schools. In 2006 Dr. Ellis joined RSR Technologies Inc. of Dallas, the research and development arm of Eco-Bat Technologies the world's largest battery recycler and is presently president of RSR Technologies. He has more than 25 patents and 50 publications in the areas of metallurgy, materials science and technology management. He also serves as chair of the Consortium for Battery Innovation, formerly known as the Advanced Lead Acid Battery Consortium.

Dr. Ellis received a Ph.D. in Metallurgy from Iowa State University in 1993. He received a Master of Science in chemistry and a Bachelor of Science in metallurgical engineering from Michigan Technological University.

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DAVID HOWELL

Director of the Vehicle Technologies Office, U.S. Department of Energy

Dave Howell is the Deputy Director of the U.S. Department of Energy's (DOE) Vehicle Technologies Office (VTO) with responsibility for the Department's $340 million advanced vehicle R&D portfolio. He has over 30 years of experience planning and executing complex, multi-disciplined R&D activities that includes hybrid and electric vehicle R&D, advanced battery research and manufacturing, and advanced structural materials research.

Howell served as DOE's Program Manager for Battery R&D from 2003 – 2017. He continues to serve as DOE's representative at the United States Advanced Battery Consortium Management Committee, the Executive Committee for the Battery500 Research Consortium, and various international and inter-government forums.

Prior to DOE, Howell was on the research staff of the Oak Ridge National Laboratory and served on active duty at the Wright Patterson Air Force Base as the Program Manager for Advanced Materials for Space Structures at the Air Force Materials Laboratory.

He received a Bachelor of Science degree in aerospace engineering from the University of Tennessee at Knoxville.

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TOIVO KODAS

Executive Director for Energy Storage and Performance Materials
New Business Development, Cabot Corporation

Toivo Kodas is a Director at Cabot Corporation, a US-based specialty materials corporation. He was one of the founders of Cabot's Energy Materials business that is now focused internationally on carbons and metal oxides for Li ion, lead acid, fuel cell and other electrochemical technologies. Kodas is currently working globally on new business development, technology in and out-licensing and M&A activities. His background is in Aerosol Science and Engineering, Nanotechnology, Chemical Vapor Deposition, and carbon and ceramic materials with a focus on lithium ion batteries and other electrochemical applications. His background also includes time as a Professor of Chemical Engineering at the Center for Micro-Engineered Ceramics at UNM and co-founder of Superior MicroPowders/Nanochem (now part of SICPA).

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VINEET MEHTA

Director of Battery Technology and Powertrain Architecture and Modeling, Tesla

Vineet Mehta is the founder of "219 Design LLC" as well as the designer of top leading models of Tesla like Roadster 2, Tesla Semi, Model S, Model X, Model 3 and many more. He has worked with the US Government on renewable energy resources and also has various patents filed under his name for fuel efficient products.

Mehta received his Master of Science in mechanical engineering from Stanford University and a Bachelor of Science in mechanical engineering from The University of Texas at Austin.

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GLEN MERFELD

Vice President and Chief Technology Officer, Albemarle

Glen Merfeld is responsible for research and development in the area of energy storage and will lead all Lithium technology efforts in the areas of both material and data science. He is a distinguished thought leader in the field of energy materials and battery science, as well as a seasoned executive with over 20 years in advanced materials with General Electric. He personally holds 14 patents, 28 invention disclosures, and more than 35 publications.

Merfeld was a founding member of the New York Battery & Energy Storage Technology consortium and served as an industrial Advisory Board member of Argonne National Laboratory's Joint Center for Energy Storage Research. He also served as an Advisory Board member for the University of Maryland's Energy Frontier Research Center on nano-enabled energy storage.

He received his Ph.D. in chemical engineer from The University of Texas at Austin and a Bachelor of Science in chemical engineering from Northwestern University.

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WILLY SHIH

Robert and Jane Cizik Professor of Management Practice, Harvard Business School

Willy Shih is the Robert and Jane Cizik Professor of Management Practice in Business Administration. He is part of the Technology and Operations Management Unit, and he teaches in the MBA and Executive Education Programs. His expertise is in manufacturing and product development, and he has written or co-authored numerous cases and teaching materials in industries ranging from semiconductors, information technology, consumer electronics, aerospace, transportation equipment, manufacturing processes and tools, and intellectual property.

Prior to coming to HBS in 2007, Shih spent 28 years in industry at IBM, Digital Equipment, Silicon Graphics, Eastman Kodak, and Thomson SA. He worked in product development and manufacturing in a wide range of areas including computer systems, scientific instruments, semiconductors, digital cameras, optical discs and software systems. Reporting to him have been major manufacturing operations in the United States, China, Ireland, Japan, and Mexico, as well as global sales and marketing operations. He has led the building of billion dollar revenue businesses.

Shih is on the Board of Directors of FLEX Inc., a large provider of design, manufacturing and supply chain services. He is also on the Board of Directors of VEO Robotics, a firm that brings advanced computer vision, 3D sensing, and AI to industrial robots, enabling them to work collaboratively.

He has two S.B. degrees from the Massachusetts Institute of Technology, and a Ph.D. from the University of California at Berkeley.