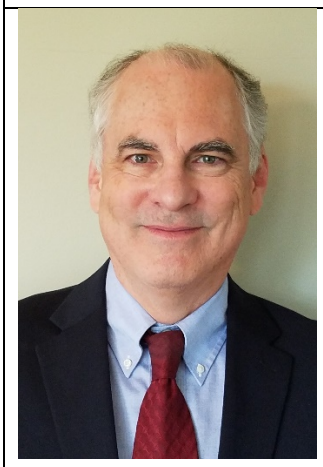
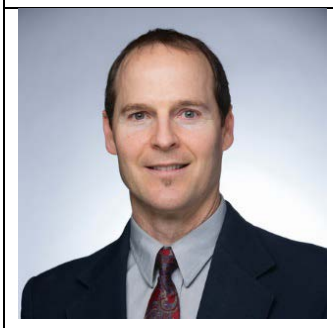
America Makes & ANSI Additive Manufacturing Standardization Collaborative (AMSC)
July 13, 2021 Virtual Event: Additive Manufacturing (AM) Feedstock Materials Standardization
Speaker Biographies

	Hosts / Moderators
 **Brandon Ribic, Ph.D.** **Technology Director** **America Makes**	Dr. Brandon Ribic was named Technology Director of America Makes in October 2019. Driven by the National Center for Defense Manufacturing and Machining (NCDMM), America Makes is the national accelerator for AM and the first of nine Manufacturing Innovation Institutes (MIIs) established and managed by the U.S. Department of Defense (DoD) as public-private partnerships. Prior to joining NCDMM, Dr. Ribic was a joining processes and additive manufacturing materials specialist at Rolls-Royce Corporation. He led the Materials Technology Center efforts in additive manufacturing (AM) process modeling and in-situ process monitoring. His research focused on welding and AM processes for various titanium and nickel superalloy gas turbine engine components. One of his most notable achievements is successfully developing, qualifying, and productionizing (TRL 7) the first ever CMSX-4 AM repair for Rolls-Royce.
 **Jim McCabe** **Senior Director, Standards Facilitation** **American National Standards Institute**	Jim McCabe serves as senior director, standards facilitation, at the American National Standards Institute (ANSI), where he directs collaborative standardization activities for emerging technologies. Recent projects have included: • organizing meetings on standardization and the commercial space industry • spearheading the development of a standardization roadmap for unmanned aircraft systems (drones) to facilitate their safe integration into the U.S. national airspace • partnering with America Makes to develop a standardization roadmap for additive manufacturing (3D printing) A member of the ANSI staff since 1995, Mr. McCabe has been recognized by America Makes with its Distinguished Collaborator Award, and by SES, the Society of Standards Professionals, with its Honorary Life Member award.

	Speakers
 **Cindy Ashforth** **Senior Technical Specialist** **Federal Aviation Administration** **(CMH-17 AM)**	Ms. Ashforth has over 25 years' experience testing and certifying composite structures, as both a certification manager and composite materials specialist. Her background includes student research at the air force research lab, testing and certification at propeller and general aviation manufacturers, certification and quality assurance at an aviation equipment manufacturer, and FAA program manager for international validation of transport aircraft. As one of the FAA's subject matter experts for advanced materials and manufacturing, she provides technical advice on rulemaking activities, writes guidance documents, supports industry standards development organizations in a leadership role, oversees research, develops and delivers educational materials, and assists in certification projects and continued operational safety activities related to composite and additive manufacturing applications. She has also developed the related strategic plans to address safety challenges, ensure certification efficiency and workforce education in these areas. Ms. Ashforth has a BS in Engineering Mechanics from the University of Wisconsin and a MS in Materials Science from Wright State University.
 **Bill Bihlman, Ph.D.** **Founder & President** **Aerolytics LLC** **(SAE International)**	Bill Bihlman founded Aerolytics in 2012, a management consultancy dedicated to aerospace materials, manufacturing, and the supply chain. He actively supports SAE AMS standards development. Bill has a BSME, MSME, and PhD in IE from Purdue - with a focus on additive manufacturing - and an MBA and MPA from Cornell.

 **Shane Collins** **Head of Additive Manufacturing Advisory Services** **ASTM International Additive Manufacturing Center of Excellence**	▪ **Head of Additive Manufacturing Advisory Services – ASTM Center of Excellence** ▪ 20-year veteran of the AM Industry – Operations, product management, business development for metal and polymer additive manufacturing • Produced production class parts to specifications from: • Boeing E-PBF, L-PBF - Lockheed Martin E-PBF, L-PBF - Northrop Grumman E-PBF, L-PBF - GE Aviation L-PBF - Pratt and Whitney L-PBF - Space Systems Loral E-PBF - JPL E-PBF, L-PBF • Experience includes CalRAM – First organisation to achieve Nadcap for L-PBF and EB-PBF ▪ ASTM F42 Fellow – Chair of the ASTM F42.07 on additive manufacturing Applications – Formerly for 10 years, Chair of F42.05 on Materials and Process – ASTM Robert F. Painter Memorial Award in 2017, the ASTM Award of Merit in 2018
 **Eliana Fu, Ph.D** **Industry Manager: Aerospace & Medical** **TRUMPF**	Eliana Fu was educated at Imperial College, University of London with a Masters and PhD in Materials Science. Eliana also performed post-doctoral research at Loughborough University (UK) and Clemson University (USA). After working extensively in the Traditional Manufacturing world, with TWI then TIMET and SpaceX, she turned her attention to Additive Manufacturing at SpaceX and then with Relativity Space as Senior Engineer: Additive Technologies. Eliana then joined TRUMPF as Industry Manager, Aerospace & Medical. She also serves as Women in 3D Printing Ambassador for Las Vegas and is involved with many other volunteer STEM activities for middle-school kids. Eliana has written a book based on her experiences as a female engineer at SpaceX.

 **Kate Hyam** **Director of Nuclear Codes and Standards** **American Society of Mechanical Engineers**	Kate Hyam is Director of Nuclear Codes and Standards in the ASME Standards and Engineering Services department, responsible for ASME's portfolio of standards applicable to nuclear facilities and technology. Her previous assignments focused on the areas of Big Data, manufacturing, additive manufacturing and verification and validation of computational modelling and simulation. Prior to working at ASME she was a design engineer for Bechtel Power, responsible for mechanical systems for natural gas and coal fired power plants.
 **Igor Levin, Sc.D.** **Leader, Materials Structure and Data Group, Materials Measurement Science Division** **National Institute of Standards and Technology**	Igor Levin leads the Materials Structure & Data Group in the Materials Measurement Science Division of the National Institute of Standards and Technology in Gaithersburg MD. He received his Dipl. Eng. in Metallurgy (with distinction) from the Polytechnical Institute of St. Petersburg, Russia, and both M. Sc. & D. Sc. Degrees in Materials Science from the Technion – Israel Institute of Technology. Dr. Levin is pursuing research into structure-property relationships in electroceramics by developing methods for combining inputs from diffraction, spectroscopic, and transmission electron microscopy techniques to obtain structural models that span length-scales from sub-nanometer to macroscopic. His recent interests also encompass ceramic processing, including additive manufacturing.

 **Bryan W. McEnerney, Ph.D.** **Group Supervisor, Materials & Processes (353C)** **NASA Jet Propulsion Laboratory**	Bryan W. McEnerney holds a B.S. in Materials Science and Engineering from Lehigh University, as well as a M.S. and Ph.D. in Ceramic and Materials Engineering from Rutgers University. He spent 8 years as a member of the technical staff at Pratt & Whitney Rocketdyne (now Aerojet Rocketdyne) working in a variety of areas, including advanced terrestrial and space energy projects, liquid rocket engine propulsion systems, hypersonic propulsion systems and a myriad of internal research and development tasks. He joined NASA's Jet Propulsion Laboratory in 2014 as the Group Supervisor for the Materials & Processes Group, where he is heavily involved in additive manufacturing research, failure analysis and advanced ceramics research. He is a member of NASA's Materials Technical Discipline Team and the Materials Capability Leadership Team. He is also a lecturer in Materials Science and Engineering at the University of California, Los Angeles and holds 6 U.S. Patents.
 **Teresa Melfi** **Technical Fellow** **The Lincoln Electric Company**	Teresa has been involved in the welding industry for over 30 years, with roles in the manufacture, design and application of welding machines, consumables and processes. She supports the global welding community through involvement in standards bodies, industry and academic projects, peer reviews and technical seminars. Her collaborations with designers, specifiers, fabricators, owners, insurers and classification societies help to establish meaningful rules for welding. Teresa currently serves on several American Welding Society, API and ASME committees and is an advisor to International Standards Organization (ISO) groups on welding consumables and welding qualifications. She has published many technical papers and holds United States and international patents related to welding processes, weldment fabrication, weld metal alloys and welding consumable slag systems.

 **J. Hector Sandoval** **Fellow** **Lockheed Martin**	Hector Sandoval is a technical Fellow at Lockheed Martin Missiles and Fire Control (LMMFC). He supports Tactical & Strike Missiles programs and the Advanced Manufacturing Technologies group at LMMFC. In this capacity, Hector is responsible for leading internal research and development (IRAD) projects focusing on implementation of Additive Manufacturing (AM) technologies and support production programs. Hector is recognized as an industry subject matter expert in the AM field and is currently serving as the SAE AMS AM committee chair. Hector has led the development and release of AM Ti6Al4V and Aluminum (AlSi10Mg) industry standard specifications (both under SAE AMS and ASTM). Hector has a Bachelor of Science degree in mechanical engineering and a Master of Science degree in metallurgical and materials engineering from the University of Texas at El Paso (UTEP).
 **Isabella Van Rooyen, Ph.D.** **National Technical Director** **Advanced Methods for Manufacturing Program** **Idaho National Laboratory**	Dr. Isabella J. van Rooyen holds a PhD in physics, an MSc in metallurgy, and an MBA. She is the National Technical Director for Advanced Methods for Manufacturing Programs for the Department of Energy-Nuclear Energy Enabling Technologies. She is also a distinguished staff scientist at the Idaho National Laboratory (INL) where she has led as principal investigator (PI) a variety of research projects for nuclear applications through competitive awards by industry strategic partners, technology commercialization funds (TCF), lab-directed research funds, Nuclear Science User Facility (NSUF), technology commercialization funds (TCF) and the Nuclear Engineering University Program (NEUP). These research projects focus on tristructural isotropic (TRISO)-coated particles, U_3Si_2, integrated fuel fabrication processes, high-temperature compact heat exchangers, SiC-ODS alloy gradient nano-composite cladding, fission product transport mechanisms, additive manufacturing qualification reviews, and advanced manufacturing methods. Prior to joining INL in 2011, Dr. van Rooyen held various technical leadership roles in the nuclear, aerospace, and automotive industries in South Africa, most notably the research at Pebble Bed Modular Reactor (PBMR) Company, NECSA and DENEL Aviation. Dr. van Rooyen has more than 50 peer-reviewed journal publications, more than 40 conference papers and presentations, over 100 company-specific technical and scientific reports, two additive manufacturing related patents (awarded 2020, 2021), and six patents filed on additive manufacturing in 2018–2021.