

Jonathan A. Demko



Jonathan A. Demko has been in the field of cryogenics and superconductivity for over 30 years beginning his career with General Dynamics/Fort Worth working on the X-30 National Aerospace Plane (NASP) program where he became the Thermodynamics Analysis Group Lead Engineer and Thermal Management Team Leader. He also held engineering positions with the Superconducting Super Collider Laboratory Cryogenics Department and was a Senior Member of the Technical Staff at Sandia National Laboratory. Next he was a Senior Development Staff Member with Oak Ridge National Laboratory (ORNL) where he worked on the cryogenic systems needed to support electric power applications (power cables and transformers) of high-temperature superconductors (HTS). At ORNL he was responsible for the cryogenic systems used in several demonstration projects of HTS cables and transformers including the Southwire Co. HTS demonstration project, the American Electric Power Bixby Substation in Columbus Ohio demonstration project, and the Hydra Project Fault Current Limiting cable prototype at ORNL. In addition, Jonathan Demko had an assignment with the Research Accelerator Division Cryogenics Department at the ORNL Spallation Neutron Source.

He is currently a Professor of Mechanical Engineering with LeTourneau University, Longview, Texas where he teaches classes in thermodynamics, fluids, heat transfer, and cryogenics. He served as a consultant to the Electric Power Research Institute (EPRI) on a Department of Homeland Security (DHS) project regarding liquid nitrogen cooling systems for HTS power transmission cables. He has authored several papers that have been published in the IEEE Transactions on Applied Superconductivity and in the Cryogenic Engineering Conference proceedings related to applied superconductivity and cryogenics. He is a Member of the American Society of Mechanical Engineers (ASME), and the Cryogenic Society of America (CSA). He served as a member of the AIAA Thermophysics Technical committee. He also has served on the board of the Cryogenic Engineering Conference and currently serves on the board of directors for the Cryogenic Society of America, and as a technical editor for the Proceedings of the Cryogenic Engineering Conference Advances in Cryogenic Engineering. He is a registered professional engineer in Texas.