# BRENT D. SHUMAKER

## Senior Systems Development Engineer

As Senior Systems Development Engineer at AMS, **BRENT D. SHUMAKER** is responsible for leading the development of software applications for instrumentation and control (I&C) system testing in nuclear power plants. A Certified LabVIEW Developer, Mr. Shumaker has been with AMS as a full-time senior engineer since 2001. Mr. Shumaker has served as the principal investigator for a number of SBIR projects focused on developing technologies for advanced monitoring and diagnostics of nuclear I&C systems.

Mr. Shumaker has been involved in numerous industry conferences, serving in various capacities from technical session chair to main presenter. He is a member of the American Nuclear Society (ANS), Secretary of Human Factors Instrumentation and Control Division (HFICD), and a senior member of ISA.

Mr. Shumaker is co-author of 5 awarded U.S. patents and more than 50 journal articles and industry publications, including standards for the International Society of Automation (ISA) and reports for the Electric Power Research Institute (EPRI). He currently serves as the co-chairman of a standard committee of the ISA updating the 67.06 standard entitled "Performance Monitoring for Nuclear Safety-Related Instrument Channels in Nuclear Power Plants," and as a voting member of the 67.04 standard committee on "Setpoints for Nuclear Safety-Related Instrumentation."

He has participated in a number of international activities, including the writing and review of two Nuclear Energy Series documents for the International Atomic Energy Agency (IAEA)—"On-line Monitoring for Improving Performance of Nuclear Power Plants Part 2: Process and Component Condition Monitoring and Diagnostics" and "Dependability Assessment of Software for Safety Instrumentation and Control Systems at Nuclear Power Plants." He is also the Chief Scientific Investigator (CSI) for a Coordinated Research Project for IAEA on "Advanced Surveillance, Diagnostics, and Prognostics Techniques Used for Health Monitoring of Systems, Structures, and Components in Nuclear Power Plants."

Prior to joining AMS, Mr. Shumaker worked as a software engineer for the Guidance and Navigation Operations Divisions of Honeywell, Inc. in Clearwater, Florida, where he developed software for real-time embedded inertial navigation systems. He completed his graduate work in Computer Science at the University of Texas–San Antonio in 2001.