Katrina M. Groth, Professor and Director of Reliability Engineering, University of Maryland

Katrina Groth is a Professor of Reliability Engineering at the University of Maryland, College Park. She is also the Director of the university's Center for Risk and Reliability and the Reliability Engineering graduate program.

Groth specializes in reliability and risk analysis of energy systems and has defined key engineering methods used to advance the reliability and safety of hydrogen fueling stations, electrolyzers, gas pipelines, nuclear power plants, and more. Her current research includes developing quantitative risk assessment methods to understand dominant failure causes in novel hydrogen systems, investigating prognostics and health management (PHM) techniques to support diagnosis and reliability monitoring in complex systems, and creating reliability data collection frameworks and algorithms for emerging energy technologies. Before becoming a professor, she was a Principal R&D Engineer at Sandia National Laboratories.

Groth has published over 225 papers and technical reports, one textbook, and multiple software packages. Her notable hydrogen activities include inventing the U.S. Department of Energy's Hydrogen Risk Assessment Models (HyRAM) toolkit and the Hydrogen Component Reliability Database (HyCReD), being an expert witness on hydrogen equipment failure investigations, and leading a working group within ISO 19880-1. She has received many awards, including a *National Science Foundation CAREER Award* and the *David Okrent Award for Nuclear Safety* and was selected to take part in the *2021 U.S. Frontiers of Engineering* symposium. In 2025, Groth received the *University System of Maryland Board of Regents Faculty Award for Excellence in Research*.

Groth holds a PhD and MS in Reliability Engineering and a BS in Nuclear Engineering, all from the University of Maryland.