

# The Role of Human Reliability in the Design of Systems

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**Date and time:** Thursday 27 September 2018, at 14.00-15.00, followed by coffee/cake and informal discussions

**Place:** CHALMERS, Virtual Development Laboratory (VDL), Chalmers Tvärgata 4C, Göteborg

**Registration not later than 25 Sept to:** Prof Anna-Lisa Osvalder, Division Design & Human Factors, Phone: 031-7723643, E-mail: [alos@chalmers.se](mailto:alos@chalmers.se)

## About the Talk

Human reliability analysis (HRA) is often treated primarily as a way to quantify human errors in support of probabilistic safety assessments. This view greatly oversimplifies HRA and excludes one of the most powerful uses of HRA—the design of systems. HRA is a series of techniques for predicting human performance and identifying vulnerabilities in human-system interactions. As such, HRA can serve an important but still underutilized role in the design of safety-critical systems. HRA can identify human error traps and prioritize mitigation strategies. This talk will review recent applications of human reliability for the design of systems and as a complementary tool to more traditional human factors design and evaluation methods. Examples of HRA in design will be provided for control rooms in nuclear power, vehicles for long-duration space flight, new oil and gas systems, military systems, and in conventional user-centered design interfaces. The talk will conclude with ideas for new research and development opportunities for informing design through human reliability.

## About the Presenter

Dr. Boring is a Distinguished Scientist in human factors and human reliability at Idaho National Laboratory, where he has worked as a researcher and principal investigator on projects for the U.S. Nuclear Regulatory Commission, NASA, the U.S. Department of Energy, the Canadian Nuclear Safety Commission, the U.S. Department of Defense, and the Norwegian Research Council. He previously worked as a human reliability researcher at Sandia National Laboratories, a usability engineer for Microsoft Corporation and Expedia Corporation, a guest researcher in human-computer interaction at the National Research Council of Canada, and a visiting human factors scientist at OECD Halden Reactor Project. Dr. Boring has a Ph.D. in Cognitive Science from Carleton University. He was a Fulbright Academic Scholar to the University of Heidelberg, Germany. He has published over 200 research articles in a wide variety of human reliability, human factors, and human-computer interaction forums. He is the founder of the Human Error, Reliability, Resilience, and Performance conference, and he is Chair Elect for the 2018-2021 annual meetings of the Human Factors and Ergonomics Society.