



# Exoskeleton Requirements for Firefighters: Use Cases Reveal Essential Needs

November 17, 2020

Please register via Eventbrite, or see <http://www.incose.org/cleveland>

5:30 PM EDT

Virtual – Online Meeting

(Connection information will be available to registrants on Eventbrite)

## Speaker: LuAnn M. Duffus

**Abstract:** What if the product already exists? Here is an example tailoring model-based systems engineering (MBSE) methods to provide requirements for a new use of an existing product: occupational exoskeletons.

Firefighters have a high rate of work-related musculoskeletal disorders (WMSD). Occupational exoskeletons are currently in use in manufacturing settings to help prevent or reduce WMSDs and to reduce worker fatigue. Exoskeleton technology has potential to be a good fit for the firefighting industry however there are challenges that must be overcome.

Here, MBSE methods are incrementally utilized to check feasibility for this new use and identify the new requirements for the firefighter community.

**Biography:** LuAnn M. Duffus, PhD holds a masters and doctorate in Economics from University of Illinois, Champaign-Urbana and a masters in Industrial and Systems Engineering from Ohio University. Dr. Duffus has applied model-based system engineering to various projects including real-time, fault tolerant SS7 databases and their SQL provisioning systems in the telecommunications network while at Bell Laboratories. In 2009 she was honored by appointment to the Alcatel Lucent Technical Academy (ALTA) for technological leadership. Her research focuses on innovations and the policies that aid or hinder innovation.



We hope that you can join us!