

**System of Systems Engineering
Collaborators Information Exchange (SoSECIE)**

**July 16, 2019
11:00 a.m. to Noon Eastern Time**

Modular Online Open SoS Education (MOOSE)

Presenter: Mr. Kyle Hastings, The MITRE Corporation

Abstract

MOOSE began as an experimental initiative to support a growing interest in systems of systems ((SoS) and SoS engineering (SoSE). The goal was (and still is) to create a platform for more broadly available SoS educational material to support the SE community. There is a developing base of SoSE knowledge and experience available and there are traditional sources of SoSE education through university programs and short courses and tutorials. The MOOSE concept is to offer an on-demand, self-paced learning experience based on sets of short course modules, which will each focus on a specific topic and take roughly 30 to 60 minutes to complete. The modules, some of which utilize short 7-8-minute videos, draw on existing SoS material on experience with key SoS topics, and are structured to allow for flexible access to materials of specific interest to the viewer. Knowledge checks, included as auto-graded quizzes, support increased student retention of the material. By making these modules openly available, they provide a shared resource that can be used by teams supporting SoSE efforts from FFRCs, academia, and industry. MOOSE is a MITRE initiative which began in 2018 and is still in development. As part of the initiative, we are collecting feedback from our learners via surveys for each module. This data is currently being studied with the goal of using the survey results to better understand what elements of the modules (videos, text, images, knowledge checks) are resonating with our learners, and which might need improvement. Acting on the feedback collected is part of the iterative nature of our development of MOOSE; we hope to continue to collect data from learners as they take our offerings. This presentation describes the approach and progress to date to develop a platform for online instructional SoS and SoSE materials. The future of MOOSE will also be discussed, such as the potential for the addition of modules beyond SoS topics.

Biography

Kyle Hastings is a Systems Engineer at the MITRE Corporation. In his two years working at MITRE, Kyle has supported a variety of projects, largely through applied MBSE (Model Based Systems Engineering) with tools such as IBM's Rational Rhapsody. Kyle's background is largely in Mathematics, and he is also currently a graduate student at WPI pursuing a Master's degree in Systems Engineering. He has supported the MOOSE effort since its inception in 2018.