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AI EDAM Special Issue, November 2014, Vol. 28, No. 4
Design of Complex Engineered Systems

Guest Editors: Irem Y. Tumer & Kemper E. Lewis

Design of complex engineered systems is a research area that focuses on systematic and rigorous approaches to designing and analyzing large-scale engineering systems. The complexity is because these systems are not only large scale and include multiple disciplines but are also composed of hardware, software, and sometimes humans, which typically results in unmodeled and poorly understood interactions and behavior on multiple scales. Such behavior often leads to unintended consequences that plague the engineering organizations developing such systems, including cost overruns, schedule delays, unplanned maintenance, and ultimately catastrophic failures during operation. Current systems engineering processes do not guarantee safe, effective, and robust systems that are delivered on time and within budget. Over the last 5 years, the engineering design research community has recognized this problem and advances have been made in many research groups with real large-scale applications. Furthermore, government organizations including NSF, NASA, and DARPA have created new programs that specifically fund the scientific approaches needed to make a significant impact on the state of the art. As a result, this Special Issue is quite timely because many of the approaches are ready to be disseminated and shared with our peers. The Guest Editors intend to showcase the variety of the research in this field.

Contributions can be 8–12 pages long in the *AI EDAM* format. A paper with a length of 6200–9200 words (include figures, tables, and references) may fit that range.

All submissions will be anonymously reviewed by at least three expert reviewers, and the selection for publication will be made on the basis of these reviews. Authors are invited to submit the names of suitable reviewers, such that discussions aimed at developing the paper may be integrated in the review phase.

Information about the format and style required for *AI EDAM* papers can be found at http://aiedam.usc.edu/

Note that inquiries and submissions for the Special Issue should be sent to the Guest Editors, **not** to the Editor in Chief.

Important Dates

Intent to submit (Title & Abstract):	Immediately
Submission deadline for full papers:	September 16, 2013
Reviews due:	November 15, 2013
Notification and reviews due to authors:	December 15, 2013
Revised papers due from authors:	March 16, 2014
Final revised version submission deadline:	June 1, 2014

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