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Prof. Paris Avgeriou, David Shepherd

Editor-in-Chief

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Dear editors in chief,

I am pleased to submit a research article titled “Model Based System Assurance Using the Structured Assurance Case Metamodel” by Dr. Ran Wei, Professor Tim Kelly and Dr. Richard Hawkins for consideration for publication in the Journal of Systems and Software.

We have been involved in the standardisation of the Structured Assurance Case Metamodel (SACM) by the Object Management Group (OMG), which in our vision will be the standard for model-based system assurance in safety-related domains in the near future. We felt the need to explain SACM and discuss the relationship between existing system assurance approaches (i.e. the Goal Structuring Notation – GSN, and Claims, Arguments and Evidence - CAE) and SACM, to promote SACM and prepare system safety engineers towards model-based system assurance. Therefore, we explain SACM in the manuscript and discuss model-to-model transformations from existing approaches to SACM. We also briefly discuss a tool based on Graphical Modelling Framework, which acts as a transitional solution for safety engineers to shift from GSN to SACM. We think this manuscript is an important step towards model-based system assurance for its broader usage in emerging technologies such as Cyber-Physical Systems and Internet of Things.

We think that this manuscript is appropriate for publication by the Journal of Software and System in the special issue on Model Driven Engineering and Reverse Engineering, for the extensive discussion on SACM, the application of SACM in safety-related systems, and the assistance to safety engineers towards the shift from conventional approaches to model-based system assurance.

We confirm that the work presented in the manuscript is original and is not under review elsewhere or published elsewhere. We have no conflicts of interest to disclose.

Thank you for your consideration!

Sincerely,

Ran Wei, PhD

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University of York