



RESEARCH AND APPLICATION WORKSHOP  
**AI4SE & SE4AI**

The [2022 AI4SE/SE4AI Workshop](#) will be held [September 21-22](#) as a hybrid event at Stevens Institute of Technology, Hoboken NJ. Participation is limited to U.S. citizens only. Abstracts are sought from government, industry and academia for presentations and panels addressing key Artificial Intelligence (AI) and Systems Engineering (SE) initiatives. All abstracts and presentations must be approved for public release. Selected abstracts will be invited to present at the workshop.

Two engineering and technology developments are shaping next generation defense systems. First, artificial intelligence (AI), which includes machine learning, has been recognized as a key driver for next-generation levels of cognitive performance, efficiency, and speed in systems that range from vehicles and weapons to logistics networks. Second, systems engineering (SE) methodologies and tools, including digital engineering and model-based systems engineering, have become increasingly important in the design, acquisition, and management of systems.

### **Objective**

The objective of this hybrid workshop is to bring together key stakeholders. The intent is to generate shared interests in relevant research ideas aligned with DEVCOM AC and SERC priorities to advance the application of AI4SE and SE4AI.

### **Abstract Submission Deadline**

**Abstracts must be submitted by [August 3, 2022, by 11:59 p.m. EDT.](#)**

### **TOPICS OF INTEREST INCLUDE:**

- Application of AI on SE projects
- Application of SE on AI projects
- Augmented Engineering
  - Using AI to Augment Engineering Design
- V&V and T&E of Learning Based Systems
- Workforce Development for AI4SE & SE4AI
- AI/ML Technology Evolution
- Augmented Intelligence, Cognitive Assistants and Decision Aiding Tools
- Automation & Human-Machine Teaming
- Digital Engineering Infrastructure and Methods in Support of AI
- Advances in Explainable AI
- Advances to Address Cognitive Bias in AI
- Uncertainty Quantification and Relation to Safety Boundaries in AI

- Applications of Digital Twins to Improve Machine Learning
- Data Collection and Curation for AI in Cyberphysical Systems

### **Submission Schedule**

Abstracts are sought for presentations from government, industry and academia addressing key AI and Systems Engineering related initiatives. Abstracts should be clear, concise and address AI/ML enablers and technologies to the Systems Engineering community at large and advances in the application of SE on AI systems.

**Abstract Submission Deadline:** August 3, 2022, by 11:59 p.m. EDT.

**Notification to Authors:** August 15, 2022

**Final Program:** September 1, 2022

### **Submission Guidelines**

Submissions should be made through the SERC website submission form at <https://sercuarc.org/event/ai4se-and-se4ai-workshop-2022/> by **July 27, 2022, by 11:59 p.m. EDT**. All requested information below must be completed for an abstract to be considered.

### **Information Required**

Title (200-character limit)

Primary Author/Presenter: Full name, title and organization for the primary author. This person is the main point of contact and will receive all notifications, confirmations and further instructions.

Research Area: Identify the research topic area(s) being addressed.

Individual Presentation: Indicate if the submission is for an individual presentation.

Panel Submissions: Identify the planned panelists and their organizations and include a short position statement for each panelist.

Abstract Text (5,000 character limit): Content of the abstract. Do not insert graphics or tables.

References: One additional page can be included to contain endnote references, graphics and URL links to faculty/researcher bios or CVs.

Primary Author Biography (500-character limit): The primary author biography must be submitted.

Additional Authors: Any additional authors and/or presenters should be listed and their organizational affiliation.

### **Tips for Authors**

Abstracts should clearly outline the summary of the project objectives, results, benefits to defense capability and the warfighter. The title should be concise as it will be listed in the workshop program. Submissions must be appropriate for an open 30-minute oral presentation, which includes time for questions and answers, or for a 60-minute panel. Presentation guidelines will be provided with notice of selection.

**Disclosure**

The AI4SE/SE4AI Workshop is an unclassified workshop. **All abstracts and selected presentations must be approved for public release.**

Please contact Ms. Kara Pepe at [kpepe@stevens.edu](mailto:kpepe@stevens.edu) or Mr. Albert Stanbury at [albert.w.stanbury.civ@army.mil](mailto:albert.w.stanbury.civ@army.mil) if you have any questions.