

## P2247.3

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**Submitter Email:** bob.sottolare@soartech.com

**Type of Project:** New IEEE Best Practice

**PAR Request Date: PAR Approval Date:**

**PAR Expiration Date:**

**Status:** PAR for a New IEEE Best Practice

**1.1 Project Number:** P2247.3

**1.2 Type of Document:** Best Practice

**1.3 Life Cycle:** Full Use

**2.1 Title:** Best Practices for Evaluation of Adaptive Instructional Systems  
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**3.1 Working Group:** Adaptive Instructional Systems (C/LT/AIS)

**Contact Information for Working Group Chair**

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**3.2 Sponsoring Society and Committee:** IEEE Computer Society/Learning Technology (C/LT)

**Contact Information for Sponsor Chair**

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** 03/2020

**4.3 Projected Completion Date for Submittal to RevCom.:** 02/2021

**Note:** Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months  
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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 20

**5.2 Scope:** This best practice defines and classifies methods of evaluating adaptive instructional systems (AIS) and establishes guidance for the use of these methods and measures.

**5.3 Is the completion of this standard dependent upon the completion of another standard:** No

**5.4 Purpose:** This best practice will enable AISs to be characterized in terms of instructional effectiveness and other characteristics of concern to consumers when making purchase decisions (e.g., data handling and privacy protection). This best practice incorporates and promotes the principles of ethically aligned design for the use of artificial intelligence (AI) in AIS.

**5.5 Need for the Project:** AISs are increasingly being deployed in commercial and open-source versions. These systems have the potential to significantly improve learning across many sectors of training and education; but, assessment of effectiveness meeting scientific conventions may not exist for any individual AIS. Because many

factors contribute to the instructional design and engineering of an AIS, and there may be significant variation in which features of “adaptivity” are included in the system and in how instructors and end-users may deploy these systems. Some AISs are being marketed with misleading claims about the evidence as to their effects. The purpose of this best practice for AISs is to establish criteria and best practices for evaluation of AISs so that consumers can determine the likelihood of desired learning outcomes and program impacts based on the features included in the AIS and the intended usage frequency of those AIS features.

**5.6 Stakeholders for the Standard:** Stakeholders include designers and producers of AIS and related instructional systems; education and training organizations that buy and deploy AIS and other instructional systems; program managers who seek to implement formative and summative evaluations of education and training programs; AIS program evaluators; designers and producers of tools used to develop AIS and to author adaptive instructional content; researchers in the fields of learning science and learning engineering; learners who interact with AIS; government agencies purchasing and regulating the use of AIS; and the general public that may need to interpret data reported by AIS. Anyone person or any organization that produces, buys, or uses an AIS or a personalized learning system is a stakeholder.

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### **Intellectual Property**

**6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?:** No

**6.1.b. Is the Sponsor aware of possible registration activity related to this project?:** No

**7.1 Are there other standards or projects with a similar scope?:** No

### **7.2 Joint Development**

**Is it the intent to develop this document jointly with another organization?:** No

**8.1 Additional Explanatory Notes:**