Center for Research in Mathematics and Science Education

CRMSE Colloquium Announcement

Dr. Stephen Reed

Center for the Study of Language and Information
Stanford University

Creating Taxonomies and Ontologies to Organize Research in the Learning Sciences

Friday, March 13, 2015
1:00-2:00 pm
6475 Alvarado Road, Room 128

RSVP: https://crmse.wufoo.com/forms/crmse-colloquia/ or
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Abstract: There are increasing demands to organize scientific data as data continue to accumulate. I will provide an overview of my attempt to create taxonomies and ontologies to organize empirical and theoretical contributions in the learning sciences. Learning as Mapping Across Situations (The Journal of the Learning Sciences, 2012) is a taxonomy consisting of 3 types of mappings (one-to-one, one-to-many, partial) across 4 types of situations (problems, solutions, representations, sociocultural contexts). A Taxonomic Analysis of Abstraction (submitted) analyzes how 3 levels of abstraction – features, instances, categories – apply to a variety of learning activities. A Framework for Constructing Cognition Ontologies using WordNet, FrameNet and SUMO with Adam Pease (Cognitive Systems Research, in press) applies tools from the Information Sciences to Cognitive Science. I will conclude by summarizing my current projects.

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